CHAPTER 4: RESEARCH FINDINGS

4.1. Malaysia's International Competitiveness

WEF ranked Malaysia at ninth position out of 53 nations (developed and developing economies) in 1997, an improvement over its tenth position in 1996 (**Appendix I**). However in 1998, Malaysia slipped to seventeenth position. This could be attributed to the uncertainties affecting the country arising from the economic crisis since the second half of 1997. The Malaysian economy contracted by 2.8 percent during the first quarter of 1998, and by 6.8 percent during the second quarter. The successive contractions of the economy during the first two quarters in 1998 marked the first negative growths for Malaysia since the contraction of 1 percent during the last recession in 1987.

It is noted that Malaysia ranked fairly favourably among the emerging economies in WEF's list of competitive economies (**Table 4.1**). Malaysia's ranking was more favourable than the other Asean nations, with the exception of Singapore which has consistently been ranked number one by WEF since 1996. It is pertinent to mention that Vietnam, a recent member of Asean has been included in WEF's list of competitiveness since 1997. Malaysia also ranked higher than China, which is the leading FDI recipient among developing economies.

IMD ranked Malaysia seventeen out of 46 developed and developing countries (**Appendix II**). This was an improvement over its twenty-third position in 1996. However, the regional economic turmoil has affected the country's international competitiveness as its ranking eroded from seventeen in 1997 to twenty in 1998. Similarly, the international ranking by IMD indicated that Malaysia also fared fairly favourably among the other developing countries (**Table 4.2**). It is observed that Malaysia ranked higher compared to the other Asean countries and other developing economies, after Singapore and Hong Kong. IMD ranked Singapore as the second most competitive economy, after the United States since 1994.

Table 4.1: WEF Competitiveness Ranking, 1996-1998

Country	1996 Ranking	1997 Ranking	1998 Ranking
Argentina	37	37	36
Brazil	48	42	46
Chile	18	13	18
China	36	29	28
Colombia	40	41	47
Czech Republic	35	32	35
Egypt	29	28	38
Hong Kong	2	2	2
Hungary	46	46	43
India	45	45	50
Indonesia	*30*	*15*	*31*
Jordan	28	43	34
Korea	20	21	19
Malaysia	*10*	*9*	*17*
Mexico	33	33	32
Peru	38	40	37
Poland	44	50	49
Philippines	*31*	*34*	*33*
Russia	49	53	52
Singapore	*1*	*1*	*1*
Slovakia	n/a	35	48
Taiwan	9	8	6
Thailand	*14*	*18*	*21*
Turkey	42	36	40
Ukraine	n/a	52	53
Venezuela	47	47	45
Vietnam	*n/a*	*49*	*39*
Zimbabwe	n/a	52	53

Source: World Economic Forum, *Global Competitiveness Report*.
Note: Asean countries indicated in italic.

The regional economic meltdown appeared to have eroded the rankings of Malaysia, Indonesia and the Philippines in 1998, except for Singapore and Vietnam. It is pertinent to note that the four NICs of Hong Kong, Taiwan Korea and Singapore are grouped as developing economies in UNCTAD's *World Investment Report 1997*.

Table 4.2: IMD Competitiveness Ranking, 1996-1998

Country	1996 Ranking	1997 Ranking	1998 Ranking
Argentina	32	28	31
Brazil	37	33	37
Chile	13	24	36
China	26	27	24
Colombia	33	42	44
Czech Republic	34	35	38
Hong Kong	3	3	3
Hungary	39	36	28
India	38	41	41
Indonesia	*41*	*39*	*40*
Korea	27	30	35
Malaysia	*23*	*17*	*20*
Mexico	42	40	34
Poland	43	43	45
Philippines	*31*	*31*	*32*
Russia	46	46	46
Singapore	*2*	*2*	*2*
Taiwan	18	23	16
Thailand	*30*	*29*	*39*
Turkey	35	38	33
Venezuela	45	45	43

Source: IMD. *World Competitiveness Yearbook*.
Note: Asean countries indicated in italic.

4.2. Regression Analysis

The statistical tool of multiple regression analysis was used across the set of ten predictor or independent variables, comprising GDP, Real GDP per Capita Growth, exports, control, political system, corporate taxes, incentives, infrastructure, improper practices and transparency on the dependent variable (FDI inflow). Two approaches were used, that is, the All-variables regression and the Stepwise regression. The All-variables regression using the method enter indicated all ten predictor variables in the equation (**Table 4.3** and **Appendix IV**).

Table 4.3: All-Variables Regression Summary

Variable	B	Significant T	Significance (Compare with alpha = 0.05)
Constant	-717.287	0.016	-
GDP	0.709	0.037	Significant
GDP growth	14.423	0.367	Not significant
Exports	-0.928	0.705	Not significant
Control	67.651	0.048	Significant
Political system	-1.544	0.975	Not significant
Corporate taxes	-22.193	0.448	Not significant
Incentives	4.597	0.927	Not significant
Infrastructure	-29.016	0.546	Not significant
Improper practices	-22.193	0.662	Not significant
Transparency	119.913	0.160	Not significant

Adjusted R Square = 0.703

Significant F = 0.05

Standard error = 137.9362

The coefficient of determination as indicated by the adjusted R square is 0.703, meaning that the predictor variables explain 70.3 percent of the variation in FDI inflow. At 70.3 percent, it implies that the explanatory power of the model is fairly strong. About 30 percent of the variation in FDI inflow is explained by other variables not in the model.

Comparing the significant T value with alpha equals 0.05, only two variables, that is "control" (perception whether foreign investors may not or are free to acquire control in a domestic company) and GDP are significant. The remaining eight variables are found to be not significant. The estimated coefficient for the "control" variable is positive, implying that the greater the ability to acquire control in a domestic company, the larger the FDI inflow, other things being equal. Similarly, the estimated coefficient for the GDP variable (a proxy for host

country's market size) is positive, implying that the bigger the market size, the larger the FDI inflow, other things being equal.

The regression model is as follows:

$$Y = -717.3 + 0.7X1 + 14.4X2 - 0.9X3 + 67.6X4 - 1.5X5 - 32.8X6 + 4.6X7 - 29.0X8 - 22.2X9 + 119.9X10$$

Where Y = FDI inflow

X1 = GDP

X2 = Real GDP per capita growth

X3 = Exports

X4 = Control (pertaining to restrictions/freedom in acquiring domestic companies in host country)

X5 = Political system (whether adapted to current economic challenges)

X6 = Corporate taxes (whether taxes discourage or encourage entrepreneurial activity

X7 = Incentives (whether investment incentives are insufficient or sufficient to attract FDI)

X8 = Infrastructure (whether inadequately or adequately planned and financed)

X9 = Improper practices (regarding prevalence of improper practices such as bribery and corruption)

X10 = Transparency (whether government does not often communicate its intentions or is transparent)

Under the stepwise regression method, the predictor variables enter the regression equation one at a time by ranking of importance. It is observed that only two variables, GDP and "control" entered the model at steps 1 and 2

Table 4.4: Stepwise Regression Summary

Variable	Adj. R Square	B	Significant T	Significant F
Step 1				
(Constant)		-96.999	0.100	
GDP	0.552	0.872	0.000	0.000
Step 2				
(Constant)		-558.273	0.003	
GDP		1.026	0.000	
Control	0.686	59.760	0.007	0.000

respectively (**Table 4.4** and **Appendix V**). The remaining eight variables are not significant and are therefore excluded from the model.

From Step 1, the adjusted R square is 0.552, which means that the variable GDP (a proxy for host country's market size) accounts for a significant 55.2 percent of the variation in FDI. This again implies that the bigger the host country's market size, the larger the FDI inflow. Clearly evident of this market size attraction is the United States which is the world's largest economy with a GDP of US$7.6 trillion in 1996, and remains the largest FDI recipient with US$84.6 billion in 1996 (24.2 percent of global FDI inflow).

In Step 2, when the variable "control" was entered, the adjusted R square increased to 0.686. This means that the second variable accounted for 13.4 percent of the variation in FDI inflow. Collectively, the variables GDP and "control" accounted for 68.6 percent of the variation in the dependent variable. This also implies that 31.4 percent of the variation in FDI is explained by other variables not in the regression model.

It is observed that the two variables (GDP and "control") are significant as indicated by the values of significant T which are smaller than alpha equals 0.05. There is also evidence of a statistical relationship between the two variables and the dependent variable as the significant F values are smaller than alpha equals 0.05.

The regression model using the stepwise method is as follows:

Y = -558.27 + 1.03X1 + 59.76X4

Where Y = FDI

X1 = GDP

X4 = Control (restrictions or freedom in acquiring domestic firms)

4.3. Correlation between International Ranking and FDI Inflows

It is observed that generally countries with more favourable international ranking have been able to attract larger FDI inflows (**Table 4.5**). For example, Singapore's top ranking as the second most competitive economy in 1997 has resulted in substantial FDI inflow at US$9,440 million. Similarly, Malaysia which ranks more favourably than the other Asean economies (with the exception of Singapore) has also been able to attract fairly significant FDI inflow at US$6,200 million.

It is pertinent to note that international competitiveness matters to countries with small domestic markets, such as Singapore and Malaysia, which compete for FDI as platforms for exports. In contrast, FDI is drawn to countries with large market sizes such as China (1.2 billion), Indonesia (200 million) and Brazil (158 million), despite their less favourable ranking. FDI in the 1990s is a tale of large countries (Shatz, 1997). The United States and China are the largest FDI recipients, as well as being the largest countries, the United States by virtue of its

Table 4.5: FDI Inflow and International Ranking

Country	1996 FDI Inflow (US$ million)	1997 Ranking*
Singapore	9,440 (6)	2
Hong Kong	2,500 (26)	3
Malaysia	6,200 (11)	17
Taiwan	1,402 (35)	23
Chile	2,200 (28)	24
China	42,300 (2)	27
Argentina	2,000 (30)	28
Thailand	2,900 (23)	29
Korea	2,308 (27)	30
Philippines	1,408 (34)	31
Brazil	5,500 (14)	33
Czech Republic	1,200 (38)	35
Hungary	1,700 (32)	36
Turkey	1,116 (39)	38
Indonesia	5,800 (13)	39
Mexico	6,400 (8)	40
India	2,587 (24)	41
Colombia	3,000 (21)	42
Poland	4,200 (16)	43
Venezuela	1,300 (36)	45
Russia	1,800 (31)	46

Source: IMD's ranking of 46 countries.
UNCTAD. *World Investment Report 1997*
World Bank. *Global Development Finance 1997*
*Overall ranking
Note: Ranking in FDI is indicated in parentheses

GDP, and China its population. Since 1992, China has remained the largest FDI recipient among developing economies. In 1996, China attracted FDI inflows of US$42.3 billion, accounting for a significant 38.7 percent of total FDI inflows to developing economies.

It is observed that countries with lower rankings, such as the Czech Republic, Hungary, Turkey, Venezuela and Russia generally tend to attract lesser FDI. However, it is observed that Mexico remained a significant FDI recipient, ranking at eighth position in terms of FDI inflow, despite its low overall ranking at number 40. This could be attributed to substantial FDI inflow to Mexico from the United

Table 4.6: FDI Inflows into Asean, 1991-1996 (US$ million)

Country	1991	1992	1993	1994	1995	1996	Total	*(% share)*
Brunei*	1	4	14	6	7	9	41	*(0.0)*
Indonesia (IMD:39)	1,482	1,777	2,004	2,109	4,348	5,800	17,520	*(16.6)*
Laos*	7	8	30	59	88	104	296	*(0.3)*
Malaysia (IMD:17)	**3,998**	**5,183**	**5,006**	**4,342**	**4,132**	**6,200**	**28,861**	***(27.3)***
Myanmar*	238	171	149	91	115	100	864	*(0.8)*
Philippines (IMD:31)	544	228	1,238	1,591	1,478	1,408	6,487	*(6.1)*
Singapore (IMD:2)	4,887	2,204	4,686	5,480	6,912	9,440	33,609	*(31.8)*
Thailand (IMD:29)	2,014	2,114	1,730	1,322	2,003	2,900	12,083	*(11.4)*
Vietnam (WEF:49)	229	385	523	742	2,000	2,156	6,035	*(5.7)*
						Total	**106,582**	***(100.0)***

Source. UNCTAD. *World Investment Report 1997*
World Bank. *Global Development Finance 1997*
*Not included in either WEF's or IMD's list of competitive economies
Note. Vietnam is not in IMD's list
1997 overall ranking indicated in parentheses.
IMD's ranking covers 46 countries and WEF's ranking covers 53 countries

States and Canada under the auspices of NAFTA (North America Free Trade Agreement). Thus after discounting factors such as the market size attraction of countries like China, Indonesia and Brazil, and the special position of Mexico within NAFTA, there generally seems to be a correlation between a favourable ranking and FDI inflow. This means the higher a nation's ranking, the larger the FDI inflows, and vice versa (**Figure 4.1**).

Data on FDI inflows into Asean countries for the period 1991 – 1996 indicated that Singapore was way ahead of the other countries in attracting FDI, with US$33,609 million which accounted for 31.8 percent of total FDI inflows into Asean (**Table 4.6**). Malaysia was second with FDI of US$28,861 million or 27.3 percent of total FDI inflows for the region.

Singapore's ability in attracting substantially larger FDI inflows can be attributed to its global competitiveness, being ranked as the most competitive economy by WEF in 1996, 1997 and 1998, and ranked the second most competitive nation by IMD since 1994 to 1998. Malaysia's ability to attract the second largest FDI inflows after Singapore could be due to its higher ranking compared to Indonesia, Philippines and Thailand. It can therefore be implied that a nation's favourable international ranking has been instrumental in attracting larger FDI inflows.

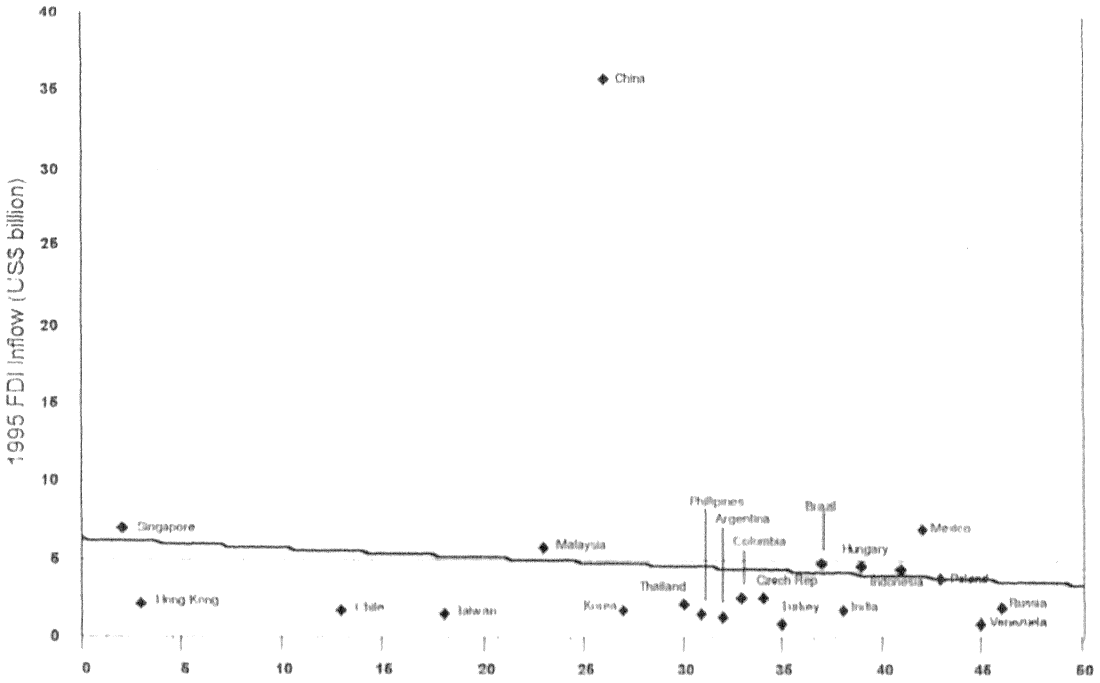
Indonesia is the third largest FDI recipient in Asean despite it being ranked less favourably than Thailand and the Philippines, which is largely due to its market size factor. Indonesia is the most populous nation in Asean with 200 million people compared to Thailand with 60 million and Philippines with 71 million.

Vietnam's recent emergence as an important location for FDI inflows could be due to it opening up its markets after the insurgent wars and the implementation of market reforms (*Doi Moi*) in the late 1980s. Other factors in Vietnam's favour are its large labour force and relatively low wages.

4.4. Correlation between Economic Growth Rates and FDI Inflows

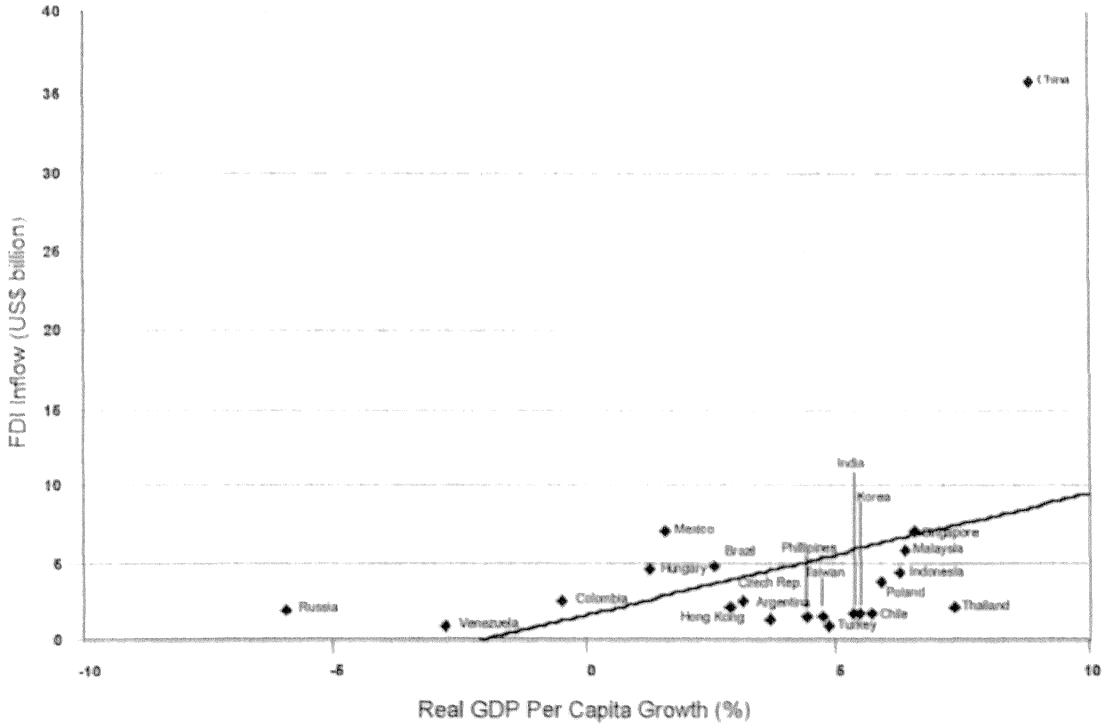
The study will next try to establish that there is a correlation between per capita GDP growth rates and FDI inflows. In other words, the higher the growth in real per capita GDP, the larger the FDI inflow. The real GDP per capita growth variable is an indicator for expected growth in the market size of target country. There appears to be a positive correlation between real GDP per capita growth and FDI inflows (**Figure 4.2**). Countries like China, Singapore, Malaysia and Indonesia with significantly higher growths in real GDP per capita in 1996, have been able to attract larger FDI inflows than countries with lower real GDP per capita growth rates, such as Colombia, Venezuela and Russia.

Fig. 4.1 : **FDI Inflows and Ranking**



Source: IMD Data

Fig. 4.2 : **FDI Inflow and Real GDP Per Capita Growth, 1995**



Source: IMD Data

Table 4.7: Country Ranking by GDP per Capita Growth and FDI

Country	1996 GDP per Capita Growth %	(Ranking)	1996 FDI Inflow (US$ million)	Overall Ranking
China	8.94	(2)	42,300	27
Thailand	7.38	(3)	2,900	29
Singapore	6.57	(4)	9,440	2
Malaysia	6.39	(5)	6,200	17
Indonesia	6.30	(6)	5,800	39
Poland	5.92	(7)	4,200	43
Chile	5.71	(8)	2,200	24
Korea	5.50	(10)	2,308	30
India	5.36	(11)	2,587	41
Turkey	4.89	(12)	1,116	38
Taiwan	4.72	(13)	1,402	23
Philippines	4.40	(14)	1,408	31
Argentina	3.68	(17)	2,000	28
Czech Republic	3.13	(19)	1,200	35
Hong Kong	2.91	(21)	2,500	3
Brazil	2.61	(24)	5,500	33
Mexico	1.57	(31)	6,400	40
Hungary	1.29	(33)	1,700	36
Colombia	-0.47	(43)	1,300	42
Venezuela	-2.77	(45)	1,300	45
Russia	-5.92	(46)	1,800	46

Source: IMD. *International Competitiveness Yearbook 1997*
UNCTAD. *World Investment Report 1997*
Note: IMD ranking covers 46 countries.

It is pertinent to note that generally developed countries such as the G-7 countries do not register high growth rates in real GDP per capita. This is because the GDP base in these countries is already significantly large. In contrast, developing countries are able to achieve higher growth rates as their GDP base is usually smaller. For example, the United States achieved a real GDP per capita growth of only 2.06 percent in 1996 to its GDP base of US$7.5 trillion, and was ranked at position 27.

Table 4.8: Country Ranking by Exports as % of GDP and FDI Inflows, 1995

Country	Exports (% of GDP) (Ranking)		FDI Inflow (US$ million)	Overall Ranking (1997)
Singapore	173.3	(1)	9,440	2
Hong Kong	149.8	(2)	2,500	3
Malaysia	92.3	(4)	6,200	17
Czech Republic	59.8	(7)	1,200	35
Taiwan	48.9	(9)	1,402	23
Thailand	43.2	(10)	2,900	29
Philippines	36.1	(16)	1,408	31
Hungary	33.2	(20)	1,700	36
Korea	32.9	(21)	2,308	30
Mexico	30.8	(23)	6,400	40
Venezuela	29.2	(26)	1,300	45
Chile	28.2	(27)	2,200	24
Poland	26.7	(30)	4,200	43
Indonesia	25.4	(31)	5,800	39
China	24.0	(34)	42,300	27
Russia	21.4	(37)	1,800	46
Colombia	17.1	(40)	3,000	42
Argentina	8.5	(43)	2,000	28
India	7.4	(44)	2,587	41
Brazil	7.3	(45)	5,500	33
Turkey	0.02	(46)	1,116	38

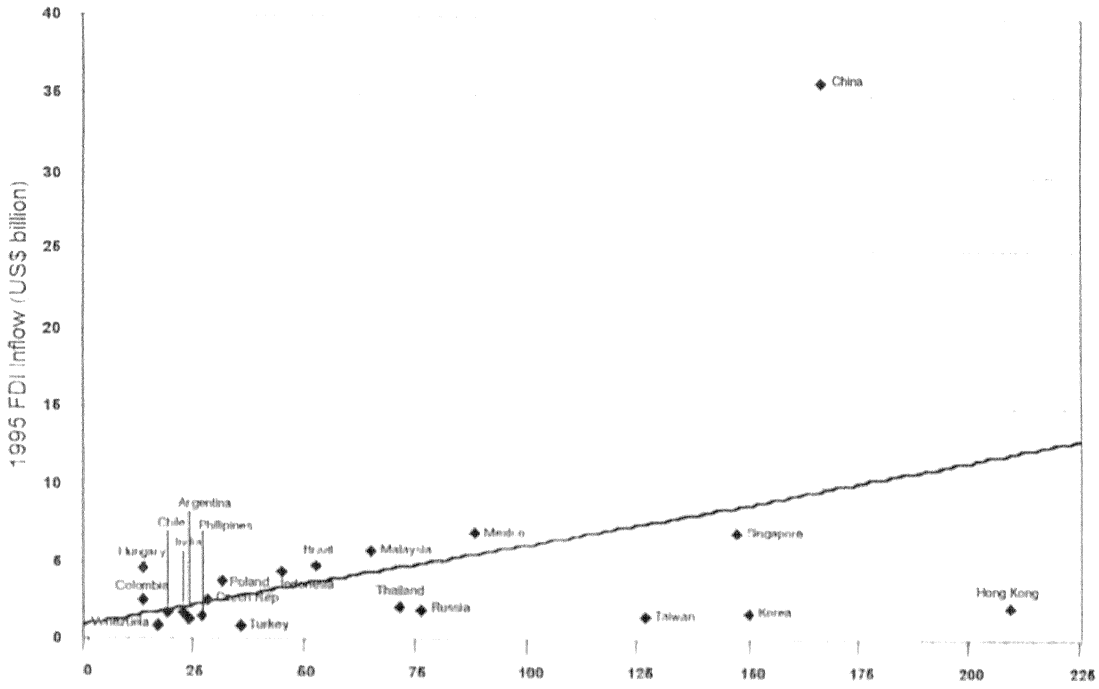
Source. IMD. *World Competitiveness Yearbook 1997*
World Bank. *Global development Finance 1997*

4.5. Correlation between Exports and FDI Inflows

FDI can stimulate the host country's growth through exports. Generally, MNCs in host countries tend to have a large export propensity. There is evidence to suggest that higher FDI inflows are associated with higher host country exports of goods (**Table 4.8 and Figure 4.3**). It is observed that generally countries with small domestic markets tend to have higher exports expressed as a percentage of GDP. These countries compete for FDI as offshore bases for exports.

For example, Singapore with a population of 3 million and hence a small domestic market is the most aggressive in export performance, with exports at 173.3 percent of GDP. FDI inflow to Singapore is also significant at US$9.4

Fig. 4.3 : **FDI Inflows and Exports, 1995**



Source: IMD Data

billion in 1996. In second place is Hong Kong with a population of 6.3 million and export performance at 150 percent of GDP. It is noted that FDI inflow to Hong Kong, Taiwan and Korea is not substantial. This is because Hong Kong, Taiwan and Korea have been actively investing in Asean countries (including Malaysia) and China in recent years. However, the export performance of these three NICs remain significant.

As for Malaysia, it has always been an open economy, initially relying on the export of primary commodities and later the export of manufactured products. With a population of 21 million, Malaysia's domestic market is considered relatively small, and thus the need to aggressively export. Malaysia is in fourth position and its export performance has been impressive at 92.3 percent of GDP.

4.6. Other Factors of FDI

The study will next examine Malaysia's ranking vis-à-vis the other developing economies on the other factors of FDI as per the regression analysis discussed earlier. **Table 4.9** indicates the ranking on the more tangible issues (control, political system, corporate taxes, investment incentives and infrastructure). The tangible factors are within the control of host countries. For example, the host country can lower corporate taxes in order to make the country more attractive for FDI. **Table 4.10** indicates the ranking on the soft issues (improper practices and transparency).

It is observed that Malaysia ranked number one on the factor political system out of 46 countries, implying that the political system in the country is well adapted to the current economic challenges. Malaysia also fared favourably on the other factors, ranking in second position on corporate taxes, in third position on investment incentives, and in twelfth position on infrastructure maintenance and development. However, it ranked poorly on the factor "control", obtaining position number 44. Although ranking favourably on the factors political system,

Table 4.9: Country Ranking on Tangible Factors of FDI

Country	Control	Political System	Corporate Taxes	Incentives	Infra-Structure
Singapore (2)	24	3	3	2	1
Hong Kong (3)	20	8	1	11	6
Malaysia (17)	44	1	2	3	12
Taiwan (23)	38	29	10	30	25
Chile (24)	12	30	19	12	22
China (27)	40	32	27	24	30
Argentina (28)	1	26	16	19	24
Thailand (29)	42	37	13	5	31
Korea (30)	46	44	33	32	32
Philippines (31)	41	11	28	9	36
Brazil (33)	30	20	31	13	41
Czech Rep (35)	27	17	39	36	33
Hungary (36)	13	15	22	20	39
Turkey (38)	7	41	32	14	37
Indonesia (39)	36	28	18	22	26
Mexico (40)	32	38	38	39	35
India (41)	39	42	34	26	46
Colombia (42)	29	40	40	41	45
Poland (43)	35	35	45	33	40
Venezuela (45)	23	46	29	37	43
Russia (46)	43	39	46	46	44

Source: IMD. *World Competitiveness Yearbook 1997.*
Note: 1997 overall ranking indicated in parentheses.

corporate taxes, investment incentives and infrastructure contributes to the overall ranking of the nation, it is pertinent to note that the stepwise regression analysis did not find these factors to be significant in explaining the variation in FDI inflow.

The poor ranking on the factor "control" is of concern based on the results of the stepwise regression analysis which identified this factor as significant with an explanatory power of 13.4 percent of the variation in FDI inflow. It is necessary to mention that the factor GDP (a proxy for market size) accounts for 55.2 percent of the variation in FDI. These findings have policy implications for the government as traditional policy measures such as investment incentives, low corporate taxes and good infrastructure aimed at attracting FDI may not be sufficient.

In addition, the country's market size is relatively small, as indicated by a GDP of US$99.2 billion in 1996, which was ranked at position 34 out of 46 countries. As discussed earlier, FDI is drawn to Malaysia not because of its market size, but as a platform for exports. Investors aiming for an export platform tend to be more concerned about the overall competitiveness of the country they are considering (Shatz,1997). In contrast, investors aiming for the domestic market may be more willing to compromise on some location specific assets, such as improper practices and insufficient investment incentives, in order to get access to a large market as in China or Russia.

The Malaysian government also imposes equity conditions, specifying bumiputera and non-bumiputera share on foreign investors. These equity conditions are linked to export conditions (**Appendix VI**). This policy is aimed at encouraging manufacturing projects to be undertaken on a joint-venture basis between Malaysian and foreign entrepreneurs. However, the need to comply with certain equity conditions may be viewed as restrictions to acquiring domestic companies. This perhaps explains the low ranking obtained by the country on the factor "control".

Malaysia did not rank favourably on the factor improper practices (bribery and corruption), ranking at position 26 out of 46 countries (**Table 4.10**). However, Malaysia still ranked higher on this factor, compared to other Asean member countries, such as Thailand (ranked at 38), Philippines (42) and Indonesia (41). In contrast, Singapore which is known to have little corruption ranked the highest among the developing economies (scoring position 4). It is observed that China ranked low on this factor at position 34. Despite this, the market size factor of populous China is its ace card in attracting substantial FDI inflow.

As for the factor transparency, Malaysia at position 8 ranked higher than the other developing economies, except for Singapore which ranked number 2, and Hong Kong which ranked number 6. Although the factors improper practices and

Table 4.10: Country Ranking on Improper Practices and Transparency

Country	Overall Ranking	Improper Practices	Transparency
Singapore	2	4	2
Hong Kong	3	15	6
Malaysia	17	26	8
Taiwan	23	25	24
Chile	24	22	31
China	27	34	11
Argentina	28	37	34
Thailand	29	38	39
Korea	30	36	38
Philippines	31	42	23
Brazil	33	28	12
Czech Republic	35	29	28
Hungary	36	35	36
Turkey	38	39	44
Indonesia	39	41	29
Mexico	40	40	35
India	41	45	40
Colombia	42	44	46
Poland	43	32	45
Venezuela	45	43	42
Russia	46	46	43

Source: IMD. *World Competitiveness Yearbook 1997*

transparency are currently assuming increasing importance, they were found to be not significant in the stepwise regression analysis. Nevertheless, scoring favourably on the two factors will contribute to the overall competitiveness of nations. A country that is more competitive is more likely to be considered a good choice as an investment location for exporting firms (Shatz,1997). The issue of competitiveness is particularly relevant to the Malaysian economy which is competing as an offshore base for exports.