

## **CHAPTER 3: Research Methodology**

### **3.1. Secondary Data**

Data for this research project was obtained from secondary sources, namely publications from relevant agencies such as MITI, MIDA, Bank Negara, Ministry of Finance, World Bank and the International Monetary Fund (IMF) and UNCTAD. Data on ranking and international competitiveness was sourced from the WEF and IMD. Material for this study was also obtained from textbooks, journals, newspapers and the Internet.

### **3.2. Limitations and Strengths of the Data**

Data on approved projects was obtained from MIDA to indicate the number of projects, potential employment, proposed capital investment (local and foreign), type of industry and capital intensity (**Appendix III**). Despite the limitation of using approved projects to indicate FDI inflows, as not all projects may be implemented, it is nevertheless felt that approved projects are a fairly close proxy of the intention to start production. Similarly, the proposed capital investment in approved projects may be less than actual investment as some of the approved projects may not be implemented.

MIDA reported that 20 – 25 percent of approved projects during 1979 – 1988 failed to get off the ground, citing reasons such as lack of finance, difficulty in getting market outlets and difficulty in getting approval owing to red tape (*Star*, May 4 1988). Similarly, MITI reported that 1,919 projects or 21 percent from a total of 9,130 approved manufacturing projects during 1980 – 1993 were not implemented (*Malaysia International Trade and Industry Report 1994*). A total of 5,307 projects (58.2 percent) had been implemented as at the end of 1993, while 1,904 projects (20.8 percent) were in initial stages of implementation. An 80

percent implementation rate is considered good, implying that data on approved projects can be safely used as a proxy of actual commitment

In addition, data on FDI inflow by country and region was sourced from reports by the World Bank and UNCTAD. It must be recognised that there could be inaccuracies in data on FDI inflows due to errors and differences in definitions and reporting across countries. However, data on FDI from the World Bank and UNCTAD is generally used as a proxy to indicate trends and direction of flows.

Data on international competitiveness was obtained from the Global Competitiveness Report 1997 by WEF, and the International Competitiveness Yearbook 1997 by IMD. The strength in using both WEF's and IMD's reports is that both these organisations are recognised worldwide as authorities on international competitiveness. The competitiveness reports are also used worldwide by decision-makers in the government and business community. It is noted that both WEF and IMD have had considerable experience in producing the international competitiveness reports, jointly producing the World Competitiveness Report since 1989 – 1995. However since 1996, WEF began to produce its own competitiveness report with value added by including some feature articles from top economists and scholars on current issues such as technology, intellectual property protection and education in the globalised world.

IMD compares and ranks 46 countries on the basis of their international competitiveness. Of the 244 criteria used to determine competitiveness, 160 are hard data or statistical indicators recorded by international organisations and national institutes, while 84 criteria are soft data obtained from the Executive Opinion Survey. From the 160 statistical data, only 136 are included in the calculation of the competitiveness index used to establish the final ranking. The remaining 24 hard criteria are included in the report as relevant background information. The usable 220 criteria, comprising 136 statistical data and 84 soft data, are then aggregated into 8 factors: domestic economy, internalisation,

government, finance, infrastructure, management, science and technology, and people, to help determine a country's overall ranking. The rankings are calculated according to the standard deviation method.

WEF analyses and ranks 53 countries on 155 criteria also grouped under eight factors. These factors are measured on a cross-country basis, and the results are summarised in a simple Competitive Index. The 53 countries in WEF's list are among the world's most important economies and account for 90 percent of the world industrial output. Incidentally, the 46 countries in IMD's list are also included in WEF's list. This is a strong point as it implies that these countries are among the world's most competitive economies.

Both WEF and IMD conduct its own Executive Survey, where opinions are sought from the business community of each of the ranked country regarding various criteria and the business environment of their country. WEF and IMD each covered a sample size of 2,500 respondents. WEF and IMD then use hard data and the results from the Executive Survey to produce the competitiveness reports. This is another strength as both WEF and IMD have incorporated primary data from the Executive Survey into their competitiveness reports. The survey focuses on issues which are unmeasurable but critical to competitiveness. Each respondent rates only the country he is working in, in order to ensure that the evaluations are based on a profound knowledge of a particular business environment.

### **3.3. Data Analysis Techniques**

The study will use the final rankings of countries as determined by WEF and IMD, and discuss Malaysia's international competitiveness vis-à-vis other developing economies.

The study will run a regression analysis using Windows SPSS (Statistical Package for Social Sciences) on several location specific factors which impact on FDI inflow for 21 developing economies, including Malaysia drawn from IMD's list of competitive economies. Focus is on the 21 developing economies, including the four NICs (Newly Industrialising Countries) of Singapore, Taiwan, Hong Kong and Korea based on the consideration that the competition for FDI inflow is among the developing economies themselves. This is because it is an established fact that the developed countries as major sources of FDI will channel the majority of FDI inflow to the developed countries. Hence, the intense competition among developing economies for the remaining FDI share meant for developing countries.

It is pertinent to mention that countries eager to attract FDI will try to improve on their location specific assets, such as incentives and infrastructure. For example, Malaysia has been generous in offering a host of investment incentives, including tax holidays, investment tax allowance, reinvestment allowance and export incentives. However, it is necessary to note that investment incentives are seldom cited by foreign investors as the main reason for investing in a particular country, and that such incentives are often viewed as compensation for disincentives (Ariff, 1991).

The factors used in the regression analysis comprise statistical data and soft data obtained from IMD's Executive Survey. The factors are the following:

- GDP as a proxy for market size (statistical data).
- GDP growth as a proxy for expected growth in market size (statistical data).
- Exports: to establish that higher FDI inflows are associated with higher host country exports (statistical data).
- Control: whether foreign investors may not acquire or are free to acquire control in a domestic company (soft data).
- Political system: whether the political system in the host country is not adapted or well adapted to today's economic challenges (soft data). A more

relevant factor influencing FDI inflow would be political stability. However, IMD's Executive Survey does not include this important factor.

- Corporate taxes: whether corporate taxes discourage or encourage entrepreneurial activity (soft data)
- Incentives: whether investment incentives are insufficient or sufficient to attract foreign investments (soft data)
- Infrastructure: whether infrastructure maintenance and future development is not adequately or adequately planned and financed (soft data).
- Improper practices: whether improper practices such as bribing or corruption prevail or do not prevail in the public sphere (soft data).
- Transparency: whether the government does not often communicate its intentions successfully or is transparent towards citizens (soft data).

### **3.4. Considerations for Factor Choice**

The factors GDP and GDP growth are included in the regression analysis, as the former is a proxy for market size of the target country, while the latter is an indicator for expected growth in market size. FDI is often attracted to countries with a large GDP, such as the developed countries, or to countries with large populations, such as China, Brazil and Indonesia. The export factor is included based on the consideration that FDI is drawn to countries which can be used as platforms for exports. Countries used as offshore bases for export will typically reflect higher exports, usually expressed as a percentage of GDP.

The factor "control" is regarding whether foreign investors may not acquire or are free to acquire control in a domestic company. It is included in the regression analysis on grounds that with increasing globalisation and the demands on liberalisation, foreign investors desire to be treated like domestic investors, and to be free to acquire control in domestic companies (except for certain key industries such as defence). A higher score on this factor implies that foreign investors are free to acquire control in domestic companies.

The factor political system is included in the absence of political stability. This question in the IMD Executive Survey asked respondents whether the political system in the host country is not adapted or well adapted to current economic challenges. A high score on this factor suggests that the political system is geared to current economic challenges.

The factors corporate taxes, investment incentives and infrastructure can be regarded as the location specific assets within the control of the host country. For example, corporate taxes can be reduced or generous investment incentives given to enhance the attractiveness of the host country. Hines and Rice (1994) have found that low tax rates are associated with high FDI. Likewise, good and adequate infrastructure has an advantage in attracting FDI (Wheeler and Mody, 1992).

The factors improper practices and transparency are included in the regression analysis as these are current issues which have assumed increasing importance and could impact on the nation's competitiveness as an FDI target. For example, a nation which has little corruption and scores highly on transparency makes a more attractive FDI target. Shang (1997) found that corruption acts like a tax, discouraging investment inflows.

### **3.5. Analysis**

The study will discuss Malaysia's international competitiveness as indicated by the rankings determined by WEF and IMD. Based on the regression analysis, the study will discuss the coefficient of determination, that is the explanatory power of the predictor variables (location specific assets) on the dependent variable (FDI inflow), the significant predictor variables, and to establish whether there is statistical evidence of a linear relationship between the variables.

The study will also try to establish the following correlations:

- Larger FDI inflows are positively correlated with favourable rankings.
- Economic growth rates are positively correlated with FDI inflows.
- Higher FDI inflows are associated with higher host country exports.

In addition, the study will examine Malaysia's ranking on the other factors of FDI as used in the regression analysis. The more tangible factors are "control", political system, corporate taxes, investment incentives and infrastructure. These factors are within the control of the host country, and countries compete for FDI through enhancing the attractiveness of these factors to foreign investors. The soft issues are improper practices and transparency. A higher ranking on these factors will contribute towards a more favourable overall ranking.