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THE ROLE OF FOREIGN DIRECT INVESTMENT IN SOCIO-ECONOMIC DEVELOPMENT - A CASE STUDY OF VIETNAM DURING THE TRANSITION PERIOD

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ABSTRACT

The role of Foreign Direct Investment (FDI) in the socio-economic development of developing countries, especially countries in transition toward a market-oriented economy, has been the topic of debate between several schools of thought, notably the mainstream and radical views.

The mainstream view argues that FDI flows cover the savings-investment, foreign exchange, technological and fiscal gaps in developing countries, and hence promote economic growth. In contrast, the radical view argues that FDI flows are detrimental to socio-economic development, they have not supplemented but substituted for domestic savings, and thus they have deteriorated the balance of payments and failed to address poverty problems in developing countries. In reality, FDI flows have provided positive impacts on socio-economic development in some developing countries, especially Asian newly industrialising countries (NICs), but generated many detrimental effects in other developing countries. In Asian NICs, FDI flows tend to be useful and have fewer detrimental effects because the governments of those countries have intervened appropriately and created favourable environments for FDI through implementing export-oriented industrialisation strategies.

In the case of Vietnam, about $35.3 billion of FDI was committed, of which $14.2 billion was implemented, over the 1988-1998 period. Such large amounts of FDI flows have created significant impacts on the socio-economic development of Vietnam. Over the 1988-1998 period, FDI flows have accounted for around one-third of Vietnam's investment, over 20 percent of Vietnam' exports in 1998 and overall, between 1 percent to 1.5 percent of annual GDP growth. However, the unequal allocation of FDI flows between regions and provinces in Vietnam may promote socio-economic development in some regions and provinces but also widen the gap between rich and poor regions.

The overall success of attracting and utilising FDI flows in Vietnam has been attributed to the role of government policies that maximise the positive impacts and minimise the detrimental effects of FDI flows. Government's tax preference policies and domestic protection policies have been found to play an important role in the performance of foreign-invested enterprises.

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ABBREVIATIONS

$: United States dollar

AFTA: ASEAN Free Trade Area

APEC: Asian Pacific Economic Co-operation

ASEAN: Association of Southeast Asian Nations

BCC: Business Cooperation Contract

BOP: Balance of Payments

BOT: Build-Operation-Transfer

BT: Build-Transfer

BTO: Build-Transfer-Operation

CU: Custom Union

DFI: Direct Foreign Investment

EC: European Community

EOI: Export-Oriented Industrialisation

EPZs: Export Processing Zones

EU: European Union

FDI: Foreign Direct Investment

FIEs: Foreign Invested Enterprises

FIPs: Foreign Invested Projects

FTA: Free Trade Area

GDP: Gross Domestic Product

GOV: Government of Vietnam

GSO: General Statistical Office

ICOR: Incremental Capital Output Ratio

IMF: International Monetary Fund

IOCR: Incremental Output Capital Ratio

ISI: Import Substitution Industrialisation

ISO: International Organisation for Standardisation

IZs: Industrial Zones

MNCs: Multi-national Corporations

MOSTE: Ministry of Science, Technology and Environment

MOT: Ministry of Trade

MPI: Ministry of Planning and Investment

NAPES: National Asia Pacific Economic and Scientific Database

NICs: Newly Industrialising Countries

ODA: Official Development Assistance

SOEs: State Owned Enterprises

SRV: Socialist Republic of Vietnam

TNCs: Transnational Corporations

UNDP: United Nations Development Program

VND: Vietnam Dong

VTA: Vietnam Tourism Authority

WB: World Bank

CHAPTER I:
INTRODUCTION

Foreign Direct Investment (FDI) flows to Vietnam during the 1988-1998 period have been considered by many observers and policy makers to be critical in the transition process from a centrally planned economy to a market-oriented economy. As a result of the government's socio-economic reform programme which started in 1986, annual committed FDI flows in Vietnam increased from zero in 1988 to $8.6 billion in 1996 and made Vietnam second in the world in terms of FDI as percentage of gross national product (WB 1997a, p.17).

FDI flows not only to Vietnam but also to many other developing countries, making use of their comparative advantages of cheap labour and natural resources. Arguably, as a result of FDI, many developing countries, such as the newly industrialising countries (NICs) of Asia, have achieved the status of middle-income industrialised economies.

However, debates still take place about the role of FDI in the socio-economic development process, whether FDI is useful or detrimental in socio-economic development and what government can do to make use of FDI flows. In particular, such debates have continued between the proponents of both what will be referred to as the mainstream and radical views.

The mainstream view argues that FDI flows cover the savings-investment, foreign exchange, technological and fiscal gaps in developing countries, and hence promote economic growth. Moreover, FDI also brings in modern technology and management skills that help to improve a country's competitiveness and promote the industrialisation process. The mainstream view argues that high economic growth and changes in economic structure as well as the industrialisation process also provide backward and forward linkages to alleviate poverty and income inequality in developing countries in the long term.

In contrast, the radical view argues that FDI flows are detrimental to socio-economic development, that they have not supplemented, but have substituted for, domestic

savings, and thus they have caused the balance of payments in developing countries to deteriorate. The radical view also criticises FDI flows for failing to address poverty problems in developing countries because FDI tends to introduce capital-intensive technology that reduces, rather than generates, employment.

This thesis examines the arguments put forward by both mainstream and radical views regarding the motivation and the role of FDI in socio-economic development. It also analyses the role of government policies in promoting and utilising FDI flows in several developing countries as well as in countries in transition towards a market economy. Several examples of FDI flows, especially examples from Asian NICs, will be used to illustrate and support those arguments.

The thesis will use Vietnam as a case study. This is the first attempt to provide detailed analysis and insights into the operation and contribution of FDI in Vietnam during the 1988-1998 period. Moreover, this thesis will show that under the unique conditions of transition towards a market economy, the government of Vietnam has intervened appropriately to maximise the positive impacts and minimise the detrimental effects of FDI, especially on gross national savings and investments, foreign exchange earnings, economic growth, industrialisation process and poverty alleviation. Based on this analysis, the thesis will draw some policy implications for FDI mobilisation and management in the future.

This thesis consists of nine chapters as follows:

Chapter I: Introduction.

This chapter identifies the necessity of the research and outlines both the structure and the method of the thesis as well as the sources of data used in the thesis.

Chapter II: Theories on Foreign Direct Investment.

This chapter examines the arguments and empirical evidence put forward by both the mainstream and radical views about the role of FDI flows in socio-economic development, especially the contribution of FDI flows to domestic savings and

investment, foreign exchange earnings, technology transfer, industrialising process and poverty alleviation.

Chapter III: Foreign Direct Investment, Economic Integration and Government Intervention.

This chapter examines the literature on the role of government policies in maximising the positive impacts and minimising the detrimental effects of FDI flows, such as investment requirements and incentives, and trade policies. Moreover, the relationship between economic integration and FDI flows and how economic integration helps to induce FDI flows will also be analysed. Attention is also given to the role of government in attracting FDI flows in countries in transition towards a market economy.

Chapter IV: Overview of Socio-economic Development and Foreign Direct Investment Flows in Vietnam.

This chapter sets the context of the Vietnam case study. It reviews socio-economic development in Vietnam since the reform started in 1986 as well as the volume and structure of FDI flows during the 1988-1998 period.

Chapter V: Macro-economic Impacts of Foreign Direct Investment in Vietnam.

This chapter examines the contribution to - and impacts of FDI flows on - domestic savings and gross national investment, foreign exchange earnings, government budget and economic growth in Vietnam in the 1988-1998 period.

Chapter VI: Foreign Direct Investment and Industrialisation Process in Vietnam

This chapter looks at the contribution of FDI flows to the industrialisation process in Vietnam by examining the role of FDI flows in transferring modern technology, and in promoting the government's dual industrialisation strategy of export-oriented industrialisation and import substitution industrialisation. This chapter also analyses

government policies that influence the contribution of FDI flows to the industrialisation process.

Chapter VII: Foreign Direct Investment, Regional Development and Poverty Alleviation.

This chapter examines the impacts of FDI flows on regional development and poverty alleviation by analysing factors influencing the regional allocation of FDI flows, and the impacts of FDI flows on economic growth of each region as well as the employment generation effects of FDI flows.

Chapter VIII: Policy Implication.

Based on the findings of previous chapters, this chapter generalises several policy implications that will be used to maximise the positive impacts and minimise the detrimental effects of FDI flows in Vietnam in the future. Those policy implications are very important for boosting the FDI flows to Vietnam that started to fall after 1997 as a consequence of the regional financial crisis.

Chapter IX: Conclusion.

This chapter will return to, and assess, the arguments of both the mainstream and radical views about the role of FDI flows in socio-economic development as well as the role of government in making use of FDI flows. The main conclusion is that FDI flows may generate either useful impacts or detrimental effects on socio-economic development in developing countries, depending on the government policies as appropriate government policies will maximise the useful impacts and minimise the detrimental effects. In the case of Vietnam, FDI flows over the 1988-1998 period generated positive impacts on socio-economic development, thanks to appropriate government policies.

The research method used in this thesis will be a combination of reviewing the relevant literature, simple qualitative and quantitative descriptive analysis and regression analysis. In chapters II and III, the body of literature relating to foreign direct investment, its impacts on socio-economic development and the role of government in

making use of foreign direct investment will be discussed and reviewed. Several examples, case studies and empirical evidence, especially examples, case studies and evidence from Asian NICs, will be used to support the arguments on the role of foreign direct investment.

In chapters IV, V, VI and VII, simple qualitative and quantitative descriptive analyses will be used to analyse the contribution of foreign direct investment to socio-economic development in Vietnam. Several case studies will be used to illustrate such contributions. Moreover, regression analyses will be used in chapters VI and VII to examine the role of government policies in making use of foreign direct investment.

The data used to analyse the contribution of foreign direct investment to socio-economic development in Vietnam come from several sources. The general data on the socio-economic development of Vietnam and FDI flows to Vietnam over the 1988-1998 period come from official publications such as Vietnam's statistical yearbooks, reports of international organisations such as the World Bank, International Monetary Fund, Asian Development Bank, and the United Nations Development Program. Data on the performance of individual foreign direct investment projects come from the database of Vietnam's Ministry of Planning and Investment. Such data have been collected through the quarterly survey of foreign direct investment projects. However, the low level of reliability of such data requires extra care in interpreting the results of several analyses that are based on such data.

Nevertheless, as this thesis is the first attempt to analyse such data by using both descriptive and regression analyses, it will provide useful insights into the operation and contribution of FDI in Vietnam. In broader terms, this thesis will contribute to the global debates on the role of FDI flows in developing countries in the transition period and to the discussion on the role of government intervention in mobilising and utilising FDI flows.

CHAPTER II:
THEORIES OF FOREIGN DIRECT INVESTMENT

Foreign Direct Investment (FDI) has become an important part of foreign capital flows in developing countries, especially since the early 1990s, financing a large proportion of national gross investment in developing countries. However, the role of FDI in promoting socio-economic development is seen variously as either useful or detrimental and has been a controversial topic for discussion between several schools of thought. This chapter first reviews several theories about the nature and motivation of FDI flows. Then the arguments of the mainstream view, which support the important and useful role of FDI in socio-economic development, as well as the arguments of the radical view, that FDI is detrimental to socio-economic development in developing countries, will both be examined.

This chapter will look at the impacts of FDI on several aspects of the socio-economic development process: on domestic savings, national gross investment, balance of payments, government budget, transfer of technology and management skills, on poverty alleviation and changing economic structure in developing countries. The main findings of this chapter and chapter III will set the foundation for analysing the impacts of FDI flows on Vietnam over the 1988-1998 period in the following chapters.

2.1. Overview of Foreign Direct Investment.

2.1.1. Definitions of foreign direct investment.

There are several ways to define foreign direct investment. According to the International Monetary Fund, FDI includes:

- New equity purchased or acquired by parent companies in overseas firms they are considered to control (including establishment of new subsidiaries).
- Reinvestment of earnings by controlled firms, and
- Intra-company loans from parent companies to controlled firms.

(Graham and Krugman 1993, p.16).

The United Nations defines FDI as "an investment involving a long term relationship and reflecting a lasting interest of a resident entity (individual or business) in one

economy (direct investor) in an entity resident in an economy other than that of the investor (host country)" (United Nations 1992 cited in Lindblad 1998, p.1).

In general, FDI has been defined as the long-term investment made by non-residents of a host country through either creation or acquisition of capital assets in the host country. FDI implies the ownership of capital assets large enough to have full or partial control of the enterprise and a physical presence by foreign firms or individuals (Gillis et al. 1992, p.374; Hogendorn 1992, p.414). In this sense, FDI includes not only the transfer of investment capital, but also a whole package of physical capital, modern technology, techniques of production, managerial and marketing knowledge and business practices (Korbin 1977, p.30; Gillis et al. 1992, p.285; Thirwall 1994, p.328).

These definitions of FDI show the difference between FDI and portfolio investment in that the latter is the purchase of a host country's bonds or stock by foreigners, but does not involve a controlling ownership (Gillis et al. 1992, p.374; Hogendorn 1992, p.414; Meyer and Qu 1995, p.1). Compared to commercial loans, FDI appears more attractive to developing countries because it involves a risk-sharing relationship with foreign investors (Fry 1997, p.511).

At present, FDI has mainly been used by Multinational Corporations (MNCs) from both developed and developing countries to achieve the twin objectives of maximising their global profits and diversifying risks for long-term stability (Gillis et al. 1992, p.387; Meyer and Qu 1995, pp. 2-3; Todaro 1996, pp. 535-537; WB 1997a, pp. 13-15).

2.1.2. Foreign direct investment - classifications.

Foreign Direct Investment in developing countries can take several forms depending on the conditions of host countries and foreign investors, on the nature of investment projects and on the bargaining power of both developing countries and foreign investors. Nevertheless, FDI may take the following forms:

- Wholly-owned foreign subsidiaries, in which the whole ownership belongs to a foreign firms.
- Joint-ventures, in which a foreign firm shares the ownership with a local partner.

- 'Fading-out' agreements, in which local partners will gradually take over the management and ownership of existing foreign investments as their capacities increase.
- Licensing technology.
- Franchising of products and brands as done by MacDonalds world-wide.
- Management contracts, in which a foreign firm runs the company with little - or no - equity share.
- Turnkey ventures, in which foreign firms hand over projects to the host country after starting up.
- Agreement in production sharing, in which a foreign firm and local partner share production rather than ownership.

(Oman 1984 cited in Chen 1994, p.10; Gillis et al. 1992, pp. 391-392).

2.1.3. Foreign direct investment - volume and trends.

FDI flows have become very important external financial resources since the early 1990s. The volume of FDI flows to either developed or developing countries has increased from an average of $77 billion in 1983-1987 to $318 billion in 1995. Developing countries have become an important destination for FDI, as their share of global FDI increased from 15 percent in 1990 to one-third in 1996. Notably, FDI flows to developing countries have increased more than five-fold from an average of $18 billion in the 1983-1987 period to nearly $100 billion in 1995 (FIAS 1997, p.5; WB 1997a, p.9). FDI has now become the most important external financial flow to developing countries, accounting for 39 percent of total external financial flows in 1996 (FIAS 1997, p.15).

However, the FDI flows to developing countries have not been distributed equally. There is a tendency for FDI to concentrate on the middle-income countries. In 1996, lower-income countries (excluding China) received FDI flows equal to 1 percent of their GNP, compared to 1.4 percent and 1.5 percent in the same year for lower- and upper-middle income countries respectively. In 1995, 74 percent of FDI flows to developing countries were concentrated in only 10 developing countries. All of these except China are middle-income countries (IFC and FIAS 1997, p.6, pp. 17-19). When using the FDI to GNP ratio, East Asian countries received the highest flows of FDI at

3.5 percent, compared to 0.3 percent for South Asia and 0.7 percent for Sub-Saharan Africa (ibid.).

2.2. Theories of Foreign Direct Investment.

Several theories have been developed to explain the nature and motivation of FDI flows, including the mainstream view, the radical view, Vernon's product life cycle model, the industrial organisation approach, the transaction cost or internalisation theory and Dunning's eclectic theory. The following review of those theories on the nature and motivation of FDI flows will help to examine the impacts of FDI flows on socio-economic development.

2.2.1. Mainstream view.

The mainstream view, especially neo-classical theory, is generally an adaptation of classical economic theory. The mainstream view puts strong emphasis on economic growth, capital accumulation, promoting free market and laissez-faire economics, free trade policies, open markets and individual decision-making.

The mainstream view of foreign direct investment is rooted in the Hecksher-Ohlin-Samuelson model of international factor movements and argues that the international movements of factors of production, including FDI, are decided by the availabilities of primary production inputs in different countries. In this regard, FDI moves from countries where capital is relatively abundant with low marginal productivity to countries where capital is relatively scarce and has higher marginal productivity. The argument of the mainstream view is based on the assumptions of a perfectly competitive market, identical production functions in different countries and of FDI movement in response to difference in interest rates (Bos et al. 1974; Lall and Streeten 1977, pp. 17-18).

2.2.2. Radical view.

The radical view lies largely within the neo-Marxist paradigm and includes not only dependency theory but also other views that can be classified as "anti-establishment". Unlike the mainstream view, the radical view, especially dependency theory, has focused on the social relations of production and on the relations between developed

and developing countries (Dutt 1992, pp. 12-13; Todaro 1996, p.82). The radical view considers underdevelopment in developing countries as an externally induced phenomenon. It is not original or traditional but is, in large part, the historical consequence of the relationship between developed and developing countries (Baran 1957; Frank 1969, p.4).

More specifically, radical theorists like Dos Santos, Cardoso, Sunkel, Frank, Amin and Baran have argued that FDI arose in response to the need of Northern industrial countries for new markets and/or new sources of cheap labour and other inputs (Baran 1957, pp. 177, 325; Frank 1966 and 1969; Cardoso 1972, pp. 91-92; Amin 1977, pp. 172-173; Helleiner 1989, pp. 1453-1454). In their view, FDI is the "basis for a new type of technological industrial dependence to replace earlier forms of dependence" (Dos Santos 1970, p.232).

2.2.3. Other theories.

While the mainstream and radical views provide general arguments about the motivations for FDI flows, there are several theories which explain in more detail the reasons why firms invest overseas.

Vernon's Product Life-cycle Model.

Vernon developed the product life-cycle model to explain the basic evolution of the international production of innovation from export to direct investment overseas. The model includes three phases:

- ***The early or development phase:*** In this phase, the initial demand is small compared to potential demand, production is skilled and labour-intensive rather than capital-intensive, producing small output for the home innovating market.
- ***The growth phase:*** In this phase, the demand for new products is expanded in both home and international markets. Production techniques become standardised and tend toward large-scale and long-run production. Part of the product produced domestically is exported to meet foreign demand. Some overseas investment by innovating firms will start to meet international demand.

- ***The mature phase:*** In this phase, demand in the innovating market is fully met, production technology becomes standardised and during this phase, overseas investment by innovating and foreign firms is likely to reach a peak.

(Parry 1980, pp. 27-28).

International Organisation Theory.

International organisation theory was first mentioned by Hymer (1960), when he explained the movement of FDI in response not to higher interest rates but to finance and to support the international operations of firms. According to Hymer, the operation of firms abroad is determined by firm-specific advantages such as a firm's market position, patents, access to export markets and to credit, and technological advantages (Yamin 1991, Frischtak and Newfarmer 1996, p.297). On the other hand, the market structure or country-specific characteristics also decide the location of FDI activities. The country-specific characteristics can be the cost of labour, the availability of raw materials, energy and capital or population size and GNP per capita (Santiago 1987).

The Transaction Cost or Internalisation Approach.

The transaction cost (or internalisation) approach explains FDI as a response to market imperfection and argues that MNCs, by internalising their economic activities, may minimise the transaction costs caused by market imperfection. Through FDI, structural market imperfection such as tariffs or subsidies, income taxes, import restrictions, foreign exchange controls and other regulatory restrictions can be internalised by MNCs. Market imperfection also imposes transaction costs on the transfer of intangible assets like technology. In order to overcome this problem and maximise the benefit, MNCs would invest in overseas markets instead of selling or licensing their technology or patents (Vernon 1966 cited in Sun 1998, p.5; Caves 1982; Rugman 1986).

Dunning's Eclectic Theory.

According to Dunning's theory, there are three sets of factors that determine foreign direct investment.

- ***Ownership advantages*** include marketing skills, research and development skills or production skills that allow firms to provide goods and services more competitively both in their own countries and in other countries.

- ***Location advantages*** include natural resources, domestic market potential, labour forces, political stability and government policies. These advantages are the main reasons why firms choose to invest in one country rather than another.
- ***Transaction costs*** explain why foreign and local firms choose to combine the ownership advantages and location advantages through an internalising process to overcome the transaction costs such as transport costs, different taxes and charges between countries (tariffs, quota) or other market imperfections.

(Dunning and Narula 1996, pp. 1-2; Bishop 1997, p.11).

It is argued that countries tend to go through five stages of investment path, either to be outward and/or inward direct investors, depending on the changes amongst the three sets of factors mentioned above.

Stage 1: In the first stage, except for its possession of natural assets, the location-specific advantages of a country are insufficient to attract inward investment. At this stage, there is likely to be very little inward direct investment and foreign firms will prefer to export to, and import from, this market or co-operate on a non-equity arrangement basis with indigenous firms (Dunning and Narula 1996, pp. 2-3).

Stage 2: In this stage, inward direct investment starts to rise while outward investment is still low or negligible. A country must possess some desirable location-specific advantages like good physical infrastructure, human resources, and a large domestic market. At this second stage, outward direct investment will emerge, however at a very low growth rate, and countries will increase their net inward investment (Dunning and Narula 1996, pp. 3-4)

Stage 3: Countries in stage three are marked by a gradual decrease in the rate of growth of inward direct investment and an increase in that of outward investment. The country's location-specific advantages increase in the sense that the domestic market is enlarged with rising income and wage rates and domestic innovatory capacity is improved. On the other hand, as domestic wage rates increase, the country's comparative advantage in labour-intensive activities will be reduced. As a result, inward foreign investment will shift towards efficiency seeking production and away from

import substituting production while outward direct investment will be directed to countries at lower stages (Dunning and Narula 1996, pp. 4-6).

Stage 4: The fourth stage is reached when outward direct investment stock exceeds or equals the inward investment stock and the rate of growth of outward FDI is still rising faster than that of inward FDI. At this stage, the locational advantages will be based almost completely on created assets. Domestic firms can compete effectively with foreign firms and penetrate foreign market (Dunning and Narula 1996, pp. 6-7)

Stage 5: At stage five, the net outward investment first falls and later fluctuates around the zero level. At the same time, both inward and outward FDI are likely to continue to increase. This is a scenario which advanced industrial nations are now approaching. At this stage, there is increasing propensity for cross-border transactions to be conducted within MNCs and as countries converge in the structure of their location-bound assets, their international direct investment positions are likely to become more evenly balanced (Dunning and Narula 1996, pp. 7-8).

In research on investment development paths, Narula (1996) found that countries in stage one and stage two have a GNP per capita of lower than $4,926 (at 1988 prices) and include several developing countries like China, Thailand, Malaysia, Mexico, and Brazil. Countries that are approaching stage three with a GNP per capita between $4,926 and $9,853 are Portugal, Korea, Taiwan and Spain. Countries approaching stage four are those like Hong Kong, while countries in stage four and stage five, with a GNP per capita of over $9,853, are all developed countries (Narula 1996, pp. 46-49).

These theories, except Dunning's eclectic theory, have considered the nature and motivation of FDI flows from different perspectives. Dunning's eclectic theory, however, has combined those theories together (except the radical view) in an attempt to understand more fully the nature and motivation of FDI flows. The thorough understanding of the nature and motivation of FDI flows will support the examination of the impacts of FDI flows in the following sections.

2.3. The Impacts of Foreign Direct Investment on Socio-economic Development.

This section will examine the arguments put forward mainly by the mainstream and radical theorists on the impacts of FDI flows on several aspects of socio-economic development such as domestic savings, foreign exchange earnings, national gross investment, government budget, technology transfer, industrialisation processes and poverty alleviation in developing countries.

2.3.1. General arguments of the mainstream and radical views.

The mainstream view argues that FDI flows to developing countries and creates benefits to both developed and developing countries. The mainstream view's arguments on the useful role of FDI in promoting socio-economic development have built on the gaps model and the Harrod-Domar model.

The mainstream view has argued that developing countries on the way to take-off are likely to face three constraints, namely the savings-investment gap, the foreign exchange gap and the fiscal gap. Besides these gaps, skill constraints are likely to remain during the development process (Chenery and Strout 1966; Chenery and Cater 1973; Papanek 1973; Dowling and Hiemenz 1983; Cassen 1986; Mosley 1987; Bacha 1990; White 1992, 1998).

The savings-investment gap is created by the inability to generate a sufficient level of domestic savings to finance the level of investment required to achieve the targeted growth rate, especially when domestic consumption is already at a minimum level (Chenery and Strout 1966, p.682).

The foreign exchange gap appears when foreign exchange earnings from exports cannot increase quickly enough to meet the import requirements of capital, intermediate and consumer goods required to achieve the targeted growth rate. The import requirement is decided by the level of income, rate of investment and pattern of consumer demand (Chenery and Strout 1966, p. 682, 689; Tan 1995, p. 26).

While the savings-investment gap and foreign exchange gap might not be equal ex-ante, they must be equal ex-post. At the ex-ante, one gap may be larger than the other and

therefore constrain economic growth. If the savings-investment gap is larger, the economy is said to be constrained by the shortage of domestic savings, the savings-investment gap is said to be binding, and the foreign exchange earnings are under-utilised. In that case, foreign exchange earnings could be used to import non-essential consumer goods. In the case of foreign exchange binding, domestic savings would be reduced through lower taxes or more liberal consumer credit (Chenery and Strout 1966, pp. 680-681; Chenery and Eckstein 1970, p.968).

Besides the savings-investment gap and the foreign exchange gap, developing countries also suffer from a fiscal gap. The fiscal gap is different from the savings-investment gap and foreign exchange gap in the sense that overall savings are, in principle, available to finance additional investment demand, but many developing countries find it difficult to mobilise investment, especially private investment, due to the government budget deficit. The government budget deficit may constrain private investment through increasing the inflation rate, while government investment in infrastructure and basic industry creates the stimulus to mobilise private investment, and set an upper-limit for profitable private investment to occur (Bacha 1990, p.283; Taylor 1990, p.76; Shapiro and Taylor 1990, p.872). Barro (1989, p.29) in a recent study of 72 countries finds that "an extra unit of public investment induces about a one-for-one increase in private investment".

In those cases, the inflow of foreign direct investment is necessary to fill either the savings-investment gap or the foreign exchange gap - whichever is larger - and create government income and hence promote economic growth. The impacts of FDI flows on economic growth have been calculated by using the Harrod-Domar model.

The underlying assumption of the Harrod-Domar model is that the output of the whole economy depends on the amount of capital investment in the whole economy (Gillis et al. 1992, p.43). If the output is called Y, then:

$$Y = K / k$$

$$\Delta Y/Y = \Delta K/(kY) = I/(kY) = \frac{(S/Y + F/Y)}{k}$$

or $$g = s/k$$

Where K: Capital stock

k: capital-output ratio

ΔY: Change in output

ΔK: Change in capital stock = I: Gross investment

s: Saving rate

g: Growth rate

S: Gross domestic savings

F: Foreign capital flows

From the above equations, the policy implication of the Harrod – Domar growth model is that the higher the FDI flows, the higher the economic growth rate as economic growth rate is directly proportional to foreign capital flows, including FDI flows (Gillis et al. 1992, p.44; Todaro 1996, p.73).

In contrast, the radical view argues that FDI flows are harmful to socio-economic development in developing countries (Baran 1957, pp. 177, 325; Frank 1966 and 1969; Cardoso 1972, pp. 91-92; Amin 1977, pp. 172-173; Helleiner 1989, pp. 1453-1454). This critique is based on the argument that the relationship between developed countries and developing countries is a "metropolis-satellite relationship" in which developed countries maintain a monopoly over the developing countries and that relationships of dominance and surplus extraction between metropolis and satellite serve both to channel surplus to the developed countries and to sustain underdevelopment (Brewer 1980, pp. 159-167, p.971).

Such criticisms have been intensified recently within the framework of the globalisation process (Korten 1995; Mander and Goldsmith 1996; Khor 1996; Scott 1997; Kiely 1998; Palan 2000). As globalisation is defined as "...a shift from a world of distinct national economies to a global economy in which production is internationalised and financial capital flows freely and instantly between countries" (OECD 1996 c, p.3), FDI

flows become an essential component of the globalisation process. The radical view considers such globalisation and its components of FDI, free trade and aid as part of a liberal capitalist agenda which reaffirms and entrenches exploitative relations (Korten 1995, p.28; Palan 2000, p.147). More specifically, Korten (1995) has criticised FDI flows under the globalisation process as a means of colonising the resources of developing countries. The FDI flows from Japan, and recently from Asian NICs to neighbouring countries, are typical examples. Korten concluded that "Economic globalisation is largely a modern form of the imperial phenomenon, and it carries much the same consequence" (Korten 1995, p.28).

Thus, according to radical theorists, FDI is a method to drain the surplus out of developing countries and FDI flows actually create detrimental effects on socio-economic development in developing countries through causing the balance of payments to deteriorate, displacing the indigenous production, technology and pattern of consumption, and the social structure - which leads to increasing income inequality.

2.3.2. Foreign direct investment, domestic savings and national gross investment.

As mentioned in the previous section, developing countries on the way to take-off are facing a savings-investment gap and hence FDI is argued by the mainstream view to flow in to bridge this gap and hence promote socio-economic development. According to mainstream theorists, FDI can increase national gross investment by directly supplementing - and indirectly stimulating - domestic savings.

FDI is considered as a part of national gross investment and the flows of FDI directly add to the locally available stock of investment capital. Nowadays, the FDI made by MNCs has brought in a huge amount of necessary capital investment as they have access to financial resources and can obtain investment capital on better terms than can local firms. Moreover, the entry of FDI into developing countries may stimulate the flows of Official Development Assistance (ODA) from MNCs' home governments (Lall and Streeten 1977, pp. 53-54). The development of countries in the Association of South East Asian Nations (ASEAN) in the 1980s has shown the direct contribution of FDI on their national gross investment (Table 2.1).

Table 2.1: ASEAN-Foreign Direct Investment Ratio

(percent)

	Indonesia	Malaysia	Philippines	Singapore	Thailand
	Foreign Direct Investment / Gross Domestic Capital Formation				
1980	1.2	12.5	-1.1	21.0	2.2
1985	1.3	8.1	0.3	10.7	1.8
1986	1.1	6.8	2.9	22.4	2.9
1987	1.6	5.8	5.8	33.3	1.6
1988	2.2	8.0	14.3	38.6	6.3
1989	2.0	16.0	6.1	22.8	7.9
1990	2.5	21.9	3.3	24.5	7.9

Source: Modified from Table 3, Yue 1993, p.74.

Table 2.1 shows that FDI has contributed greatly to national gross investment, as much as 38.6 percent of gross domestic capital formation in Singapore in 1988. Moreover, FDI flows have increased more rapidly compared to ODA and commercial loans and by 1989-1990 have taken over ODA and commercial loans (Yue 1993, p.75).

Besides contributing directly to national gross investment, FDI also stimulates domestic savings, and therefore indirectly increases national gross investment. In developing countries, FDI can help to improve infrastructure and investment conditions and hence promote domestically financed investment and offer more attractive investment opportunities. Moreover, the additional foreign capital investment brought by foreign investors may also help to relieve the pressure on the rate of interest in capital markets and hence encourage domestic investment (Areskoug 1976 and Ahiakpor 1990 cited in Sun 1998, p.9).

The operation of foreign invested enterprises (FIEs) in developing countries also provides backward and forward effects that stimulate further investment by local entrepreneurs. A backward linkage is derived input demand in production of other related industries generated by an increase in final demand for the products of a given industry (Hirschman 1958). In this sense, FDI-created backward effects are the demand on locally made materials for the operation of FIEs. FDI in manufacturing and high value-added industries is said to have high backward effects. In this sense, the local content is an important indicator by which to measure the backward effects of FDI.

FDI-created forward linkage is a demand of every other industry for the product of a given FIE. FDI in primary industries is said to have high forward linkage effects since primary products require further processing in other sectors (Sun 1998, pp. 101-102).

Backward linkages can be seen clearly in Asian developing countries. In Taiwan between 1972 and 1981, local purchasing by foreign firms increased by 8.2 times and rose from 40.8 percent of their total purchase in 1972 to 53.3 percent in 1981 (Chi 1987 cited in Lim and Fong 1991, p.94). In the Philippines, domestically-purchased inputs accounted for between one-fourth and one-third of the cost of production of MNCs (Lindsey 1986, p.370).

The argument of the mainstream view is that FDI stimulates both domestic and national savings, and this has been supported by empirical evidence in several Asian countries in which FDI has had a favourable effect on the domestic saving rate. The regression analyses by Gupta and Islam (1983 cited in Lee et al. 1986), Lee, Rana and Iwasaki (1986), Borensztein, deGregorio and Lee (1995), and Fry (1997) have found that FDI flows are positively correlated with either domestic savings or national investment. Borensztein, deGregorio and Lee (1995), when studying the role of FDI in 69 developing countries during the period from 1970-1989, found that a dollar of FDI flows will increase the gross investment in developing countries by between $1.50 and $2.30 (Borensztein et al. 1995, pp. 14-15).

Unlike mainstream theorists, radical theorists have argued that the direct contribution of FDI to national gross investment is actually very small, and that FDI has not stimulated but decreased domestic savings by crowding out local entrepreneurs (Frank 1969; Biersteker 1981; Jenkins 1987; Elson 1988; Lall and Streeten 1997). According to radical theorists, much FDI in developing countries takes place with minimal inflows of capital from abroad. Foreign investors finance their investment in developing countries by reinvesting their profit or through borrowing funds locally. The United Nations estimated that in Latin America during the period 1957-1965, U.S. MNCs financed 83 percent of their total investment from local borrowing sources (Colman and Nixson 1978 in Elson 1988, p.307). In 1973, the report from the U.S. Senate Committee on

Finance revealed that less than 15 percent of the total financial needs of U.S-based manufacturing subsidiaries abroad originated from U.S. sources (Elson 1988, p.307).

For the period 1966-1972, half of the total FDI of U.S. majority-owned affiliates in developing countries was made up of reinvested profit and depreciation and about one-third came mainly from funds borrowed from local sources (Hood and Young 1979 cited in Jenkins 1987, p.96).

Some radical theorists like Frank (1969) have gone further in arguing that investment capital brought to developing countries by foreign investors is quite small compared to the earnings that foreign investors repatriate every year (i.e. profits, royalties and fees). Thus, instead of adding to the capital available to developing countries, FDI leads to a decline of capital or de-capitalisation in developing countries (Frank 1969, p.163).

Moreover, part of the small amount of capital brought to developing countries may be in the form of machinery or capitalised intangibles such as know-how and goodwill which are very difficult to evaluate and therefore may lead to a problem of transfer pricing. Transfer pricing can take the form of over-pricing imported inputs from other branches of the corporation and overcharging inter-affiliate loans, royalties, management fees and overhead charges. The purpose of transfer pricing is to understate the declared profits and dividends in order to achieve larger profit in countries with less stringent tax regimes and lower profit in countries where taxes are high. Moreover, reducing declared profit also helps to avoid legal limits on profit repatriation and avoid the pressure from politicians and trade unions as well as from competitors. Transfer pricing can happen because the transfers generated by FDI are inter-affiliate and not in an open market, hence the real value is hard to detect (Lall and Streeten 1977, pp. 59-69; Helleiner 1989, p.1465; Hogendorn 1992, pp. 422-423).

Furthermore, during the globalisation process, FDI may flow to developing countries but the productive capital investment is "relatively immobile" (Kiely 1998, p.55). The majority of FDI flows to developing countries have been labour-intensive while the high value-added, productive capital investment has still remained in developed countries and this, in turn, undermines the trickle-down effects of FDI flows in developing countries.

Vaitsos (1973,1974), when studying the impact of FDI in the pharmaceutical industry in Columbia, found that reported profits accounted for 3.4 percent of effective return, royalties for 14.0 percent and over-pricing for 82.6 percent. As a consequence, the loss of surplus to Columbia in 1968 was estimated at $20 million (Vaitsos 1973, 1974 cited in Elson 1988, p.305).

Besides the small contribution to gross investment, FDI flows are also criticised by radical theorists for lowering domestic savings through crowding-out domestic entrepreneurs and failure to provide backward and forward linkages. As mentioned earlier, foreign investors borrow large amounts of capital domestically to finance their investments which results in higher interest rates, and fewer capital sources being available to domestic entrepreneurs on favourable terms – and, therefore, domestic investment is crowded out. Foreign investors also compete directly with local entrepreneurs, and based on their advantages of capital, technology, managerial experience and international market access, weaken local entrepreneurs (Biersteker 1981; Lim and Fong 1991; Jansen 1995 cited in Sun 1998, p.9;). In Latin America between 1958 and 1967, 1,309 subsidiaries of U.S. MNCs were established and of the 1,136 subsidiaries for which information could be obtained, 477 had been formed by buying out local enterprises (Biersteker 1981, p.7).

The radical view also argues that FDI has failed to provide backward and forward linkages to stimulate domestic savings. The FDI in extractive industries is a typical example, where foreign investors largely import inputs from parent companies and export the raw materials for processing in developed countries. That is also the case of FDI in early stages of manufacturing growth with the operation depending almost exclusively on imports of both foreign capital and goods (Jenkins 1987, p.101; Lim and Pang 1991 cited in Lindblad 1998, p.165). According to the radical view, such kinds of FDI have created MNC enclaves in developing countries.

In response to the criticisms of the detrimental impact of FDI, the mainstream view argues that any crowding-out, if it happens, would be of investment with a lower rate of return (Hogendorn 1992, p.421). In the case of Malaysia, there is no evidence of crowding-out of domestic investors as domestic savings were in excess of investment,

increasing from $1.8 billion in 1986 to $4.3 billion in 1987 (Lim and Fong 1991, p.99). In the case of Argentina between 1960-1981, Morisset (1989) has found no evidence to support the criticism that FDI crowds out domestic savings. In the regression analyses of Borensztein, de Gregorio and Lee (1995) and Fry (1997), the coefficients between FDI and national gross investment are greater than 1, implying that FDI does not substitute or crowd-out domestic savings.

In short, there is a debate between the mainstream and radical views on the role of FDI in domestic savings and national gross investment. The mainstream view argues that FDI flows increase national gross investment while the radical view criticises FDI for decreasing it. Empirical evidence seems to support neo-classical arguments.

2.3.3. Foreign direct investment and foreign exchange earnings.

Another difficulty that developing countries are facing is the foreign exchange gap between the foreign exchange generated by export and the foreign exchange required to import goods and materials for the socio-economic development of the country. According to the mainstream view, FDI and other foreign resources (ODA, commercial borrowings) are needed to cover this gap (Todaro 1996, p.538).

Foreign Direct Investment flows can be either in cash or in kind, but FDI flows in cash contribute directly to developing countries' foreign exchange earnings. In the case of Indonesia, FDI flows in cash were more significant than FDI in kind in the mid-1980s (Table 2.2).

Table 2.2: Implementation of Foreign Investment in Indonesia, 1967-1985

($ million)

1967-1980		1981		1982		1983		1984		1985	
In Cash	In Kind	In Cash	In Kind	In Cash	In Kind	In Cash	In Kind	In Cash	In Kind	In Cash	In Kind
1,813.4	2,226.5	213.1	165.9	218.2	241.4	238.0	278.9	266.2	121.8	422.6	176.0

Note: Figures of investment in petroleum and the banking sector are excluded.

Source: Table 3 in Langhammer 1991, pp. 314-315.

More important than direct contribution to foreign exchange earnings, FDI is said to promote export activities in developing countries by providing access to international markets and by facilitating export production.

Developing countries always find themselves in a very difficult position when attempting to penetrate new foreign markets while MNCs, based on their experience of selling their products world-wide, taking advantage of fashioning and adhering long-term contracts in standardised products and having a good reputation for delivering satisfactory products on reliable schedule, can easily enter new foreign markets or re-enter their home market (Cadroso and Dornbusch 1989, p.1407; Gillis et al. 1992, p.391; Ozawa 1992, pp. 33-34). Moreover, by co-operating with foreign investors, developing countries can gain access for their products to their home market or - through intra-MNC trade that increases rapidly - developing countries' products can be introduced into new foreign markets. By joining with MNCs, developing countries can enjoy the advantage of scale economies in marketing that they could not have if operating on their own (Gillis et al. 1992, p.391).

The success of Asian NICs in the export of manufacturing products has been attributed to the role of MNCs which primarily undertook all manufactured export marketing in the 1960s and 1970s. In Singapore, MNCs are in charge of marketing for the output of wholly or majority foreign-owned subsidiaries (Helleiner 1989, p.1472; Bishop 1997, p.46).

Foreign Direct Investment also increases the foreign exchange earnings of developing countries by generating new export products. MNCs may have better export potential for locally produced products because of their global business contacts, marketing skills and advanced technology. Those advantages also enable MNCs to operate successfully in the conversion of import-substitution industries to export-oriented industries (Blomström 1990).

Studies have shown that, in many cases, FDI is export-orientated. The main reasons for investing in developing countries are low labour costs, expansion of markets and export to third countries. By investing in developing countries, MNCs can lower the cost of production and make their products more competitive in the world market. Furthermore,

by investing in developing countries, MNCs can avoid the problem of revaluation of their home currencies against the currencies of major export markets (Riedel 1991, p.141; Wells 1993).

The trade creation effect of FDI is clearly seen in the case of Japanese FDI (Kojima 1978; 1991). According to Kojima, Japanese FDI promotes trade and exports in developing countries because it flows to industries where developing countries have comparative advantages - and where the technological gap between Japan and developing countries is small, this makes it easy to transfer technology and improve productivity. In fact, Japanese FDI which has flowed into labour-intensive industries in developing countries has created huge trade effects (Kojima 1978, 1991). The export orientation of Japan FDI in Asian countries ranges from highest in the natural-based sector like food processing, wood processing (over 55 percent of production in 1988) to the lowest in the heavy, capital-intensive manufacturing sectors such as chemicals and iron and steel (over 27 percent and 16 percent respectively). For the 1980-1988 period, the share of exports in total manufacturing production of Japanese FDI in Asian countries was on the rise, with wood processing being the exception (Riedel 1991, pp. 144-145).

In several developing countries, FIEs' exports have contributed greatly to countries' foreign exchange earnings. In Taiwan, total exports of FIEs accounted for 24.4 percent of total exports in 1984 (OECD 1995a, p.160). In Singapore, the share in total manufacturing exports of FIEs was between 82 to 85 percent during the 1980s and 1990s (Lindblad 1998, p.164). In the case of Brazil, Wilmore (1986) found that FIEs have higher rates of export performance compared to local firms and, of the FIEs studied, two-thirds export at least part of their output where less than half of local firms are exporters (Wilmore 1986, p.496).

In short, the mainstream view argues that FDI flows to developing countries help to increase foreign exchange earnings either directly, by adding to foreign exchange availability, or indirectly, by providing access to foreign markets for the developing countries' export products and by generating new export products.

Unlike the mainstream view, the radical view criticises FDI for having detrimental impacts on the balance of payments (BOP) on both current and capital accounts as a consequence of substantial importation of intermediate products and capital goods as well as repatriation of profits, interest, royalties, and management fees (Frank 1966; Lall and Streeten 1977; Todaro 1996, p.539). Lall and Streeten (1977), when examining the impact of FDI on BOP, found that of 133 FIEs studied, 122 FIEs had negative effects on BOP and two-thirds of these firms had negative effects of more than 20 percent of the sale value (Lall and Streeten 1977, pp. 130-144).

The domination of foreign investors at the early stages of manufacturing development in developing countries seems to support the criticisms of the radical view. Backward linkages have been very weak and FIEs have imported their inputs (both foreign capital and foreign goods) almost exclusively from overseas (Lim and Pang 1991 cited in Lindblad 1998, p.165). Even when local content in products produced by FIEs has increased, radical theorists argue that the increase is slow and the critical materials or components are still imported from abroad (Lindblad 1998. p.188). The balance of payments transactions of foreign affiliates in Malaysia (Table 2.3) has shown that during the 1990-1994 period, the import of FIEs reached $116.7 billion and created a trade deficit of $2.36 billion.

Table 2.3: Balance of Payments Transactions of Foreign Affiliates in Malaysia, 1990-1994

($ million)

	1990	1991	1992	1993	1994	1990-94
Affiliate trade (net)	787	-1,302	249	-166	-2,028	-2,360
- Exports	15,462	18,284	22,316	26,177	34,483	116,722
- Imports	-14,675	-19,586	-21,967	-26,343	-36,511	-119,082
Royalties	-167	-216	-275	-273	-273	-1,213
Direct Investment Income	-1,926	-2,275	-2,939	-3,222	-3,846	-14,208
New FDI Inflows	2,332	3,998	5,183	5,006	4,348	20,867
Total Transactions of Affiliates	1,017	205	2,318	1,345	-1,799	3,086

Source: Table 9 in OECD 1998, p.58.

The main argument of the radical view on the detrimental effects of FDI focuses on the MNCs' extraction of surplus from developing countries and the transferring of this to developed countries through remitting profits, royalties, management fees etc. (Frank 1966; Elson 1988, p.302). This extraction has lowered the capital account of developing countries and led to an increasing debt burden.

Moreover, the heavy emphasis of FDI in the primary commodity export sector in developing countries has led to deterioration in terms of trade, created a backwash effect and diminished developing countries' comparative advantage (Singer 1984, p.287; Cadroso and Dornbusch 1989, p.1412).

With regard to the criticism of the radical view on the outflows of capital as a consequence of FDI, the mainstream view counters that such outflows are not very serious bearing in mind that profit outflows are directly a result of the success of FDI projects. That is also a point of difference between FDI and commercial loans (Helleiner 1989, p.1456; Cadroso and Dornbusch 1989, pp. 1414-1415; Hogendorn 1992, p.420). One study has shown that FDI-related profit outflows tend to reduce during economic recession (Hogendorn 1992, p.420).

A recent study by Fry (1997) on the role of FDI in six East Asian countries seems to support the mainstream view, in which FDI worsens the current account balance in the short run by increasing imports but the FDI ratio over the preceding five years raises the export ratio as FDI in East Asia has been concentrated in the export sectors of these economies. In fact, an increase of FDI from zero to 10 percent of GNP worsens the current account from –0.6 to –6.4 percent of GNP in the short run but improves the current account to 7.6 percent of GNP in the long run (Fry 1997, p.526).

Kojima's theory may explain the different contribution of FDI flows in stimulating export earnings in several developing countries. Kojima's macroeconomic theory divides FDI into two types: trade-oriented, or the Japanese-type and anti-trade-oriented, or the American-type based on comparative advantages and industrial structures. According to Kojima's theory, FDI flows to the industry in which a host country holds comparative advantage over the home country. This flow will promote an upgrading of industrial structure on both sides and accelerate trade between the two countries. That is

the case of Japanese FDI in Asian developing countries which focus on labour-intensive and resources-based industries, where host countries have comparative advantage over Japan and hence create trade between Japan and Asian developing countries (Kojima 1978, 1991).

In contrast, American FDI is concentrated in capital-intensive and high technology industries and that pattern of American FDI has not made use of the host country's comparative advantage. Kojima argued that such investment of U.S. large and oligopolistic firms is anti-trade oriented and, in the long run, may lead to trade-substitution effects (Kojima 1978, 1991).

In conclusion, while the radical view criticises the detrimental impacts of FDI on BOP, there are more convincing examples, arguments and empirical evidence to support the mainstream arguments that FDI creates positive impacts, increasing the foreign exchange earnings of developing countries.

2.3.4. Foreign direct investment and government budget.

Besides the savings-investment and foreign exchange gaps, developing countries also face a fiscal gap, the gap between public investment requirement and locally raised taxes and other incomes. This gap has been considered very large in developing countries where public investment plays an important role in promoting socio-economic development and stimulating private investment, including FDI.

FDI flows can increase government revenue by providing taxes on foreign profits or royalties from concession agreements with foreign investors (Meir 1984 cited in Ahiakpor 1990, p.25; Todaro 1996, p.539). In developing countries that have received substantial FDI, the share of government revenue in national product is considerably higher than in most of the low-income countries (Meir 1984 cited in Ahiakpor 1990, p.25). In Malaysia, tax on FIEs has contributed about 45 percent of total tax received over the period 1962-1970 (Hoffman and Tan 1980 cited in Lindblad 1998, pp. 168-169).

The radical view, in contrast, argues that the contribution of MNCs to developing countries' government budgets is considerably less than it should be as result of tax

concessions, excessive investment allowances, subsidies and transfer pricing (Todaro 1996, p.539). MNCs are criticised for using their economic power to influence developing countries' government policies in directions favourable to MNCs but not to development, bargaining for tax incentives, investment allowances and subsidies (ibid.).

2.3.5. Foreign direct investment and technology transfer.

According to mainstream theorists, the most important impact of FDI flows is the transfer of modern technology and production techniques to developing countries to cover the technology gap and promote socio-economic development.

Technology transfer is defined as the movement of technology from one location to another or from one use to another, or a combination of the two (Smith 1980 cited in Chen 1994, p.2). In the case of developing countries, technology is defined as appropriate for developing countries if the technology includes a set of techniques which are chosen and modified to make the optimum use of available resources - especially unskilled labour - in developing countries (Morawetz 1974 cited in Chen 1994, p.33). In terms of efficiency and sustainability, appropriate technology and techniques are the ones that can have greater prospects for continued employment of local resources (Chen 1994, p.36). Technology transfer is completed when the recipients can operate and maintain the production process without outside assistance and can further develop, and improve the transferred technology (Chen 1994, p.2).

For developing countries, one of the major ways to obtain modern technology is through FDI (Lall and Streeten 1977; Cadroso and Dornbusch 1989; Chen 1990, 1994; Gillis et al. 1992; Ruffin 1993; Borensztein et al. 1995; Todaro 1996; World Bank 1997a; Bishop 1997). FDI from Europe, North America and Japan are the main sources, and in many cases, the only source of modern technology and production techniques (Lall and Streeten 1977, pp. 64-70; Chen 1990, p.395; Gillis et al. 1992 p.390).

On the other hand, FDI from developing countries has different advantages of providing less capital-intensive, small-scale technology and techniques that have been adapted to suit developing countries' conditions, using cheap local material and labour (Helleiner 1989, p.1473; Chen 1990, p.386; Gillis et al. 1992, p.390). This also fits in with the idea of a two-stage of technology transfer to developing countries, in which modern

technology is first introduced from developed countries to the intermediate countries (i.e. Newly Industrialising Countries) and then to developing countries, after modification (Parry 1981 cited in Chen 1990, p.386).

The transfer of technology through FDI to promote socio-economic development is also mentioned in endogenous growth theory, in which socio-economic development in developing countries depends partly on the adoption and implementation of modern technologies that have been used in developed countries (Borensztein et al. 1995, pp. 1-2). The key assumption in the endogenous growth theory is that there are technological spillovers, and the way for technological spillovers to impact positively on growth is to reduce the cost of intervention as human knowledge accumulates.

Endogenous growth theory argues that economic integration in the world market, promotion of foreign trade and foreign investment will help to promote growth in developing countries in the long run by transferring new technologies to developing countries and avoiding unnecessary duplication of research. This increases the aggregate productivity of resources used in the research and development (R&D) sector (Grossman and Helpman 1994, p.40; Lundahl and Ndulu 1996, p.2; Bardhan 1998).

The rapid growth in East Asian countries has proved that imitation accounts for much of the technological progress and hence acceleration in growth in those countries (Grossman and Helpman 1991, p.341; Pack 1994, p.62). Such technological progress, in turn, has contributed significantly to the high and sustainable growth of East Asian countries (WB 1993).

Besides transfer of technology, foreign investors also bring with them to developing countries managerial experience, especially managerial efficiency in organising and operating large industrial projects, entrepreneurial ability in seeking out investment opportunities, organising suppliers and markets (Lall and Streeten 1977, p.57; Gillis et al. 1992, pp. 390-391).

Developing countries can benefit from and absorb modern technology provided by FDI through either horizontal or vertical linkages with foreign investors (Chen 1996). The

horizontal linkages may influence the industrial structure, conduct and performance of local firms via following ways:

- The presence of MNCs and FIEs may increase the competition and hence force local firms to upgrade their technology (Moran 1978 cited in Bishop 1997, p.23; Chen 1996, p.187).
- The demonstration of modern technology in FIEs may provide the impetus to local firms to hasten their adoption of new technologies (Blomström and Person 1983 cited in Chen 1996, p.18).
- The training of labour and management by foreign investors may become available for use in other industries when workers, technicians and managers may move from FIEs to work for local firms (ibid.; Kim and Dahlman 1992 cited in Bishop 1997, p.23).
- Local firms may get access to modern technology and managerial experience by setting up joint-ventures with MNCs (Chen 1996, p.18).

For the vertical linkages, foreign investors can improve local technological capability through purchasing their production inputs locally. In order to meet high quality requirements, local producers and suppliers are forced to adopt modern technologies. During this process, foreign investors can also provide modern technologies to local producers (Chen 1996, p.188).

Several authors have tried various ways to show the important role of FDI in transferring technology to developing countries. Studies on the role of FDI in South Korea have shown that between 65 and 76 percent of Korean partners interviewed are satisfied with the effectiveness of technology transferred through co-operation with foreign investors (Bishop 1997, p.65). The development of the Korean synthetic fibre industry in the 1960s and 1970s showed that by establishing joint-ventures with leading Japanese companies, Korean firms have successfully obtained modern technologies that were not able to be obtained through licensing (Tran 1988, pp. 394-397).

Wilmore (1986) when analysing the data for 282 pairs of foreign-owned and private firms in Brazil, found that foreign firms have higher levels of labour productivity due to several factors such as that workers in FIEs have greater skills and training, more

machinery and equipment per worker and greater technical efficiency (Wilmore 1986, pp. 479-500). In Singapore, due to the superiority of foreign technology, the value-added per worker in FIEs is always higher than that of local firms as shown in Table 2.4.

Table 2.4: Singapore Value-Added per Worker in the Manufacturing Sector, 1990

($ thousand)

Wholly Foreign	More Than Half Foreign	Less Than Half Foreign	Wholly Local	Total Manufacturing
44.0	31.3	30.8	19.1	33.9

Source: Modified from Table 10 in Yue 1993, pp. 91-92.

Another way to assess the importance of technology transfer through FDI is measuring the return of FIEs created by foreign firms' specific knowledge. For the U.S. MNCs, the share of return created by firms' specific knowledge in total income was high for developing countries, averaging 71 percent for the period 1966-1976 and 46 percent during the period 1977-1986. The high share of return created by firms' specific knowledge in developing countries has shown that modern technology brought in through FDI has played an important role in FIEs' operation in particular, and in socio-economic development in general (Lee 1990, p.179).

At the macro level, the impact of FDI on socio-economic development through transferring modern technology can be seen in the relationship between FDI flows and the Incremental Capital Output Ratio (ICOR). The mainstream view argues that FDI has brought modern technology that leads to the efficient use of capital, natural and human resources and hence reduces the ICOR (or increase of Incremental Output Capital Ratio-IOCR).

In the regression analysis of nine Asian developing countries, Lee and his co-authors found that foreign private investment has a positive coefficient relationship with IOCR, via either direct or total effects (Lee et al. 1986). De Gregorio (1992), when studying the impact of FDI in 12 Latin American countries, found that modern technology has made FDI about three times more efficient than domestic investment (de Gregorio 1992 cited in Borensztein et al. 1995, p.15). The studies of Blomström and Person (1983) and

Blomström, Lipsey and Zejan (1992) also found a positive relation between the productivity level in the domestically-owned plant in an industry and the share of foreign plant in the same industry.

The study of Borensztein, deGregorio and Lee (1995) on the role of FDI in 69 developing countries during the period from 1970-1989 suggested that FDI is an important means for technology transfer. When testing whether FDI has effects over and above aggregate investment in the growth equation, the authors found that the contribution of FDI to growth is evident only when the interaction between human capital and FDI is included. The study found that the threshold level of education for which the effect of FDI is above its effects on investment is 0.83. For a country with a threshold level lower than 0.83 and higher than 0.45, FDI can still provide positive impact on growth through crowding-in effects on domestic investment (Borensztein et al. 1995, pp. 14-15).

In short, the examples as well as empirical evidence have supported the arguments of the mainstream view that FDI brings developing countries modern technology and management experiences that facilitate socio-economic development.

Unlike the mainstream view, the radical view criticises FDI for providing inappropriate technology and techniques to developing countries claiming that, as a consequence, such technology and techniques lead to mis-allocation of natural and labour resources in developing countries (Vaitsos 1975; Lall and Streeten 1977; Amin 1977; Jenkins 1987; Todaro 1996). Radical theorists argue that FDI brings in technology that tends to be capital-intensive, not suitable for developing country's conditions and, therefore, undesirable. Only a small proportion of technology and techniques transferred meets basic social needs in developing countries, as a majority of the transfers has been used to reallocate scarce resources toward the production of goods which are not essential for the mass of poor people, but rather goods which are over-differentiated, over-packaged, over-promoted for only a small elite or for the overseas market (Lall and Streeten 1977, pp. 70-71; Bishop 1997, p.24). In the words of Amin (1977), such technology is:

> ...excessively costly, not only because of its capital-intensive nature, but because of the wasteful consumption pattern it brings with it, the excessive exploitation of nature resources that it implies etc.. In other words, this technology presupposes imperialism, i.e. the excessive exploitation of labour in the periphery.
> (Amin 1977, p.173).

Moreover, foreign investors and MNCs have failed to adjust modern technology to cope with conditions of developing countries for several reasons.

First, the major advantage of MNCs is the possession of advanced technology that can be applied with little adaptation in different countries. Thus MNCs are not willing to undertake expensive adjustment or alteration to suit small developing countries' markets or to take advantage of a cheap labour cost which is a small proportion of the total cost (Lal 1980 cited in Jenkins p.70). Second, the oligopolistic market power of MNCs allows them to pass on the higher cost of inappropriate technology and techniques to consumers in developing countries (Newfarmer 1985 cited in Jenkins 1987, p.70). Third, once the specific product form is determined and internationally marketed, it may constrain MNCs from choosing more appropriate techniques to suit conditions in developing countries (Stewart 1979 cited in Jenkins 1987, p.70).

According to the radical view, the inappropriate technology transfer to developing countries through FDI has caused an unemployment problem through distorting influences on technology used by local firms (Lall and Streeten 1977, pp. 70-71). It has been argued that the hazardous technologies and products imported through FDI flows during the globalisation process often displace indigenous technologies and products that may be "more appropriate to meet the production and consumption needs of the Third World" (Khor 1996, p.49).

Moreover, through the flows of FDI under the globalisation process, MNCs have shifted their production operation to developing countries where safety and environmental regulations are either very lax or non-existent. As a consequence, developing countries are being exposed to extremely toxic or dangerous technologies that are far below acceptable levels in developed countries (Khor 1996, p.49). Korten (1995, p.31)

concludes that "economic globalisation has greatly expanded opportunities for the rich to pass their environmental burdens to the poor by exporting both wastes and polluting factories". In this regard, Japanese companies are common examples.

The evidence, however, is mixed and does not conclusively support the radical view. Some studies found that before 1980, FIEs used more capital-intensive technology than local firms in India, Pakistan, Brazil, Ghana, Indonesia and Thailand. However, other studies in countries such as South Korea, Mexico, the Philippines, Taiwan, Malaysia and Hong Kong found no significant differences in the factor proportions of FIEs and local firms (Forsyth and Solomon 1977, p.306; Chen 1983, p.313; 1994, p.16; Ahiakpor 1990, p.41). Nevertheless, when data are dis-aggregated by ownership, local state-owned firms often are the most capital intensive[1].

Chen (1983) has argued that the choice of technology of FIEs compared to local firms actually depends on:

- The availability of skilled labour and management staff.
- The range of available technology.
- The extent of factor price distortion.

The controversial arguments between the mainstream and radical views have led to a debate on the role of government policies, in which the right policies may enable and force MNCs to bring appropriate technology to developing countries.

The most important policy that the government needs to apply to absorb foreign technology is to focus on training the labour force, especially technicians, engineers, managers and industrial economists. Such investment in education will improve local absorptive capacity (Gillis et al. 1992, p.390; Chen 1993, p.57). The study of Borensztein, deGregorio and Lee (1995) suggested that technology transferred by FDI can promote economic growth only when education has received adequate attention and investment.

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[1] This is because state-owned firms have better access to credit with lower interest rates, and are under less pressure to earn or maximise profits.

The government can also assist local firms in their choice of technology that suits the level of development of the industry concerned and make sure the transferred technology can be spread through out the industry (Gillis et al. 1992, p.25). In Taiwan, the government has directed FDI into areas where local firms lacked technological capacities. In several cases, the government itself entered into joint-ventures to obtain important technologies such as in semiconductors or aerospace industries (Lall 1996, p.208).

Therefore, technology and production techniques transferred through FDI can be useful if the developing country's government applies appropriate policies to create a favourable environment to encourage foreign investors to bring in useful technology.

2.3.6. Foreign direct investment and economic growth.

The contribution of FDI to economic growth in developing countries, according to the mainstream view, is quite straightforward. Developing countries on the way to take-off have been suffering from the savings-investment gap, the foreign exchange gap, fiscal and technology gaps. FDI flows, it is argued, cover those gaps, and increase the capital stock in developing countries. Based on the Harrod-Domar model, with decreased ICOR and increased national gross investment resulting from FDI flows, the economic growth rate will increase (WB 1997a, p.165).

The useful role of FDI in promoting economic growth has been supported by the development experiences of several developing countries. In Taiwan in 1990, the output of FIEs accounted for 9.73 percent of GDP while in Malaysia, FDI contributed 17.7 percent of GDP in the 1960s (Hoffman and Tan 1980 cited in Lim and Fong 1991, p.88; OECD 1995a, p.160).

The empirical evidence also tends to support the positive role of FDI on economic growth. Early empirical regression analyses of Papanek (1973), Stoneman (1975), Dowling and Hiemenz (1982), Gupta and Islam (1983), Rana and Dowling (1988) have shown that FDI has a favourable effect on economic growth.

More recent studies also find similar results. Blomström, Lipsey and Zejan (1992), when studying the impact of FDI on economic growth in 78 developing countries from

1960 to 1985, found that FDI has strong and favourable effects on economic growth. Likewise, Borensztein, deGrigorio and Lee (1995), when studying FDI flows in 69 developing countries during the period 1970-1989, found that with each percentage point of increase in the FDI-to-GDP ratio, the rate of growth of developing countries increased by 0.8 percentage point.

In the study of Fry (1997) on the impact of FDI on growth in six East Asian countries during the period 1983-1992, FDI was responsible for a 1.4 percentage point variation in growth rates in the short run and 2.6 percentage point in the long run (Fry 1997, pp. 527-529). Dutt (1998) has performed cross-country regression analyses using data for the period 1960-1992 and tried to capture the impact of previous FDI flows on GDP growth. He found that FDI flows have positive impacts on GDP growth, though the coefficients are not significantly different from zero.

The study of Blomström, Lipsey and Zejan (1992) also found no evidence to support the possibility that FDI does not create high growth, but that high growth attracts FDI. They then concluded that the "causation runs from foreign direct investment to growth rather than the other way around" (Blomström et al. 1992, p.13).

The radical view, in contrast, argues that FDI has lowered domestic savings and investment by suppressing domestic entrepreneurs, crowding-out local investors and increasing ICOR by introducing capital-intensive technology. As a consequence, FDI has lowered the growth rate (Bornschier et al. 1978; Bornschier and Chae-Dunn 1985; London 1987, 1988; London and Smith 1988; London and Williams 1988, 1990; London and Robinson 1989; Boswell and Dixon 1990; Wiberley 1990; Todaro 1996, pp. 40-41).

Bornschier, Chase-Dunn and Rubinson (1978) have used data from 76 developing countries in the 1960-1975 period to analyse the impacts of stock of foreign private direct investment on economic growth and found that while foreign capital investment flows have favourable effects on economic growth, the stock of foreign investment has negative effects on economic growth. The authors then stated that "what this pattern suggested is that the immediate effect of inflows of foreign capital ... is to increase the

rate of economic growth, while the long-run cumulative effects operate to reduce the rate of economic growth" (Bornschier et al. 1978, p.667).

Bornschier and Chase-Dunn (1985), by using cross-sectional data of 76 developing countries to analyse the impact of foreign capital flows on economic growth rate during the 1965-1977 period, have found that foreign capital formation provided disadvantageous consequences for economic growth in developing countries (Bornschier and Chase-Dunn 1985 cited in Firebaugh 1992, pp. 105-110).

Other authors have detected the fact that a minority of FDI projects reduced the developing country's national products. About one-third of projects in the study of Lall and Streeten (1977) and between 25 percent to 45 percent of projects in the study of Encarnacion and Well (1986) cost the developing countries more in terms of opportunity cost than they earned for it (Lall and Streeten 1977; Helleiner 1989, p.1457).

While the empirical evidence to support the radical view is limited, some regression analysis may have involved a methodology problem[2]. In general, empirical evidence seems to support neo-classical arguments that FDI flows promote economic growth.

2.3.7. Foreign direct investment and industrialisation process.

Besides promoting economic growth, FDI also plays an important role in the industrialisation process in developing countries. The role of FDI in the industrialisation process is considered as a vehicle to help developing countries to participate actively in the international division of labour and move up the ladder of technology. The mainstream view argues that different countries have comparative advantage in

[2] Firebaugh (1992), by using the same set of data as Bornschier and Chase-Dunn (1985) to analyse the impact of FDI, has come to the conclusion that foreign investment does benefit developing countries and the coefficients for foreign investment in his analysis are always positive and statistically significant. Reasons for contrary result is that, in the Bornschier and Chase-Dunn (1985) model, salutary investment effects have paraded as negative stock coefficients. As foreign capital flows remain constant, the greater the stock, the lower the investment rate. The negative stock coefficients have misled that foreign investment flows create harmful long-term effect (Firebaugh 1992, p.125).

producing different products at various stages in the development. As James et al. (1989) pointed out:

> The ever changing structure of comparative costs allows a given country to proceed up the ladder of comparative advantage from specialisation in primary products to unskilled labour-intensive exports, to skilled labour-intensive exports and to knowledge-intensive exports. As one country moves up the ladder, another country below is able to climb another rung.
> (James et al. 1989 cited in Tan 1995, p.94)

The ladder of technology argument of the mainstream view is supported by Akamatsu's "wild geese-flying pattern" in which a country moves up the ladder of industrialisation, and participates in the international division of labour according to its stage of development at that particular time (Kojima 1977, pp. 65-66; Lindblad 1998, p.130)

As production may be then reallocated from developed countries to developing countries for mutual benefit, this creates the conditions for the push and pull factors of FDI (Kojima 1977). Vernon's argument on product life-cycle (mentioned earlier in section 2.2.3) can be fitted into the technological ladder hypothesis. The highest level of technological sophistication is required at the introduction phase, and can take place in developed countries while the lowest level of standardisation can be done in developing countries (Lindblad 1998, p.130).

The importance of FDI in the industrialisation process and moving up the ladder of technology has been mentioned in five stages of FDI-driven development, in which each stage is associated with a specific set of ownership and location advantages (Katseli 1992).

Stage A: Prior to any FDI activity, international trade is implemented based on the Hecksher-Ohlin comparative advantage. A country exports goods that use intensively the country's abundant factors of production, such as agricultural products and/or unskilled labour-intensive goods.

Stage B: As output and exports increase, labour-seeking FDI takes place. Foreign investors based on their ownership advantages of patents and trading networks invest in developing countries to take location advantages of relative factor endowment to produce unskilled labour-intensive commodities.

If the host country is relatively large and pursuing an Import Substituting Industrialisation (ISI) strategy, FDI will take location advantages of trade barriers and high transportation costs to produce goods to serve the domestic market. In this case, FDI is associated with anti-trade production effects and pro-trade consumption effects. If the host country is rich in raw materials, resource-extracting FDI will take place to extract raw material for export purposes. In this case, FDI has pro-trade production effects and anti-trade consumption effects.

Stage C: Once MNCs are well established in developing countries, labour-intensive production is transferred to developing countries in the industries (such as electronics, automobiles) where vertically dis-articulated investment is technically possible. In this case, FDI takes place to enable foreign investors to enjoy ownership advantages of patents, trade marks, technological and marketing know-how and location advantages of cheap but disciplined labour – as well as low political, economic, and foreign exchange risk and a more advanced infrastructure system. If a developing country is relatively large, horizontal investment in different product will take place. FDI in this situation provides both pro-trade production and consumption effects.

Stage D: FDI in services takes place to meet the increased demand for upstream, on-stream and downstream business services generated by established firms to strengthen trading networks and networks of co-operative subcontracting arrangements. In this stage, FDI in service is made possible due to the location advantage of available networks within and across corporate structures and internalisation of industrial activity. In this case, FDI has both pro-trade production and consumption effects.

Stage E: Emergence of an integrated regional cluster, with one country becoming an information/distribution or financial centre. In this stage, intra-regional plant specialisation and intra-firm trade as well as intra-industry and intra-firm FDI within the region have developed to take advantage of the economies of hierarchical ordering. (Katseli 1992, pp. 42-44).

This evolutionary pattern of FDI-trade linkages is close to Ozawa's (1991) argument of "evolutionary process of stage-based sequential economic growth" (Ozawa 1991 cited in Katseli 1992, pp. 45-46). Ozawa argued that the success of the Asian Pacific countries is due to the investment made by Japanese MNCs in restructuring industrial production and augmenting their comparative advantages.

This was achieved through the sequencing of FDI first through "elementary" types, second through "resource-seeking" types and lastly through "the assembly-transferring" type of FDI. In this process, FDI has served to transfer to developing countries the Japanese development model of sequential industrial restructuring from export-oriented, and labour-intensive manufacturing to heavy and chemical industries, to assembly-based mass manufacturing and finally to R&D intensive customer-tailored manufacturing (Ozawa 1991 cited in Katseli 1992, pp. 45-46).

The evidence has supported the argument about the role of FDI in the industrialisation process. Table 2.5 shows that between 1967-1982 the share of FDI increased for manufacturing and services sectors while it decreased for agricultural and mining sectors in Asian NICs. Of those countries, South Korea and Taiwan have been in a higher stage of development and the share of FDI for the services sector increased rapidly and decreased for manufacture - while for Indonesia and Thailand, at a lower stage of development, the share of FDI for the manufacturing sector was still on the rise.

In the case of Taiwan, FDI has focused on export-oriented labour intensive manufacture to take advantage of cheap labour at the early stage of export-oriented industrialisation (EOI). However, during the late 1980s, as the Taiwanese economy transformed and wage rates increased, FDI moved to the chemical and machinery industries and that improved the competitiveness of Taiwanese capital-intensive production. The share of FDI in electronic and electrical appliances production reduced from 31 percent in 1976-

1980 to 20 percent in 1986-1990, while that of chemical and machinery production increased from 14.5 percent to 24.7 percent (Hoesel 1996, pp. 285-293).

Table 2.5: Foreign Direct Investment by Sector (percent)

	Agriculture			Mining			Manufacturing			Services		
	I	II	III	I	II	III	I	II	III	I	II	III
Korea	1.3	0.9	1.0	0.0	0.3	0.2	82.5	75.4	66.3	16.2	23.5	32.5
Taiwan	0.2	0.6	0.2	0.0	0.0	0.0	77.7	82.0	72.0	22.1	17.5	27.8
Indonesia	24.1	5.8	5.7	39.6	15.4	9.0	28.1	67.7	79.6	8.2	11.1	5.6
Philippi-nes	1.1	3.6	8.6	23.4	1.7	2.8	33.0	54.9	37.9	42.6	39.8	50.8
Thailand		22.4	14.1		na	na		63.6	75.0		14.0	10.9

I: Period from 1967 - 1971
II: Period from 1972 - 1976
III: Period from 1977- 1982.
Source: Table 5 in Hill and Johns 1991, p.275.

In short, it appears that FDI has promoted the industrialisation process in developing countries, facilitating the process of moving from unskilled labour-intensive to skilled-labour intensive, capital-intensive and knowledge-intensive export production.

2.3.8. Foreign direct investment and poverty alleviation.

The debate about the role of FDI in poverty alleviation in developing countries is inconclusive. While the mainstream view argues that FDI has created more employment with higher wage rates, the radical view criticises FDI for worsening the problem of income inequality, of inefficiently addressing the unemployment problem and failing to meet the basic needs of the mass of poor people.

The mainstream theorists like Lewis (1954), Kuznets (1955), and Rostow (1963) have argued that, in the long run, FDI has increased income and reduced inequality. FDI flows will result in development of a small but modern industrial sector that pays higher wage rates and that leads to an increase in income inequality. At the later stages, as more FDI flows in, the modern sector will expand, and employ more labour which has moved from the agricultural sector. The labour surplus in the agricultural sector gradually disappears and the marginal productivity of agricultural labour will increase

to the level of industrial labour. As a result, agricultural wage rates are increased and income inequality is alleviated (Lewis 1954, 1979; Tsai 1995, p.470).

The high wage rates offered by foreign investors are attributable to the fact that they apply capital-intensive techniques that require stabilisation of semi-skilled and high level indigenous labour. In the case of Nigeria in 1960s, MNCs on the average paid higher wage rates than did domestic firms within several wage groups (Biersteker 1981, p.142). The important impact of FDI in alleviating poverty is creating more job places for developing countries that are suffering an increasing unemployment problem. Table 2.6 shows that in 1992, MNCs employed 12 million employees in developing countries, an increase from 7 million in 1985.

Table 2.6: Estimated Employment in Transnational Corporations, 1985, 1990, 1992 (millions of employees)

	1985	1990	1992
Estimated Employment in TNCs	65	70	73
- Employment at Home	43	44	44
- Employment in Foreign Affiliates			
+ Developed Countries	15	na	17
+ Developing Countries	7	9	12

Source: Table 1 in Parisotto 1995, p.72.

In Mexico, international automobile companies provided 39,000 job places and another 100,000 job places in supplier industries and distributions (Moran 1988, p.61). In Singapore, the FIEs in the manufacturing sector have created 250,000 workplaces and accounted for 71 percent of total manufacturing employment in 1990 (Yue 1993, p.93). During the period 1962-1970, FDI created 6 percent of overall new employment and 26 percent of new employment in manufacturing industries in Malaysia (Hoffman and Tan 1980 cited in Lindblad 1998, pp. 168-169). FDI from Japan alone in 1986 created 250,000 jobs in Indonesia, Malaysia, Singapore, Thailand and the Philippines (Lindblad 1998, p.137).

Unlike the mainstream view, the radical view argues that FDI has actually exacerbated poverty problems in developing countries by worsening income inequality, failing to

address unemployment problems and creating undesirable consumption patterns (Frank 1969; Bornschier et al. 1978; London 1987, 1988; London and Smith 1988; London and William 1988,1990; London and Robinson 1989; Boswell and Dixon 1990; Wimberley 1991; Tsai 1995; Lewellen 1995).

While the mainstream view supports the high wage rates offered by foreign investors in modern sectors as a means to make wage rates rise in rural and traditional sectors in the long run, the radical view criticises FDI for widening the wage differences between those sectors. Because FIEs apply capital-intensive techniques that require the stabilisation of semi-skilled and high level local workers, foreign investors offer high wage rates and other benefits that are four to ten times higher than normal wages in the domestic sector. This also leads to the generation of a new social class – the labour elite in developing countries (Biersteker 1981, p.21; Bornschier and Chase-Dunn 1985 cited in Firebaugh 1992; Tsai 1995, p.471).

Moreover, the flows of FDI under the globalisation process may promote the industrialisation process in developing countries by making use of cheap labour, but the "character of this industrial development is not very desirable" because it is "based on low-value production and the 'super-exploitation' of Third World markets" (Kiely 1998, pp. 47-48). The developing countries' governments have lowered wages, relaxed working conditions and provided generous tax holidays, especially in the export-processing zones, in order to attract FDI flows. And the consequence of those policies has been the industrial development - but at the cost of low wages and poor working conditions (Kiely 1998, pp. 47-48). On the other hand, FDI contributes to inequality by forcing developing governments to provide tax incentives, maintain low labour costs, and prohibit labour unions and strikes (Bornschier and Chase-Dunn 1985 cited in Firebaugh 1992).

The radical view argues that social control and organisation of production, rather than economic output and wealth, worsen income inequality. As the labour elites are supported by foreign forces including both MNCs and foreign investors, this leads to the establishment of an economic-cum-political "triple alliance" that works for the interests of foreign investors, of the government and of the labour elites. Such alliance is the most fundamental reason for income inequality in developing countries (Chase-

Dunn 1975; Evans 1979 cited in Tsai 1995, p.471). Frank (1969) has argued that income inequality itself is the only means of guaranteeing a market for MNCs and foreign investors' products (Frank 1969 cited in Jenkins 1987, p.76).

The radical view is supported by some empirical evidence. The studies of Bornschier (1975, 1978); Chase-Dunn (1975) and Rubison (1976) found that FDI in association with foreign aid has increased economic inequality within countries (Bornschier et al. 1978, p.664). The study of Tsai (1995) on the impact of FDI on income inequality in 53 developing countries found that FDI had a positive correlation with income inequality during the 1970s.

However, such evidence is not fully convincing. The studies of Bornschier (1975,1978), Chase-Dunn (1975) and Rubinson (1976) are not time-series but cross-sectional and there may be a possibility of the causation problem. Countries with more unequal income distribution may attract more foreign aid and FDI (Bornschier et al. 1978, pp. 664-665).

Radical theorists also criticise FDI for creating undesirable consumption patterns in developing countries, maintaining that MNCs produce only luxurious products for the local elite and export market and neglect the basic needs of the mass of poor people (Frank 1969 cited in Jenkins 1987, p.76; Hogendorn 1992, p.424). Wimberley (1991) has performed a cross-national analysis on the impact of FDI on food consumption over the 1967-1985 period and found that countries with minimal MNC penetration are estimated to have gained approximately 700 more calories and 20 more grams of protein consumption per person per day than countries with maximal MNC penetration. The author then concluded that MNCs' penetration has resulted in detrimental effects on per capita consumption and that this effect grows stronger over time (Wimberley 1991).

Regarding the employment problem, the radical view contends that the number of job places created in developing countries is very low compared to unemployment problems in those countries. Table 2.6 shows that of the 73 million people employed by MNCs in 1992, only 12 million were in developing countries compared to 17 million in developed countries, and 44 million in their home countries.

There are several reasons attributed to the low number of job places created by FDI. The entry of MNCs through acquisition of local firms means that no new employment is created. In the case of Mexico, the employment created by MNCs was cut by half when employment growth which had resulted from acquisition was discounted (Sahgun 1976 cited in Jenkins 1987, p.124). Radical theorists like Vaitsos (1974, 1976) also criticised MNCs for repatriating significant amounts of profit rather than reinvesting in developing countries and hence limiting the long-run employment effect of FDI (Vaitsos 1974, 1976 cited in Jenkins 1987, p.124).

The introduction and utilisation of capital-intensive technology and techniques in FIEs are the major reasons that makes foreign investors fail to address the employment problem in developing countries. Some studies found that foreign firms, familiar to capital-intensive techniques developed in their countries where labour is expensive, tend to use capital-intensive techniques when they invest in developing countries. Moreover, foreign firms usually have access to cheaper capital sources than do domestic companies, so their choice of technology is more capital-intensive (Gillis et al. 1992, pp. 567-568).

The imperfect market in developing countries may contribute to the use of modern capital-intensive technology. FDI feasibility studies have used market prices of productive factors to calculate the return on foreign investment. Due to imperfect markets, these prices do not reflect true factor scarcities (i.e. opportunity cost or shadow prices) and consequently distort technology choice (Gillis et al. 1992, p.567).

In short, the choice of technology, especially labour-intensive technology, plays a very important role in generating employment and contributes toward poverty alleviation processes in developing countries.

While the debate between the mainstream and radical views about the role of FDI in poverty alleviation is still inconclusive, there stands the case of Asian NICs, where FDI has contributed significantly to national gross investment and promotion of exports, facilitated economic growth and improvement of living standards as well as reduction of income inequality. Riedel (1988) has found that among 34 developing countries, Taiwan has the best income distribution while Singapore, Hong Kong and South Korea

belong to the top of the sample (Riedel 1988 cited in Lim 1994, p.829). These countries also have very good records in terms of the percentage of the age group enrolled in secondary education and the life expectancy at birth (Lim 1994, p.829). In terms of income, real wages rose on average by 16 percent in South Korea between 1977-1981, while the percentage of households with income below the minimum subsistence requirement level fell from 30 percent to 8 percent in Singapore between 1973 and 1981 (Elson 1988, p.280).

2.4. Conclusion.

FDI flows are an important part of capital formation in developing countries. The mainstream view argues that FDI flows cover the savings-investment gap, foreign exchange gap, technological gap and fiscal gap in developing countries, and hence promote economic growth. Moreover, FDI also brings in modern technology and management skills that help to improve a country's competitiveness, and promote industrialisation processes. The mainstream view also argues that high economic growth and changing economic structures, as well as the industrialisation process, also provide backward and forward effects to alleviate poverty and income inequality in developing countries.

In contrast, the radical view argues that FDI flows are detrimental to socio-economic development, FDI flows have not supplemented but substituted for domestic savings, and worsened the balance of payments problems in developing countries. The radical view also criticises FDI flows for failing to address poverty problems in developing countries because FDI tends to introduce capital-intensive technology that creates less employment in relation to an increasing labour force, but establishes more exploitative employment conditions in developing countries. The arguments of both the mainstream and radical views are summarised in Table 2.7.

While the debates between these two views on the role of FDI in socio-economic development process are inconclusive, the empirical evidence seems to support the mainstream view in many cases. Several regression analyses have found that FDI has favourable impacts on national gross investment, exports and above all, economic growth and poverty alleviation, especially in the cases of Asian NICs. While the

arguments and evidence from the mainstream view in favour of FDI are compelling, the doubts raised by the radical view give us cause for concern and demand that FDI in practice and policy be carefully scrutinised if its harmful impacts are to be diminished or negated.

Table 2.7: Summary of the Arguments of Mainstream View and Radical View on FDI

	Mainstream View	Radical View
Saving - Investment	Increasing domestic savings and investment by providing supplementary capital and generating backward-forward effects	Decreasing domestic savings and investment by crowding out local entrepreneurs
Foreign Exchange Earnings	Increasing exchange earnings by bringing in foreign exchanges and promoting export by providing access to foreign markets	Deteriorating balance of payments through excessive imports of intermediate products and capital goods and repatriation of profits, interest, royalties
Government Budget Contribution	Contributing to government budget through taxes and royalties	Insignificant contribution to government budget due to tax incentives and transfer pricing
Technology Transfer	Providing modern technology and management techniques	Supplying inappropriate technology that leads to mis-allocation of resources
Economic Growth	Promoting economic growth by providing supplementary capital and modern technology	Lowering economic growth by worsening savings-investment, foreign exchange gaps and providing inappropriate technology
Industrialisation Process	Promoting industrialisation processes by making use of developing countries' comparative advantages	Promoting undesirable industrialisation process based on "super-exploitation" of labour in developing countries
Poverty Alleviation	Alleviating poverty by generating more employment and paying higher wages	Failing to meet increasing unemployment and worsening income inequality between sectors

While there is no clear indication that FDI always brings net benefits, other factors, especially the role of government, may be vital and need to be examined. The success of

Asian NICs compared to other developing countries in utilising FDI to promote economic growth and alleviate poverty may be attributed to the role of government policies in promoting socio-economic development in Asian NICs as well as government policies in mobilising and co-ordinating FDI flows. Those policies will be discussed in chapter III.

CHAPTER III:
FOREIGN DIRECT INVESTMENT, ECONOMIC INTEGRATION AND GOVERNMENT INTERVENTION

The previous chapter examined the arguments put forward by mainstream and radical writers on the impacts of foreign direct investment (FDI) flows on several aspects of socio-economic development in developing countries. The success of East and Southeast Asian countries in utilising FDI flows and economic integration to promote socio-economic development has suggested that appropriate government policies can help to maximise the positive impacts and minimise the detrimental effects of FDI flows. This chapter will analyse the role of the governments of developing country in the process of attracting, co-ordinating and providing a favourable economic environment to maximise the positive impacts and limit the detrimental effects of FDI flows for sustainable socio-economic development, especially under the framework of economic integration. In particular, this chapter will examine the government development policies regarding investment incentives, trade policies and infant industry protection policy. Attention is also given to the role of government in attracting FDI flows in countries in transition towards a market economy.

3.1. Government Intervention and Foreign Direct Investment.

While several schools of thought in Development Studies have different views on the role of government in the economic development process, there is increasing agreement that government policies play a very important role in ensuring and maximising the positive contributions to economic development of FDI. The government policies that can maximise FDI impacts are:

- Macro-organisational policies: policies relating to resources allocation, innovations, education, trade, FDI competition.
- Macro-economic policies: policies relating to fiscal, monetary, exchange rate etc. management.

(Lim and Fong 1991, p.96; Chen 1993, p.25; Clark and Chan 1994, 1995 cited in Bishop 1998, pp. 19-20; Dunning and Narula 1996, pp. 12-13; Narula 1996, p.17; Lecraw 1996, pp. 317-325).

In general, the government's liberalisation policies have inducement effects on FDI flows to developing countries and in particular, government policies affecting the price and quality of location-bound resources, and those aimed at improving the quality of human resources within its jurisdiction have significant impacts in maximising favourable impacts and limiting detrimental effects of FDI flows (Lim and Fong 1991, p.96; Dunning and Narula 1996, pp. 19-20).

As mentioned in chapter II, markets in developing countries are imperfect, the economic conditions are less favourable and FDI flows tend to distort further the market in developing countries by producing monopoly, oligopoly or transfer pricing (Helleiner 1989, p.1453; Chen 1993, p.25). Imperfection has been seen clearly in technology markets (Helleiner 1989, pp. 1459-1460). Market imperfection regarding FDI flows thus requires active government intervention.

Beside market imperfections, there are also conflicts of interest between foreign investors and developing countries. As mentioned earlier, the main interest of foreign investors is to maximise the returns on their investment capital and this may contradict the major target of governments of promoting socio-economic development and poverty alleviation. For instance, the domination of MNCs in key industries may be a threat to the implementation of a country's development strategy (Lall and Streeten 1977, p.63; Todaro 1996, p.543).

The conflict of interest, the monopoly and domination of MNCs, as well as the imperfections of the market in developing countries can lead to clashes between governments and MNCs. The relations and the price of the transactions between foreign investors and firms and governments in developing countries are likely to be the result of international bargaining and collusion rather than as a natural outgrowth of free market supply and demand (Helleiner 1989, p.1458; Todaro 1996, p.541). The nature of FDI flows in developing countries, therefore, requires the active intervention of government.

However, the mainstream view on the role of government in co-ordinating FDI flows is that it should provide a conducive policy environment through measures such as realistic exchange rates, free movement of foreign capital, competitive interest and tax

rates and minimal bureaucratic interference (Lee 1994 and Rasiah 1995 cited in Bishop 1997, p.12). This view criticises government attempts to focus FDI into selected sectors of the economy, arguing that it will lead to distortion in the allocation of foreign resources. This view argues that only firms themselves know where is the best place to invest (Goldsmith 1995 cited in Bishop 1997, p.12).

In particular, government interventions under the form of performance requirements and local ownership requirements are criticised as distortionary measures that reduce the FDI flows and offset other government incentives. Performance requirements including raising exports, lowering inputs, localising inputs and employment, local participation in management and transfer of technology can distort the market, which deflect FDI from where it would otherwise flow and hence lead to inefficient use of natural resources, reducing the location advantages of developing countries (Aranda 1988 cited in Bishop 1997, p.12; Streeten 1991, p.197; Helleiner 1991, p.156). Such arguments of the mainstream view on the limited role of government is supported by several examples.

One study by the World Bank found an inverse relationship between the advantage of market size and universal performance requirement criteria, in which performance criteria offset the advantage of a large and increasing market (Streeten 1991, p.197). The regression analysis of Lecraw (1996) based on the available data on FDI in Indonesia has found an interesting result that the greater the change in the Indonesian system from restrictive to open, the greater were the flows of FDI (Lecraw 1996, pp. 333-334).

Kokko and Blomström (1995), when studying the technology transfer of U.S. affiliates in 33 countries, found that, in general, the policy on the requirement of technology transfer imposed by host governments has a negative effect on technology transfer. In contrast, government policies that promote local competition and training of the local labour force have positive effects on technology transfer. Policies to promote local competition may force MNCs to import new technology to maintain their technology advantages over local firms, while policies to improve labour skills may reduce the cost of technology transfer (Kokko and Blomström 1995).

Government intervention in general - and in promoting FDI flows in particular - tends to be reduced further through the globalisation process (Ohmae 1991; Picciotto 1991; Sklair 1991, p.144; Robertson 1992, p.112; Holloway 1994, p.25; Korten 1995; Scott 1997, p.4; Harding and Gales 1997, p.190). According to Korten (1995), the convergence of ideological, political, and technological forces behind the globalisation process has shifted "power away from governments responsible for public goods and toward a handful of corporations and financial institutions driven by a single imperative - the quest for short-term financial gain" (Korten 1995, p.12). Moreover, during the globalisation process, the government has to surrender some sovereignty and allow supra-national institutions to manage "problems that do not respect national boundaries" (Harding and Gales 1997, p.190).

Unlike the mainstream view, the arguments supporting the active role of government intervention in the process of FDI flows come from the experience of late industrialisation countries such as Japan and Germany. Development in those countries happened through the process of learning from earlier industrialising countries and in this process, the governments in those countries have played a central role in determining development plans, in the mobilisation and allocation of the necessary resources to realise the plans (Deyo 1987, Amsden 1989, Wade 1991)

A review of the experiences of late industrialising countries tended to show that competition had been restricted in the interests of ensuring that the scarce resources available for development were not employed in ways which adversely affected the realisation of the goals set out in economic plans (Chang 1993 cited in Bishop 1997, p.18). The experience of late developers showed a willingness to protect infant industries from the forces of foreign competition until those industries reached a stage where they were internationally competitive. At the same time, those firms that did not meet performance standards set by the government no longer received the support of the government (Amsden 1989; Wade 1991).

Following those experiences, before 1980, the South Korean government played an active role in managing and allocating FDI toward sectors that it considered priorities for economic development. On the other hand, the government also took several measures to protect local firms from the competition by MNCs. FDI was channelled to

selected export-oriented industries and key import substitution industries, such as electronic and chemical industries, but excluded from domestic market oriented industries that had already met local market requirements. The intervention of the South Korean government was considered effective in making use of the positive impacts of FDI such as improving technological and international marketing skills for several local firms. Moreover, this intervention has helped to avoid the detrimental impacts of FDI in crowding out local firms (Bishop 1997, p.31).

In conclusion, the volume of FDI flows as well as favourable effects of FDI will be maximised if the government chooses to create a favourable economic environment and not to interfere directly beyond its jurisdiction in the investment decision and operation process. On the other hand, the experiences of the late industrialising countries show the need for selective government intervention to minimise the detrimental effects of FDI flows. The next section is going to examine the relation between FDI and government investment incentives, trade strategies and infant industry protection policies.

3.2. Government Investment Incentives and Foreign Direct Investment.

Several developing countries have tried to attract FDI by providing generous investment incentives but not all investment incentives, particularly tax incentives, have the same effects and some of them even have negative effects or work only under certain circumstances. This part will analyse how government tax incentives influence FDI flows.

In general, investment incentives include tax reductions, rebates, concessions, investment allowances, low interest rates, cheap locations for factories, tariff protection and public subsidies (Hogendorn 1992, p.421). Investment incentives can be broken down into three types:

- Tax holidays that give FIEs tax exemption on corporate tax for a certain period.
- Modified tax holidays where the duration and value are flexible, depending on the investment level.
- Cost-lowering incentives, of which the most common components are accelerated depreciation allowance, the investment allowance and the investment subsidy.

(Lim 1982, p.208).

Such incentives are designed to attract FDI to developing countries. However, tax incentives provide little or no incentive to induce FDI, compared to cost lowering incentives, for three main reasons:

- Tax holidays provide a "perverse" subsidy, provide little assistance when FIEs need it the most (i.e. when FIEs make little or no profit) and provide great assistance when FIEs do not need it (i.e. when FIEs make a great deal of profit).
- Their time-perspective is limited in terms of encouraging long-term foreign investors.
- Unlike the cost-lowering incentives, tax holidays provide little incentive to risky investment as tax holidays accrue only when profits are made.

(Lim 1982, p.208).

For most MNCs, tax incentives do not provide a major lure. A study of 30 MNCs in 1983 has found that such investment incentives as tax holidays and subsidies were a primary attraction for only 13 percent of MNCs (Hogendorn 1992, p.421). If tax holidays provide any effects in inducing FDI flows, such FDI flows do not respond to high efficiency in developing countries, but only to profit opportunities created by distorted markets (Borensztein et al. 1985, p.18). Lim (1982) also goes further by arguing that the level of generosity of tax incentives was negatively related to the amount of FDI as tax incentives were considered as a fiscal danger signal (Lim 1982). On this point, Fry (1997) has argued that stimulating FDI through tax incentives may actually encourage round-trip capital flows from the developing countries (Fry 1997, p.536).

While tax incentives have little effect on attracting FDI flows to developing countries, they are also unlikely to generate benefit to developing countries, especially in terms of government tax income. In Malaysia, the foreign share in tax receipts fell from about 30 percent in the second half of 1972 to less than 25 percent in 1982 as a result of a slow rate of FDI flows and tax holidays (Yew 1988 and Von Kirchbach 1983 cited in Lindblad 1998, p.170). In this sense, tax incentives mean that consumers and taxpayers in developing countries would thus subsidise foreign investors from rich countries (Hogendorn 1992, p.421).

While tax incentives provide little or no effects in attracting FDI flows to developing countries, several studies have shown that other factors influenced foreign firms' decisions to invest in them. For the developing countries, the major factors which induce FDI are economic variables such as per capita income, balance of payments position, growth rate, inflation rate, cheap labour, raw materials, skill level of the workforce, market size, sufficient infrastructure and political factors such as political stability, and bilateral and multilateral aid flows (Lall and Streeten 1977, pp. 36-38; Agodo 1978; Root and Ahmed 1979; Schneider and Frey 1985 cited in Helleiner 1989, p.1450; Gold 1991, p.22; Helleiner 1991, p.148; Hogendorn 1992, p.421; Lim 1994 cited in Bishop 1997, p.13).

A study of the motives for Japanese FDI in Asian NICs and ASEAN countries shows that the three most important motives are low cost of labour, expansion of markets and supply of raw materials (MITI 1987 cited in Riedel 1991, p.141). A survey of 52 major international corporations based in 12 countries confirmed that the dominant influences on their foreign investment decisions were the needs to gain access to local or regional markets and to avoid trade barriers. On the other hand, tax and other incentives offered by the host government were regarded as unimportant (Helleiner 1991, p.148).

Another factor that influences a firm's investment decision but which may undermine the investment incentives of developing countries is the policies of developed countries. Most developed countries provide encouragement for FDI through investment insurance or signing an agreements with the host countries to avoid double taxation. On the other hand, developed countries discourage FDI that threatens to involve the "export of jobs" (Helleiner 1989, p.1468).

Several regression analyses have supported the view that investment incentives, especially tax incentives, are not major determinants of FDI flows. Root and Ahmed (1978) studied FDI flows in 41 developing countries and found six variables which explain the difference in FDI flows between developing countries - but tax incentives were not one of them (Root and Ahmed 1978 cited in Bishop 1997, p.15).

The study by the United Nations Centre for Transnational Corporations (1991) in 46 developing countries on the role of seven investment policy variables and three macro-

economic variables, found that changes in investment policy - including incentives - had only a weak and scattered influence on FDI flows. However, "the size and growth rate of the host country economy are more powerful explanations of investment flows" (UNCTC 1991 cited in Bishop 1997, p.16). Lim (1982) used the figures on FDI flows in 27 developing countries between 1960-1965 to investigate the correlation between FDI flows and the significance of natural resources, level of economic development, the rate of economic growth and tax incentive. The results showed that all variables except tax incentives were positively related to FDI flows (Lim 1982).

In reality, developing countries like Indonesia have realised the low effectiveness of tax incentives in inducing FDI flows and have not offered tax incentives to foreign investors since 1985, but have moved instead to using deregulation and export promotion policies to attract FDI (Gillis et al. 1992, p.397; Wells 1993, p.186).

However, tax incentives can be effective in inducing FDI flows under specific circumstances. First, tax incentives may be important in the choice of location between competing countries with similar investment environments (Vernon 1977, p.171; Lall and Streeten 1977, p.38; Gold 1991; Bishop 1997, p.17). Second, tax incentives may become an important determinant for export oriented foreign investment decisions (Wells 1986; Gold 1991; Bishop 1997, pp. 16-17). The nature of production for export shows that export-oriented firms operate in highly competitive markets with very slim margins and their costs are likely to be the major factor in determining profitability. Lower tax will lower costs and lead to higher profit (Wells 1986, 1993, p.59). Moreover, the export-oriented firms are highly mobile and sought-after as they generate job places. Hence those firms can easily move between countries to take advantage of tax incentives (WB 1997a, p.17).

Several studies have supported this argument. The study by the International Finance Corporation of the World Bank has found that of the 38 export-oriented investment projects, 15 projects ranked incentives as the top three reasons for investment compared to two out of 36 domestic market-oriented investment projects (Bishop 1997, pp. 16-17). Another study by the World Bank also found that 15 out of 16 export oriented investment projects considered tax holidays as a major factor that influenced investment

location compared to two out of 23 domestic market-oriented investment projects (Wells 1993).

In conclusion, investment incentives, especially tax incentives, do not provide much effect in attracting FDI flows to developing countries. Investment incentives influence only investment decisions of export-oriented foreign investment. Governments, then, should not use investment incentives excessively - but only to attract export-oriented foreign investment.

3.3. Government Trade Policies and Foreign Direct Investment.

Trade policies including Import Substitution Industrialisation (ISI), Export Oriented Industrialisation (EOI) and economic integration have played very important roles in creating a favourable environment for the operation of foreign investors, in maximising the favourable impacts and limiting the detrimental effects of FDI. This section will examine how trade policies influence the impacts generated by FDI flows and how the economic integration helps to attract FDI flows.

3.3.1. Import substitution industrialisation strategy.

The major features of ISI are imposing tariffs and other restrictions, such as quota and foreign exchange controls, on the import of selected consumer goods and promoting the development of local industries to meet domestic demand previously served by imported consumer goods. The major purpose of ISI is to develop indigenous industries, create employment to absorb rapidly increasing labour forces and to alleviate poverty (Gillis et al. 1992, p.441; Tan 1995, p.61; Todaro 1996, p.459).

The implementation of an ISI strategy at first provides strong impetus to promote economic growth and attracts huge amounts of FDI. According to trade theory, trade restrictions will stimulate compensating factor flows. Trade protection creates local advantage, raising the cost of serving domestic market through trade. In this case, trade protection will have inducing effects on foreign investors. When developing countries stop importing consumer goods, foreign exporters have to invest and produce locally to overcome protection barriers (McCulloch 1993, p.43).

The increasing foreign investment flows in Southeast Asian countries in 1950s and 1960s were to avoid the import tariffs (Wells 1993, p.175). In the case of India during the implementation of ISI from 1948-1967, the FDI stock in the country was more than doubled (Kumar 1996, pp. 353-354). While FDI induced by ISI strategy contributed to high growth rates at the first stage of ISI implementation, such kinds of FDI gradually show several limitations on the socio-economic development process.

First, FDI flows induced by ISI in large quantities have been a mere relocation of investment from developed countries to developing countries in response to the import restrictions of developing countries, not to the comparative advantages of developing countries (Balasubrmanyam and Salisu 1991, p.193). As a consequence, such investment would crowd out domestic entrepreneurs. A study by Buffie (1993) has confirmed that FDI in a protected manufacturing sector is likely to crowd out domestic investment, while FDI in an export-oriented primary sector or in a manufacturing export processing zone will crowd in domestic investment and will lead to higher income and employment (Buffie 1993).

Second, while the ISI strategy may attract a large amount of FDI flows to some developing countries, policies that accompany and support ISI may limit FDI flows in other developing countries. Many developing countries implement an ISI strategy in association with restrictive investment frameworks, controlling investment size, direction, location and the extent of ownership (IFC and FIAS 1997, p.6). During the ISI period in Taiwan in the 1950s, due to restrictive protection policies, FDI flows annually averaged at only $4.1 million (Hoesel 1996, pp. 281-282).

Third, FDI induced by ISI has not helped to improve the balance of payments (BOP) position but has led to a deterioration of it, creating a deficit on both current and capital accounts as a result of excessive importation of capital equipment and intermediate products and the outflows of foreign exchange in the form of repatriated profits and royalties (Todaro 1996, p.538; Calderon et al. 1996, pp. 258-259). The first column of Table 3.1 shows that during the period from 1971-1982, when Mexico implemented an ISI strategy, foreign invested enterprises (FIEs) worsened the current account by $2.09 billion and overall, worsened the country's BOP by $912 million.

Fourth, foreign investors who invest behind the tariff walls tend to apply out-of-date, inefficient technology (Gold 1991, p.23; OECD 1998, p.62). ISI strategy has done little or nothing to create competition in developing countries to increase "the pressures and incentives for multinationals to transfer more and better-quality technology to affiliates" (World Bank 1997 cited in OECD 1998, p.62).

Fifth, in terms of efficiency, the FDI projects induced by ISI strategy tend to have low overall effect on national income. One-third of import substituting FDI projects in the study by Lall and Streeten (1977) and between 25 percent and 45 percent in the study by Encarnacion and Well (1986) cost the developing countries more in terms of opportunity cost of their resources than they earned for them (Lall and Streeten 1977; Moran 1988, p.64; Cadroso and Dornbusch 1989, p.1415; Helleiner 1989, p.1457). The development of Mexico's car industry behind a tariff wall is typical example. Its characteristics were small size (well below industrial countries' standard and optimal economies of scale) with many models and makes, low production runs, high prices and poor quality (Calderon et al. 1996, pp. 258-259).

Table 3.1: Foreign Enterprises' Balance of Payments in Mexico, 1971-1987

($ million)

	Annual Average 1971-82	1983	1984	1985	1986	1987
1. Current Account	-2,093.8	-869.2	-856.0	-1,814.1	346.5	1,635.8
- Trade Balance	-1,387.2	224.8	236.0	-915.1	896.5	1,886.0
Exports	856.5	1,673.3	2,779.0	3,430.1	5,520.8	6,829.0
Imports	-2,243.7	-1,448.5	-2,543.9	-4,345.2	-4,624.3	-4,943.0
- Payment of factor services	-977.4	-1,568.0	-1,762.0	-1,634.0	-1,469.0	-1,366.2
- Transformation services	270.8	474.0	670.0	735.0	919.0	1,116.0
2. Capital Account	1,128.7	-585.8	-95.1	-744.7	294.8	238.0
of which: FDI	536.6	263.0	175.8	258.7	1,298.0	2,586.0
3. Other Income	52.9	77.0	100.3	83.0	231.0	256.0
4. Net Contribution	-912.2	-1,378.0	-850.8	-2,475.8	872.3	2,129.8

Sources: Table 3.4 in Peres 1990, p57.

Finally, the FDI flows induced by ISI tend to create adverse effects on poverty alleviation. As ISI fails to provide a competitive environment, FDI flows tend to be capital intensive, low efficiency and create fewer job places for developing countries (Jenkins 1987, p.73). Furthermore, under ISI strategy, FDI can earn surpluses over the normal return to FDI that consist of a transfer from the domestic consumer and therefore worsens the poverty situation in developing countries (Parry 1980, pp. 66-73).

In short, FDI flows induced by the ISI strategy can be characterised as low in efficiency, capital-intensive, deteriorating BOP and they have not done much to alleviate the poverty problem.

3.3.2. Export-oriented industrialisation strategy.

In contrast to the ISI strategy, an Export Oriented Industrialisation (EOI) strategy tends to create a favourable environment in which to maximise the positive impacts of FDI flows. The EOI strategy in developing countries is characterised by low or non-trade barriers, and by using the comparative advantages of cheap labour and abundant raw materials to produce for the export market. Moreover, there is market determination of the exchange rate, interest rate, labour and goods prices and a minimal level of government intervention[3]. And such characteristics induce more FDI with high efficiency, labour-intensive techniques to developing countries, contributing to socio-economic development (Tan 1995, pp. 66-68; Todaro 1996).

First, FDI flows induced by an EOI strategy tend to have fewer crowding out effects to domestic entrepreneurs and in fact, this kind of FDI tends to supplement domestic investment and hence leads to an increase in national gross investment.

FDI induced by an EOI strategy is largely concentrated in new industries and export-oriented industries, and produces less competition with domestic entrepreneurs (Yue 1993, p.92; Coklin and Lecraw 1997, p.3). Jansen studied the impacts of FDI in Thailand during the EOI implementation (1970-1990) and found no evidence of crowding out of local investment by FDI (Jansen 1995, p.205).

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[3] There are inconclusive debates on the role of government intervention under EOI strategy, especially in the case of Asian NICs, where government played an active role in promoting EOI strategy.

On the other hand, the implementation of an EOI strategy tends to induce large volume of FDI. Trade liberalisation promotes high economic growth, less distortion in the investment environment and provides greater export opportunities that are essential for MNCs, especially when intra-firm trade is on the rise (Balasubrmanyam and Salisu 1991, pp. 201-204; OECD 1998, p.52). Moreover, when FDI flows are induced by developing country's comparative advantages of availability of cheap labour and raw materials and market forces, FDI flows tend to be sustainable over time (ibid. p.193).

The strong inducement impact of EOI strategy on FDI flows can be seen clearly in the cases of Mexico and Indonesia. When Mexico moved from an ISI to an EOI strategy, FDI flows increased by three times from the early 1980s to the early 1990s and now Mexico has become one of the five largest recipients of FDI in the world, accounting for one-third of FDI flows in Latin America and 12 percent of that for developing countries (Calderon et al. 1996, pp. 250-253). In Indonesia, an EOI strategy led to a significant increase in FDI flows, and during the 1987-1990 period FDI flows were 1.5 times higher than during the implementation of the ISI strategy from 1967 to 1987 (Wells 1993; Lecraw 1996, pp. 326-329).

Several regression analyses have supported the strong inducement effects of EOI strategy on FDI flows in developing countries. By using a cross-section regression analysis of 36 countries for the period 1988-1993, Sader (1995, p.28) has found the favourable effects of trade on FDI flows. In a regression analysis consisting of data for 40 countries for four periods 1975, 1979, 1984 and 1988, Narula (1996) found that inward FDI tends to increase as countries open their economies and follow an export oriented approach.

Balasubrmanyam and Salisu (1991) undertook a regression analysis on a sample of 38 developing countries over an 11-year period from 1970-1980 in order to test Bhagwati's (1978) hypothesis that a distortion-free environment provided by EOI induces FDI flows (Bhagwati 1978 cited in Balasubrmanyam and Salisu 1991, p.195). In this analysis, the type of development strategy (ISI or EOI) is very difficult to quantify and the ratio of imports over GDP has been chosen as a proxy of the type of development

strategy[4]. The results supported Bhagwati's hypothesis. A country that follows an EOI strategy is likely to be a recipient of a relatively large volume of FDI. The coefficient of the distortion index is negative and statistically significant. Thus, a country that follows an EOI strategy with a relatively distortion-free economic environment can attract large amounts of FDI (Balasubrmanyam and Salisu 1991, pp. 201-204).

Katseli (1992), in conducting causality tests on the inter-linkages between FDI and trade in Singapore, South Korea, Malaysia, Thailand, Mexico, Brazil and Nigeria, found an interesting result. In countries at a higher stage of development (like South Korea and Singapore at stage D of Katseli's five stages of FDI-driven development), FDI has a strong pro-trade production effect, while in countries at lower stages of development (like Thailand or Malaysia at stage B or C), export growth appears to have prompted FDI. In other cases, the author found no significant causality linkages[5] (Katseli 1992, p.94).

In short, development experiences as well as empirical evidence support the important role of EOI strategy in inducing FDI flows to complement domestic investment and hence lead to an increase in national gross investment.

Second, FDI induced by EOI tends to improve the balance of payments (BOP) position by increasing FDI flows and export earnings (Fry 1993 cited in OECD 1998, pp. 56-59; Tan 1995, pp. 34-35). Because MNCs were attracted to invest in developing countries to take advantage of the availability of cheap labour and raw materials to produce for exports, the share of exports generated by FDI in the total exports of developing countries is on the rise. In Argentina, Brazil, Chile, Indonesia, Malaysia and the Philippines, the share of exports generated by investors from the U.S., Japan, European

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[4]- As Bhagwati has argued, the distortion-free environment that EOI strategy provides is the reason to attract FDI. That distortion-free environment tends to result in a high ratio of imports over GDP while a high ratio of export over GDP may be the result of government subsidies in export.
- It is conceivable that in countries with a high ratio of imports over GDP, the average effective rate of exchange rate for imports is unlikely to diverge significantly from that of exports. According to Bhagwati, in a country which follows EOI strategy, the exchange rate for imports equates to the exchange rate for export.

[5] In the case of Mexico with its large domestic market, domestic income growth appears to have induced FDI, which has, in turn, both contributed to export growth and been lured by it.

and Newly Industrialising Economies in total exports was over 50 percent in the early 1990s (OECD 1998, p.54). The increase of export earnings generated by FDI flows in the long run will improve the BOP. Fry (1993) found in 16 developing countries that FDI flows associated with high imports of capital equipment and material in the first few years. But in those developing countries that follow EOI, such as Indonesia, South Korea, Malaysia, the Philippines and Thailand, FDI flows raise export earnings and reduce imports, and hence improve the BOP after five years (Fry 1993 cited in OECD 1998, p.57).

As noted earlier in Table 3.1, Mexico after the debt crisis in 1982 has moved toward an EOI strategy, attracting a huge amount of FDI to produce for export. As a result of increasing export earnings and FDI, the net contribution of FIEs to the country's BOP has changed dramatically from minus $912.2 million for the period 1971-1982 to positive $2,129.8 million in 1987 (Peres 1990, p.57). In 1992, FIEs accounted for less than 10 percent of Mexico's gross fixed investment but generated more than half of Mexico's private exports (Calderon et al. 1996, p.255).

Third, the implementation of an EOI strategy also improves the technology transfer through FDI. When the choice of technology depends largely on the extent of competition, the international export market or non-distortion domestic market will force foreign investors to apply highly efficient, labour-intensive technology. This is unlike the ISI strategy that protects foreign investors and hence enables them to introduce capital intensive technology (Gillis et al. 1992, p.389; World Bank 1997 cited in OECD 1998, p.62).

Moreover, the experience of East Asian countries pursuing an EOI strategy shows that the competition also encourages foreign investors to adapt foreign technology to local conditions for achieving maximum efficiency (Chen 1993, p.56).

Fourth, FDI flows induced by EOI strategy provide favourable impacts to promote economic growth. The opening of domestic markets, and the competition of international markets force foreign investors to use resources in very effective ways (Chen 1990, p.402, 1993, p.56; Fry 1997, p.530). Several studies have shown that FDI has led to high economic growth rates in East Asian countries that follow an EOI

strategy but has led to increasing debt burdens in countries that still adopt an ISI strategy (Chen 1993, p.56; Fry 1997, p.530).

Fifth, FDI flows induced by an EOI strategy have improved developing countries' competitiveness and their participation in international division of labour. The FDI flows in Mexico in the late 1980s have helped to create a massive transformation of that country's exports from natural resources to dynamic products such as manufactured goods that accounted for two-thirds of Mexico's exports to the OECD (Calderon et al. 1996, pp. 252-253). In the case of Malaysia, it could not have participated in the labour-intensive electronics industry globally without the flows of FDI. Malaysia has moved from the position of a natural resources export country to the position where electronics account for more than 75 percent of the country's total exports (OECD 1998, p.55).

Finally, the implementation of an EOI strategy has forced foreign investors to introduce labour-intensive technology and techniques, utilising a largely cheap labour force in developing countries and creating more employment. This, in turn, should help to tackle the poverty problem (Helleiner 1975 cited in Chen 1990, p.396; Wells 1993, p.186).

In conclusion, the advantages of an EOI strategy over an ISI strategy in creating a favourable environment for FDI flows in developing countries are clearly stated by Bhagwati:

> With due adjustments for differences among countries for their economic size, political attitudes toward DFI and political stability, both the magnitude of DFI inflows and their efficacy in promoting economic growth will be greater over the long haul in countries pursuing the export promotion (EP) strategy than in countries pursuing the import substitution (IS) strategy.
> (Bhagwati 1978 cited in Balasubrmanyam and Salisu 1991, p.195).

3.3.3. Economic integration and the relationship between economic integration and foreign direct investment.

Economic integration is a very complex issue, ranging from tariff reduction and trade liberalisation to fiscal integration and harmonisation, and monetary integration. By definition, "Economic integration is concerned with the discriminatory removal of all trade impediments between at least two participating nations and with the establishment of certain elements of co-operation and co-ordination between them. The latter depends entirely on the actual form that integration takes" (El-Agraa 1997, p.1). There are several forms of economic integration including Free Trade Area (FTA), Custom Union (CU), Common Market and Economic Union.

Economic integration processes will create static and dynamic gains that will promote socio-economic development. The static gains of economic integration are measured by trade creation between member countries of an FTA or CU caused by the elimination of tariff and non-tariff barriers between member countries. Trade creation effects include a shift of production from high-cost member to low-cost member countries in accordance with the comparative advantage of each member country (Viner 1950 cited in DeMelo et al. 1992, p.161; Root 1994, p.254; Todaro 1996, pp. 482-485; Robson 1998, pp. 31-35).

The dynamic gains of economic integration include the creation of a larger market and achievement of economies of scale, R&D promotion, competition and improvement of the terms of trade (Imada et al. 1991, p.14).

Economic integration also creates trade diversion effects when a member country shifts from importing products from lowest-cost producers outside the trading bloc to importing them from other member countries as result of tariff removal within the trading bloc (Lawrence 1996, pp. 22-23).

There is a strong relationship between economic integration and FDI flows. The relationship between economic integration and FDI was first mentioned in Mundell's (1957) work which showed that trade in goods and international movement of production factors can be substituted and that "an increase in trade impediments" against non-member countries "stimulates factor movements" (Mundell 1957). When

exporting firms face import restriction, they choose to use FDI to penetrate foreign markets.

Economic integration will have medium-term effects on attracting FDI if economic integration changes the return on investment. Economic integration facilitates the effectiveness of resource allocation in member countries and, based on the Cobb-Douglas national production function, this will increase the capital stock.

On the other hand, the trade liberalisation process within the framework of economic integration is always accompanied by the removal of all restrictions on foreign investment and measures to facilitate FDI flows (Drache 1994, p.178). Asia Pacific Economic Co-operation (APEC) has approved Non-binding Investment Principles to facilitate the liberalisation of investment within APEC while the ASEAN Investment Area has been established to promote investment from ASEAN and other countries. At the global level, negotiation on trade-related investment measures (TRIMS) has also been carried out under the framework of the World Trade Organisation (WTO) (Intal and Findlay 1998, pp. 144-147; Drysdale et al. 1998, p.117).

There are two approaches to assess the interaction between economic integration and FDI and MNCs operation: the International Economic Approach and the Industrial Organisation Approach.

According to the International Economic Approach, economic integration creates expanded opportunities for countries to engage in inter-industry product specialisation within a bloc in accordance with comparative advantage and hence both rationalises production, and improves the efficiency of resource allocation. Such increases in production rationalisation and in the efficiency of resource allocation will make a trading bloc more attractive to MNCs and FDI. Beside the attractiveness derived from comparative advantage, there are four sources of potential gain from trade and economic integration that can induce FDI. They are:

- Trade increases effective market size, giving rise to more competition and a decrease in oligopolistic mark-ups.

- Larger market size encourages longer production runs and reductions in cost. In the process, some higher-cost firms may be eliminated and the demand met by imports.
- The increased market size that accompanies trade expansion may enable more products to be produced profitably, so generating welfare gains from increased product diversity.
- Trade may permit firms to engage in more plant specialisation, thus reducing the number of products produced in a given plant, with attendant cost reduction.

(Robson 1993, p.5).

However, the extent to which such potential gains may induce FDI depends upon the strategic behaviour of foreign and domestic MNCs in a trading bloc (Horst 1973; Tironi 1982; Aliber 1985; Smith 1987).

Unlike the International Economic Approach, the Industrial Organisation Approach focuses directly on how an FDI decision is affected by economic integration processes (Robson 1993, p.8). Dunning's eclectic theory, introduced in the previous chapter, has been widely used to examine the impacts of economic integration on MNCs' decisions on investing abroad, especially the impacts on ownership-specific advantages, locational advantages and internalisation opportunities. It is argued that economic integration enhances the locational advantages of production inside the trading bloc compared to third countries. Moreover, the dynamic effects of trading blocs (especially custom unions) will improve the competitive advantages of firms located within trading blocs and hence enhance firms' ownership-specific advantages. Economic integration with expanding market size and creating opportunities for scale economies allow the firm to sustain larger research-and-development expenditure and hence increase firms' innovative activity. This in turn will allow firms to accumulate an ownership advantage that they would not have been able to obtain if they had operated in a smaller and more fragmented market (Transnational Corporations and Management Division 1992, p.103). Such impacts of economic integration on ownership-advantages, locational advantages and internalisation opportunity will influence the MNCs' decision on investing abroad in the way that FDI is considered as "the main instrument to capture a

foreign market if a firm has the capacity to exploit simultaneously all three advantages: ownership, internalisation and locational" (ibid. p.103).

According to Kindleberger (1966), custom unions with their trade creation and trade diversion effects will directly lead to investment creation and investment diversion phenomena. Investment creation is the increase of inward FDI from non-member countries in response to the stimulus of trade diversion. Investment diversion is a strategic response to trade creation and includes the reorganisation of investment inside the bloc of non-member countries, moving the investment from one member country to another in order "to take advantage of newly arisen opportunities for economies of scale and specialisation" (Kindleberger 1966, pp. 96-97).

An examination of the strategic responses of firms engaged in international production to each of the static and dynamic effects of economic integration process shows that there are likely to be four types of investment responses (Transnational Corporations and Management Division 1992, p.104):

- **Defensive import-substituting investment** is MNCs' response to the trade diversion effects of economic integration. As tariff realignment generates locational advantages, MNCs move from exporting products to the trading blocs to investing in production within trading blocs in order to maintain their market share.
- **Offensive import-substituting investment** is MNCs' investment with the motivation of taking advantage of growing demand and the opening up of new markets.
- **Reorganisation investment** is a result of the trade-creation effects of integration, under which MNCs have to reallocate their economic activities in accordance with member countries' comparative advantages.
- **Rationalised investment** is FDI that responds to international differences in production costs generated by lowering production cost as a result of reorganisation of investment.

Table 3.2 shows the correspondence between trade effects and the FDI effects of economic integration. Defensive import-substituting investment is trade-replacing while rationalised and reorganisation investments are likely to be complementary to trade.

Offensive import-substituting investment may restrict opportunities for trade expansion (ibid., p.106).

Table 3.2: Foreign Direct Investment Effects of Economic Integration

Macro-economic Effect of Integration	MNC Strategic Response	Net Trade Effect	Net FDI Effect
Intra-regional trade more attractive than extra-regional trade*	Replace exports with FDI (Defensive import-substituting investment)	Declines as sales by regionally-based foreign affiliates replace exports to the region	Increased investment in regionally-based foreign affiliates
New configuration of locational advantages among members of the region	Adjust existing investments in the region to reflect free intra-regional trade (Reorganisation investment)	No effect/possible increase; intra-regional trade could rise if reorganisation leads to increased plant and country specialisation. Extra-regional exports could rise if region's industries become more competitive in World markets.	Indeterminate effect for the region as a whole; gain in some countries, offset by losses in others.
Cost reduction and efficiency gains	Increase value-adding activities within region; integrate with other offshore investments (Rationalised investment)	Possible decrease if less is imported into the region; possible increase if exports from the region rise.	Increased FDI as MNCs increase sourcing in the region
Market expansion, demand growth and technical progress	Gain first-mover advantages via FDI (Offensive import-substituting investment)	No effect if demand in regional market grows faster than supply from new inward FDI; otherwise, possible decrease	Increase

(*) Assuming that integration does not result in lower external tariffs than those which previously existed among individual countries, and that non-tariff barriers do not prevent the growth of intra-regional trade.
Source: Table 1 in Transnational Corporations and Management Division 1992, p.105.

From the experience of Japanese FDI in the European Community, there is another kind of FDI that has been used not to circumvent tariffs, but to defuse the threat of protection. According to Bhagwati (1987), such a kind of FDI, or "quid pro quo FDI" in Bhagwati's words, occurs in anticipation of tariff imposition. In this case, FDI will

transfer technology and promote employment in exchange for access to the host countries' markets (Bhagwati 1987 cited in Balasubramanyam and Greenaway 1993, pp. 157-158).

In the presence of FDI, economic integration can increase the income for the host country by redistributing the income of foreign investment between the investing country and the host country. That is the case when the prices of importable commodities produced by foreign invested firms reduce as a result of the trade creation effects of economic integration and leads to a reduction in the foreign company's rents and hence an increase in the host country's income. Such gain has been called the "foreign profit diversion effect" (Tironi 1982, pp. 77-78).

Several studies, by Yannopolous (1990), UNCTAD (1990, 1992), Balasubramanyam and Greenaway (1992) and Aristotelous and Fountas (1996), have found strong evidence that integration provides a significant positive influence on inflows of FDI, especially in the case of NAFTA and EU. In the case of NAFTA, the local content requirements have pushed Sam Sung to invest $800 million in five plants in Mexico in order to get access to NAFTA without paying tariffs (Larudee 1998, p.282).

For developing countries, where markets are often small and isolated, economic integration allows foreign firms to achieve economies of scale in three ways:

- Construction of larger plants in one country within a free trade area to produce a single product for the whole market. This type of scale of economy is important in heavy industries such as steel, petroleum refining, and pulp and paper.
- Reducing product varieties in individual plants (or horizontal specialisation). This type of scale of economy is important for new industries such as machine tools, footwear, textiles, and pharmaceuticals.
- Manufacturing parts, components, and accessories of particular product in separate countries (or vertical specialisation). This type of scale of economy is important in industries producing durable consumer goods, machinery, and transport and equipment.

(Athukolara and Menon 1996, p.86).

Moreover, economic integration among developing countries also leads to efficiency-seeking investment that includes export-platform investment and investment in internationally integrated industries. Export-platform investment focuses on producing standard final goods for export to the extra-regional market. Such investment in developing countries is likely to produce light manufactured goods such as clothing, footwear, sporting goods and toys.

The second type of efficiency-seeking investment is investment in internationally integrated industries where the development of technology allows the division of the production process into capital, technology-intensive and labour-intensive stages. The labour-intensive stages often involve assembling components produced in developed countries, which are then to be moved to low wage developing countries. Economic integration provides foreign investors with opportunities of relocation or to "peel-off" parts of the production processes among member countries in order to take advantage of further division of labour and intra-industry specialisation as well as a country's comparative advantages. Such effects of economic integration will be greater if member countries have a complementary economic structure (Athukolara and Menon 1996, p.87).

The investment of the Japanese Toyota Motor Company in the Southeast Asian countries under the formation of the Association of Southeast Asian Nations Free Trade Area (AFTA) is a typical example. Toyota has established a network of affiliates for part supply to local and regional markets including Japan, in which Toyota exports diesel engines from Thailand, transmissions from the Philippines, steering gears from Malaysia and engines from Indonesia. In 1995, intra-firm exports among those affiliates accounted for about 20 percent of exports of parts and components of the company's manufacturing affiliates world-wide (UNCTAD 1996 cited in Gangopadhyay 1998, p.45).

Moreover, the formation of AFTA also generates several impetuses to attract FDI flows. The content of AFTA's common effective preferential tariff scheme appears in Appendix 1.

The greatest attraction of AFTA to FDI is to increase the efficiency of FDI, especially for the export-oriented variety. The formation of AFTA and removal of trade barriers will allow foreign investors to relocate production according to member countries' comparative advantages. In this sense, Vietnam, Indonesia, Thailand, and the Philippines will attract FDI toward labour-intensive industries while Singapore and Malaysia will attract FDI that uses intensively human and physical capital (Athukolara and Menon 1996, p.88, 1997, p.171; Motta and Norman 1996).

Moreover, the removal of trade impediments under AFTA will allow foreign companies investing in ASEAN to procure intermediate goods from sources within the region more easily and at a lower cost and hence increase ASEAN intra-industry trade (Igusa and Shimada 1996, p.159). In general, the formation of AFTA that facilitates intra-industry trade will promote FDI flows into ASEAN countries as a part of MNCs' strategy of globalisation, in which MNCs reallocate their production activities in developing countries as a part of the process of international vertical integration (Menon 1996b, p.11).

Motta and Norman (1996) argued that trade liberalisation under AFTA is considered as "open regionalism" and mainly creates increased market accessibility. Such lower trade barriers between member countries without "necessarily increasing trade barriers with respect to the rest of the world" on the one hand will be likely to induce outside firms to invest in the region, but on the other hand also influence the form of FDI (Motta and Norman 1996, pp. 775-776). In the case of ASEAN, FDI induced by AFTA will be likely to take the form of intra-regional export platform FDI, in which foreign investment firms will supply the majority of the member countries (Motta and Norman 1996).

In addition to inducing FDI flows, AFTA also tends to improve the efficiency of FDI flows to the region. Trade liberalisation and removal of intra-regional trade impediments will attract foreign investors who look for opportunities to improve their production efficiency and discourage foreign investors who had "committed themselves to high-cost, small production runs under import substitution regimes and local content requirement" (Ravenhill 1995, p.856).

AFTA also encourages and provides new investors with opportunities to compete with those who have already invested in the region. AFTA creates opportunities for foreign investors, especially U.S. firms, to catch up with Japanese investors in ASEAN markets. As newcomers, they can invest in building a single factory to serve the whole market and enjoy economies of scale while Japanese investors, who own plants in several ASEAN countries, are struggling to rationalise their production networks (Holloway 1997, p.48).

In general, it is argued that economic integration has induced FDI flows by creating larger market size and increasing production efficiency. On the other hand, the discriminatory removal of trade impediments has induced FDI to flow into trading blocs in order to avoid import tariffs and enjoy free access to member countries' markets. The formation of free trade areas like AFTA, for example, will provide dynamic effects to enlarge the regional market, enable foreign investors to enjoy economies of scale and attract FDI flows toward making use of member countries' comparative advantages.

3.4. Government Intervention and Infant Industry Protection.

Of all government intervention policies, infant industry protection has been argued as a means to create domestic production and employment, to diversify exports, to improve terms of trade and - in the long term - to support trade liberalisation and economic integration. The implementation of infant industry protection policies also attracts a large amount of FDI flows to develop infant industries in developing countries through introducing tariff, or non-tariff, barriers or production subsidies.

The infant industry argument was developed by Hamilton (1791) and List (1840) based on the real conditions of the American economy at that time. List (1840) argued that free trade is not necessarily in the best interests of a country in an intermediate stage of economic development and that a developing country could develop new industries only with some kind of temporary protection (List 1840 cited in Root 1994, p. 175).

The theory of infant industry protection has been discussed extensively by Kemp (1964), Johnson (1970) and Baldwin (1969). The main purposes of infant industry protection are:

- To give domestic infant industries enough time to achieve economies of scale before exposing them to international competition (Johnson 1964 cited in Thirlwall 1994, p. 368; Todaro 1996, p. 468).
- To avoid the problem of external economies. According to Johnson (1970), this is "an investment in a process of acquisition of knowledge which is socially profitable but privately unprofitable because the private sector cannot appropriate the whole of the social return from this investment" (Johnson 1970, p. 60). The high costs of obtaining new knowledge through training and education, R&D or knowledge diffusion require government protection, increase the benefit of new industries to cover the initial costs and encourage private entrepreneurs to enter new industries (Johnson 1964 cited in Thirlwall 1994, p.368; Baldwin 1969; Corden 1984, pp. 91-92; Todaro 1996, p. 468; Krugman and Obstenfeld 1997, pp. 255-256).
- To address the imperfections of capital markets. In developing countries, due to underdevelopment of capital markets (inefficient stock markets and banks), savings could not be transferred from traditional sectors (like agriculture) to finance new investment in new industries. The low initial profit in new industries will restrict the investment: even the long-term return on such investment may be high. In this case, the government can protect new industries and hence raise the initial profit and attract new investment (Baldwin 1969; Krugman and Obstfeld 1997, p. 255).
- To give new industries time to learn and master new technology effectively (Gillis et al. 1992, p. 442).

Based on the justification for infant industry protection, there are some principles for selecting industries that will be protected.

- The protected infant industries must be few and selected.
- The infant industries might have high initial cost, however if developed "would experience a sufficient decrease in costs, or generate sufficient externalities, so that the initial excess costs of the industry would be repaid with a rate of return equal to that earned on other investment" (Krueger 1984, p. 523).
- Some part of cost reduction would result from externalities generated by firms in the industry or the whole industries (ibid. pp. 523-525).

For developing countries, infant industries that need to be protected will be likely to be manufacturing industries that have high internal elasticity of demand from the outside world. Based on such selection, infant industry protection could provide the opportunity to diversify exports and to start producing and exporting goods with a much higher income elasticity of demand in the world markets (Prebisch 1950 and 1959 cited in Thirlwall 1994, pp. 371-373; Krueger 1984, pp. 523-525).

For those industries, the government can provide protection through tariffs or non-tariff barriers (such as quotas, excise taxes, sanitary regulations etc.) or production subsidies. The essential points of infant industry protection are that infant industry protection should be temporary and address market failure. Therefore, infant industry protection should include some kind of time schedule and determination of market failure - either imperfection or externalities (Corden 1984, p. 91; Todaro 1994, p.466). This is the major difference between infant industry protection policies and ISI strategy - though they both generate the inducement effects on FDI flows.

Among tariff and non-tariff barriers and production subsidy that have been used to protect infant industry, production subsidy appears to be a better choice (Johnson 1970, p.61; Corden 1984, p.91; Jovanovic 1992, p. 29; Gillis et al. 1992, p.462; Robson 1998, p. 60). There are several reasons that make a production subsidy the first choice to protect infant industry.

First, while both tariffs and subsidies impose distortion, a subsidy is likely to produce smaller distortion and avoid the consumption costs involved in the imposition of a tariff. As a result, a subsidy will reduce the dead-weight loss (Meade 1955 cited in Robson 1998, p.60; Corden 1974; Gillis et al. 1992, p.462).

Second, under the conditions of imperfection in capital markets, tariffs will not solve completely the problem of externalities. When a firm invests in R&D, tariffs will not prevent other firms from copying new technology and reducing production costs and that makes the investing firm unable to recover the costs of R&D while production subsidy could help the investing firm to recover the costs while new technology is still available for every firm (Baldwin 1969, p.298).

Third, tariff protection is inward looking in the sense that tariffs adjust the internal price structure, and lead to inefficiencies and difficulties in competing in the international market when protection policy is lifted. A production subsidy, by contrast, is outward looking, adjusts the internal cost structure to the external price structure and makes domestic production more efficient to compete in international markets (Thirlwall 1994, p.369).

Fourth, as a subsidy is an annual accounting, appearing in the government budget annually and financed through taxation, it will be more adherent to infant industries, small in quantity and short-lived (Gillis 1992, p.463).

The above-mentioned characteristics of infant industry protection have made it different from ISI. Under infant industry protection, an industry can be identified and given some initial period of protection, and will later become able to compete in an unprotected market. The ISI, in contrast, aims to protect an infant economy to enable it to develop the necessary characteristics it must have to produce rising welfare (Bruton 1989, p.1605).

The experience of Japan, Asian NICs and Southeast Asian countries has shown how infant industry protection has been carried out and has contributed toward socio-economic development. During the late 1940s, Japan was facing two development options of either taking advantage of its abundant low-wage labour or embracing new, advanced technologies. The Ministry of International Trade and Industry at that time argued that by choosing to adopt new, advanced technologies, the Japanese economy would achieve long-term advantages, and avoid the adverse effects of deteriorating terms of trade. In order to facilitate this strategy, medium and high technology industries were accorded substantial tariff and other protection against import competition until they had achieved their world market segment (Bliss 1988, p.1216; Scherer 1994, p.13, Rima 1994).

South Korea and Taiwan began their industrialisation process with protection being given to infant industries. Such protection lasted for about five years with an effective rate of protection of 10-20 percent, and such protection was implemented through subsidies. However, the governments of East and Southeast Asian countries were

willing to terminate protection when domestic infant industries failed to compete internationally after a period of protection (Evan and Alizadeh 1984 cited in Evan 1989, p.1292 ; Pack 1988, p.349).

In conclusion, government policies to protect infant industries have played important roles in the success of Asian NICs and Southeast Asian countries. The infant industry protection policy has been considered as a necessary means to create domestic production and employment, to diversify exports, to improve terms of trade, and in the long run, to support trade liberalisation and economic integration. The introduction of tariff and non-tariff barriers and production subsidies as a part of infant industry protection policy has generated strong inducement effects on FDI flows.

3.5. Government Intervention and Foreign Direct Investment in the Countries in Transition.

The previous sections showed that appropriate government intervention through investment incentives, trade policy and infant industry protection has contributed to the inducement of FDI flows to developing countries. For the countries in transition towards a market economy, appropriate government intervention has also played a very decisive role in attracting FDI flows indirectly by generating stability in political, social and economic conditions or directly by providing investment incentives and favourable environment for FDI.

For countries in transition towards a market economy, which include several countries in Central and Eastern Europe, countries of the former Soviet Union and China and Vietnam in Asia, FDI flows have been considered as a very important factor. FDI flows contribute to the transition period towards a market economy through providing scarce investment capital, access to advanced technology and management techniques, as well as access to western markets. Moreover, FDI flows also facilitate the privatisation and restructuring process and promote the integration of those countries into the global economy (OECD 1995b, pp. 17-18; Dyker 1999, p.9). The contribution of FDI flows in the privatisation and integration process has been essential. Certain types of privatisation in the countries in transition (especially Central and Eastern European countries) require substantial amounts of capital and an analysing ability of the firms'

economic potential that only foreign firms are able to provide (OECD 1995b, p.18). Moreover, by setting up joint-ventures in the countries in transition and placing these joint-ventures within their global networks, foreign investors have integrated those countries into the international market and international labour division system (Dyker 1999, p.9).

The inflows of FDI into the countries in transition depend very much on the political, social and economic stability of those countries (Svetlicic et al. 1993, p.8; Dunning 1993, p.17; Tiusanen 1993, pp. 69-70). However, the role of government in maintaining stability and therefore attracting FDI flows in the countries in transition depends on the reform approach that has been chosen in each country. In general, there are two distinctive reform approaches that have been introduced in the countries in transition towards a market economy: the Big-Bang approach and the gradual approach. According to the World Bank, the Big-Bang (or all-out) approach includes:

- Rapid price and trade liberalisation with a determined stabilisation programme to restore or maintain price stability.
- Quick moves to current account convertibility.
- Opening of market to entry by new private businesses.
- Starting several other reforms such as privatisation, financial sector reform, tax reform etc.

(WB 1996, p.9).

The Big-Bang approach has been introduced widely in Central and Eastern European countries including Russia and countries of the Former Soviet Union.

In contrast, the gradual approach starts with the liberalisation of a few sectors such as agriculture. Markets are then slowly but steadily extended to other parts of the economy. The gradual approach has been followed by China since 1978 by opening up the economy to foreign investors, liberalising prices, first at the margin and then more extensively. China's reform also focused on the rural economy, de-collectivising agriculture, and relaxing restriction on non-state industrial production. Those reforms were later carried out in urban areas, and in state-owned enterprises. In fact, the gradual

reform in China went through several stages of "combining plan with market" (WB 1996, p.10).

The role of the government under each reform approach also differs substantially. In the planning economy, the government has controlled almost every socio-economic activity through the mandatory planning system. Under the Big-Bang approach, the role of government has been reduced suddenly almost overnight to being responsible for only minimum socio-economic activities such as defence, or major public goods. In contrast, under the gradual approach, government intervention has been reduced gradually through several phases until the necessary institutions of a market economy have fully emerged (WB 1996; Pomfret 1996).

The application of different reform approaches in countries in transition has generated different results as shown in Table 3.3. In Table 3.3, Central and Eastern European countries are divided into four groups[6] according to the extent of economic liberalisation in each country by 1995: as countries in Group 1 are the most liberalised. The Central and Eastern European countries that followed the Big-Bang approach all suffered economic reduction and high inflation over the 1989-1995 period. Especially, countries of Group 3, including Russia, have experienced negative GDP growth of around 10 percent over the same period. The social situation in Central and Eastern European countries has also deteriorated except in the case of Group 1. In the case of Russia, its economy has experienced substantial losses as a consequence of the introduction of the Big-Bang approach. By 1995, Russian GDP had fallen to less than 50 percent of its 1989 level (Spulber 1997, p.129). On the other hand, inflation in Russia reached a high of 25 percent per month at the end of 1992 as a consequence of price deregulation (Tiusanen 1993, p.37). As the economy performed poorly, the living standards of Russia deteriorated. Between 1990 and 1994, total Russian employment fell by 6.5 million while 1994 wages and pensions were at 34 percent and 22 percent of their 1991 level respectively (Spulber 1997, pp. 124-125). Moreover, the income inequality has become more severe in Russia during the transition. The Gini coefficient

[6] Group1: Poland, Slovenia, Hungary, Croatia, FYR Macedonia, Czech Republic, Slovak Republic.
Group 2: Estonia, Lithuania, Bulgaria, Latvia, Albania, Romania, Mongolia.
Group 3: Kyrgyz Republic, Russia, Moldova, Armenia, Georgia, Kazakstan.
Group 4: Uzbekistan, Ukraine, Belarus, Azerbaijan, Tajikistan, Turkmenistan.

increased from 19-27 percent in 1989-1990 to 23-35 percent in 1993-1994 (Popov 1998, p.105).

Table 3.3: GDP Growth, Inflation and Social Indicators during Transition

	Average GDP growth (percent per year) 1989-1995	Average Inflation (percent per year) 1989-1995	Change in Social Indicators (percent) 1989-1994	
			Life Expectancy	Infant Mortality
Group 1	- 1.6	106	0.7	- 1.8
Group 2	- 4.2	149.2	- 0.2	- 1.8
Group 3	- 9.6	466.4	- 4.4	0.9
Group 4	- 6.7	809.6	- 1.6	- 1.9
China	9.4	8.4	2.1	- 11.1

Source: Modified from Table 1.1 in WB 1996, p.18.

Compared to the negative economic growth and living standard deterioration in the Central and Eastern European countries that follow the Big-Bang approach, China followed a gradual approach and has experienced substantial economic growth and improvement in social indicators. As shown in Table 3.3, China has achieved a high GDP growth rate of 9.4 percent over the 1989-1995 period, while life expectancy has increased by 2.1 percent and infant mortality has reduced by 11.1 percent.

The success of the gradual approach in China and the failure of the Big-Bang approach in Central and Eastern European countries, especially in Russia, are attributable to several factors such as the social and economic structure of each country, and the existing conditions before the reform in each country (WB 1996). Besides that, appropriate government intervention has also played a very decisive role during the transition period in those countries. In the case of Russia, the lack of appropriate government intervention, the sudden disappearance of planning institutions and the slow development of new market institutions led to the failure of the co-ordination system for the whole economy (WB 1996, p.27). Spulber (1997) concluded that:

> The absence of a powerful centre of decision and control in the rumbling old social and economic order, the declines in GDP and in key outputs, and the rapidly rising inflation and unemployment all rendered unworkable the naive idea of a miraculous "jump" out of Russia from the Eastern paradigm into the West one.
> (Spulber 1997, p.128).

Unlike Russia, reform in China has been kept closely under government control. Under government co-ordination and control, the reform has been carried out on an experimental basis and then gradually expanded to the whole country (Spulber 1997, p.129). The government control and co-ordination in China has served as a "co-ordinating function, limiting disruptions to the production and trade during the phased building up of market institutions" (WB 1996, p.25).

In short, appropriate government intervention under a gradual approach has contributed to the maintenance of social and economic stability during the transition period, guaranteeing smooth reform and transition. Such a smooth and stable environment, in turn, allows China to achieve high economic growth, improve living standards and creates a favourable environment to attract FDI.

In combination with an open door policy, political, social and economic stability, as well as the high level of economic growth, also attract FDI to countries in transition towards a market economy. Under the conditions of countries in transition, political, social and economic stability is the most important factor influencing FDI flows (Svetlicic et al. 1993, p.8; Dunning 1993, p.17; Tiusanen 1993, pp. 69-70). It has been emphasised that "what investors need is an assurance that the goal-posts will not be moved during the lifetime of their commercial undertakings" (Svetlicic et al. 1993, p.8).

Besides the indirect influencing effect in attracting FDI by generating stable social, political and economic conditions, the government in countries in transition can also directly provide a favourable environments for FDI.

According to Dunning (1993), there are three alternative models of development for Central and Eastern European countries in the transition towards market economy,

namely, the developing country model, reconstruction model and systemic model. The role of FDI in each model also varies accordingly.

The developing country model is based on the experience of the development of developing countries, especially Newly Industrialising countries (i.e. Korea, Thailand and Singapore)[7]. Under this model, Central and Eastern European countries will move from attracting little to substantial FDI flows as they develop. Moreover, the significance of FDI will depend on the pattern of economic development. Dunning (1993) considered that Albania, Romania and Bulgaria are likely to belong to the developing country model (Dunning 1993, p.24).

The reconstruction model is based on the development experience of Western Germany and Japan after the Second World War. Under this model, Central and Eastern European countries will need modern technological, organisational and management capabilities to explore their potential resources as Japan and Western Germany required in 1945. This model requires "speedy and widespread involvement" of FDI. Hungary and Czechoslovakia already follow this model (ibid.).

The systemic model is the combination of the more appropriate ingredients of the developing country model and reconstruction model. Under this model, the speed and extent of the changes in economic and legal systems (or systemic changes) of Central and Eastern European countries will decide the pace and the involvement of FDI. However, the involvement of FDI under this model is much lower than that of the reconstruction model due to "substantial establishment and learning costs" of setting up foreign firms in Central and Eastern European countries (ibid.).

Bearing in mind the need for "systemic changes" in any model, Dunning (1993) has emphasised the important role of government policies in attracting and making use of FDI flows in countries in transition. In the words of Dunning (1993), the potential of

[7] Compared with developing countries, Central and Eastern European countries have achieved a better social records in education and health care, but are similar in economic performance (in terms of production, transport and telecommunications).

countries in transition to attract and make use of FDI flows will depend on the government's success in:

> ...reshaping of attitudes to work and wealth creation, the redesigning of the business and legal framework, especially with respect to property rights and contractual relationships, the costs of setting up a market system, and the introduction of macro-economic policies which encourage domestic savings, but accept the discipline of currency convertibility and an open trading system.
> (Dunning 1993, p.20).

Another direct influence of government intervention on FDI flows in countries in transition is to reduce a country's risk for FDI. The FDI flows in countries in transition depend very much on the level of risk that foreign investors are likely to face, especially the uncertainty of the potential outcome of the reform programmes. There are several factors that can contribute to reducing that risk and one of the most important factors is the "amount of government stimulation given in terms of legal and economic help" (Cox and Hooley 1995, p.51).

The reality of FDI flows in countries in transition seems to support arguments about the important role of government intervention. Table 3.4 shows that China, where the government still plays an important role in socio-economic activities, has successfully attracted a large amount of FDI flows compared to countries such as Russia, where government control and co-ordination are kept to a minimum.

Over the 1991-1996 period, China attracted large amounts of FDI of about $152.8 billion, while Russia received only $6.4 billion - or less than 5 percent of the total received by China. The reasons behind the low level of FDI flows in Russia are due to political, social and economic instability and a lack of appropriate government intervention (Adjubei 1993, p.100; Popov 1998, p.122; Barz 1999, p.111).

Table 3.4: Foreign Direct Investment Flows to China and Selected Central and Eastern European Countries (Balance of Payments Data) ($ million)

	1991	1992	1993	1994	1995	1996
Czech Rep.	511	983	654	878	2,568	1,435
Hungary	1,462	1,479	2,350	1,144	4,519	1,982
Poland	241	524	1,516	1,493	2,771	4,254
Russia	- 100	700	700	637	2,017	2,479
Romania	40	77	94	341	419	263
China	4,366	11,156	27,515	33,787	35,849	40,180

Source: Table 2.3 in Meyer 1998, p.30.

The key problems faced by foreign investors in Russia are "the permanent state of flux of the legal framework and the discrepancies between enactment and enforcement" (Barz 1999, p.111). Such problems, caused by the sudden reduction of government intervention at the early stage of transition, have left a "vacuum" and many central, regional and local authorities have competed to fill this "vacuum". Such competition has produced a "striking opaqueness and inconsistency" in the legal framework that governs the operation of FDI flows (Barz 1999, p.111).

Moreover, the number of incentives provided by the Russian government to investors in general and foreign investors in particular is lowest among Central and Eastern European countries. There was only one investment incentive given to foreign investors in Russia compared to four investment incentives given to foreign investors in Poland (Zemplinerova 1997, p.91).

In contrast to the low level of FDI flows to Russia, the huge amount of FDI flows to China since 1979 has been attributed significantly to the changes in China's government policy. The gradual liberalisation of China's economy since 1979 and the setting up of four Special Economic Zones with preferential economic policies have encouraged the inflows of FDI. As the reform gained momentum in 1983, China's government eased several restrictions on FDI and opened more cities, regions and sectors to FDI.

In 1992, realising that FDI was slow-down, the Chinese government announced the adoption of the "socialist market economy" strategy. The government carried out

several reforms in order to improve the legal framework to support the operation of FDI such as tax reform, dual-track price reform, and privatisation of state-owned enterprises. As a result of such changes, the pledged FDI increased substantially by 385% to reach $58.12 billion in 1992. From 1992 to 1996, the pledged FDI flows to China remained at a very high level ($111.4 billion in 1993) (Sun 1998, pp. 13-20).

In conclusion, government intervention in China during the transition period has played a decisive role in attracting FDI flows through maintaining political, social and economic stability and providing investment incentives and a favourable environment for FDI. Government intervention under the gradual reform approach in China has generated high economic growth, stable political, social and economic conditions - and has provided a favourable environment and incentives to attract substantial FDI flows. In contrast, the lack of appropriate government intervention under the Big-Bang reform approach in Central and Eastern European countries, especially in Russia, has contributed to low or negative economic growth, social deterioration and political unrest. The political, social and economic instability has, in turn, made those countries less attractive to FDI. Despite its large potential to attract FDI, the actual FDI flows to Russia over the 1991-1996 period were less than 5 percent of those in China over the same period. The experiences of attracting FDI in China and Russia show that the conditions of countries in transition towards a market economy require appropriate government intervention. Such government intervention will work hand - in hand - with market institutions that are being established during the transition in order to create a favourable environment for FDI.

3.6. Conclusion.

This chapter has examined economic integration and government intervention which induce FDI flows and maximise the positive impacts whilst minimising the detrimental effects of FDI flows in developing countries.

Trade liberalisation and economic integration can create positive effects, improving production efficiency through economies of scale and hence inducing FDI flows. In the case of ASEAN countries, trade liberalisation and economic integration have promoted

intra and extra regional trade, induced FDI flows, improved terms of trade and raised living standards.

The success of East and Southeast Asian countries, compared to other developing countries, in making use of FDI flows to promote socio-economic development is attributed to the role of government development policies. Where the government follows a strategy of intervening less directly in the operation of foreign investors, minimising such requirements as ownership and operational requirements or providing appropriate investment incentives, and focusing on creating a favourable environment for FDI through implementing EOI and appropriate infant industry protection policies, FDI flows tend to be more useful and have fewer detrimental effects. In contrast, where the government follows a strategy of direct intervention in the flows and operation of foreign investors, and implements an ISI strategy, FDI tends to produce detrimental effects that outweigh its positive contribution to the socio-economic development process.

Government intervention also plays a very decisive role in attracting FDI flows in countries in transition towards a market economy through maintaining political, social and economic stability, providing investment incentives and a favourable environment for FDI flows.

The foregoing chapters have examined the arguments put forward by the mainstream and radical views about the impacts of FDI flows on socio-economic development in developing countries. Moreover, the development experiences of East Asian countries and countries in transition towards a market economy have shown that government policies can help to maximise the positive impacts and minimise the detrimental effects of FDI flows and economic integration in developing countries. However, there are still some questions left unanswered, especially for countries in transition. Those questions are:

- What are the effects, either useful or detrimental, of FDI flows on socio-economic development in developing countries during the transition period from a highly planned economy towards a market-oriented economy?
- What should government do during such a transition period to maximise the useful impacts and minimise the detrimental effects of FDI flows?

Those questions will be answered in following chapters by analysing the impacts of FDI flows in Vietnam during the 1988-1998 period as well as the policies of the government of Vietnam in making use of FDI flows.

CHAPTER IV:
OVERVIEW OF SOCIO-ECONOMY DEVELOPMENT AND FOREIGN DIRECT INVESTMENT FLOWS IN VIETNAM*

The previous chapters have reviewed several arguments as well as the empirical evidence put forward by both mainstream and radical views on the role of FDI flows on socio-economic development in developing countries. While those arguments and evidence have been inconclusive, the success of East and Southeast Asian countries in utilising FDI flows to promote socio-economic development has suggested that appropriate government policies can help to maximise positive impacts and minimise detrimental effects of FDI flows. This conclusion seems to be correct in assessing the impacts of FDI flows in Vietnam that will be examined in following chapters. This chapter first reviews briefly the programme of socio-economic reform in Vietnam which started in 1986 and laid down the foundation for FDI flows in that country. The magnitude of FDI flows since 1988 and the factors that explain the trend of FDI flows in Vietnam will then be examined.

4.1. Overview of Socio-economic Development in Vietnam.

Vietnam is a developing country located in Indochina, with a population of 78 million in 1998 (GSO 1999). With GDP per capita of $352 (in 1998), Vietnam is still one of the poorest countries in the world (WB 1999, UN 1999). However, in terms of social development, Vietnam has achieved outstanding results compared to other low-income countries. The social indicators of Vietnam such as literacy rate, life expectancy and infant mortality are comparable to those in lower middle income countries such as Malaysia or Indonesia (UN 1999).

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* An article "The socio-economic impact of foreign direct investment flows in Vietnam: 1988-98" that was written based on this Chapter and Chapter V is being considered for publication by the *Asian Studies Review*.

Table 4.1: Major Indicators of Macro-economic Performance of the Vietnamese Economy, 1986-1998

	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998
GDP growth rate (%)	0.3	3.7	5.9	8.0	5.1	6.0	8.6	8.1	8.8	9.5	9.3	8.2	5.8
GDP per capita ($)							156		217		319		352
Export growth (%)		23.5	20.2	80.1	31.1	18.0	21.2	20.6	35.8	28.2	41.0	24.8	2.4
Import growth (%)		5.6	19.3	18.3	6.3	18.7	20.3	39.3	48.6	43.7	39.0	-0.2	-1.1
Inflation rate (%)	775.0	232 .0	394.0	28.0	67.5	67.6	17.6	5.2	14.4	12.7	4.5	3.6	9.2

Source: - WB 1995, 1996,1999; GSO 1996, 1999b; UN 1999.

Since unification in 1975 up until 1986, the economy of Vietnam was characterised as a highly-concentrated planned economy in which the state sector played a dominant role. The private sector and FDI were not encouraged. External economic relations were mainly with Socialist countries of Eastern Europe, especially the former Soviet Union. Under such a planned economic system, the economy suffered several difficulties. GDP growth was low and agricultural production output was not sufficient to meet domestic demand while inflation remained over 700 percent in 1986, as shown in Table 4.1.

Since 1986, the government of Vietnam started its reform programme or "Doi Moi", moving from a highly-concentrated planning mechanism towards a market-oriented economy. Accompanying the movement towards a market-oriented economy, Vietnam has also implemented an open door policy, promoting external economic co-operation with all countries in the world, encouraging foreign trade and foreign investment. Socio-economic reform has turned Vietnam into a "multi-sectoral economy in accordance with the market based on state management and Socialist orientation" (Reinhardt 1993, p.71). The main aims of socio-economic reform in Vietnam are to:

- Achieve sustainable economic growth in order to deepen macro-economic reforms, alleviate poverty and foster industrialisation.
- Maintain political, social and economic stability.
- Guarantee equity and equal opportunity for all.
- Create a people-centred development process that is implemented by the people, for the people.

(UN 1999, p.1).

To achieve such objectives, several sectoral reforms have been carried out (Than and Tan 1993; Forde and de Vylder 1996; Harvie and Tran Van Hoa 1997; Wolff 1999). In the agriculture sector, farming co-operatives have been replaced by farm households and long-term land use rights have been given to farmers in order to stabilise and increase agricultural output.

In the industrial sector, more autonomy has been given to state-owned enterprises (SOEs) and the system of government subsidies for SOEs was abolished. All SOEs have been put on self-financing bases and they have been responsible for their own

production, marketing and profit. The government also shifted the focus of investment from heavy industries toward light and export-oriented industries. Moreover, development of the private sector has been encouraged and promoted.

In the financial sector, the government has limited its control to the price of a few strategic commodities and allowed the free market to determine the prices of the majority of commodities. In the trade sector, the decentralisation and liberalisation process has been carried out intensively. The government no longer controls trade activities by command or plan but uses market tools such as taxes, quotas and tariffs. In addition to those reforms, FDI has been promoted. At the end of 1987, the government of Vietnam promulgated the Law on Foreign Investment in an attempt to attract foreign capital and technology to support the socio-economic development.

As the result of those reforms, the country has achieved encouraging initial results. Table 4.1 shows that from 1987 up to 1997, the economy has achieved very high annual growth rates of around 8 percent, while export and import growth also remained at high levels. Industrial and agricultural production has also grown rapidly and Vietnam has moved from being a rice importer before 1986 to become the world's third largest rice exporter in the early 1990s. Inflation has been reduced and remained at single digits since 1996. As the result of high economic growth, the poverty alleviation process has achieved striking results. The proportion of people classified as poor fell from 53 percent in 1993 to 37 percent in 1998 (GOV and WB 1999, p.ii). In general, successful economic growth in Vietnam since 1986 has been attributed to the government's socio-economic reform policy. FDI flows, one of the major elements of the reform, have been argued to be one of the important factors that have led to such successful economic development in Vietnam.

4.2. Overview of Foreign Direct Investment Flows in Vietnam.

4.2.1. Overview of the volume, trend and form of foreign direct investment flows in Vietnam.

FDI in Vietnam started in 1977, when the country introduced its first Foreign Investment Rules to attract FDI to develop the country after the long period of war. However, due to unfavourable international conditions, the 1977 Rules did not bring in substantial amounts of FDI.

As one of the major elements of the 1986 socio-economic reform, FDI was promoted by Vietnam's government through promulgating the Law on Foreign Investment in late 1987. The 1987 Law on Foreign Investment contains "the government's guidelines, the Socialist orientations, with the purpose of strengthening national interests and meeting the need and interests of foreign investors" (Luu Van Dat 1997, p.89). The 1987 Law has been considered as "one of the most liberal in Southeast Asia", more comprehensive and liberal than that of China (Economist 1987; Gates and Truong 1994, p.14). The Law provides favourable conditions to attract FDI by offering generous tax incentives, import privileges and by not imposing a minimum capital requirement.

The Law on Foreign Investment in Vietnam has been amended twice, in 1990 and 1992, and renewed twice, in 1996 and 2000, in order to provide a more favourable environment to encourage FDI flows to Vietnam, and to broaden the rights of both Vietnamese and foreign investors. The success of the Law on Foreign Investment in Vietnam has been reflected in the large inflows of FDI to Vietnam since 1988 as shown in Table 4.2[8]. This has been despite the U.S. trade embargo on Vietnam which was not lifted until 1994.

[8] The data on FDI flows in Vietnam are collected and compiled primarily by the Ministry of Planning and Investment (MPI) through a quarterly survey of foreign invested enterprises (FIEs) including information on FDI commitments and implementation as well as the data on performance of FIEs.

Table 4.2: Overview of Foreign Direct Investment Flows in Vietnam, 1988-1998

	1988-90	1991	1992	1993	1994	1995	1996	1997	1998
- Number of projects	211	152	195	273	371	412	368	331	275
- Committed capital ($ mill.)	1,582	1,294	2,036	2,652	4,071	6,616	8,640	4,514	3,897
- Number of cancelled projects	6	37	48	34	58	57	52	77	95
- Investment capital of cancelled projects ($ mill.)	24	293	402	79	217	477	1,035	334	2,433
- Number of projects with increased investment capital	1	6	10	51	73	122	134	143	133
- Increased investment capital ($ mill.)	0.3	7.7	49	222	504	1,247	684	1,095	770
- Actual committed capital ($ mill.)	1,558.3	1,008.7	1,683	2,795	4,358	7,386	8,289	5,275	2,234
- Growth rate of actual committed capital (%)		64.7	166.8	166.1	155.9	169.5	112.2	63.6	42.4
- Legal capital ($ mill.)	1,332	680	1,406	1,526	1,796	2,805	3,012	2,115	1,795
of which: Vietnam's contribution ($ mill.)	161	156	185	311	463	723	692	327	626
- Size of project ($ mill.)	7.6	8.8	11.4	11.7	13.9	20.8	26.2	20.8	12.4
- Number of finished projects	2	1	3	3	1	2	3	3	3
- Investment capital of finished project ($ mill.)	0.26	1	13.94	15.51	0.13	0.5	74.56	0.82	19.1
- FDI implementation ($ mill.)	262.5	213	394	1,099	1,946	2,671	2,646	3,250	1,956
- Growth rate of implemented capital (%)			185.0	278.9	177.1	137.3	99.1	122.8	60.2
- Ratio of FDI implementation over actual commitment (%)	0	21.1	23.4	39.3	44.7	36.2	31.9	61.6	87.6

Source: MPI database, Ha Thang 2000.

Between 1988 and 1998, about $35.302 billion of FDI was committed for investment in 2,588 projects in several sectors. However, 464 projects with a total investment capital of $5.294 billion have been cancelled, while $4.579 billion of investment capital has been increased for existing projects over the same period. As a result, the actual committed FDI flows in Vietnam over the 1988-1998 period were $34.587 billion for 2,124 projects. For 1999, despite the regional financial crisis, the preliminary figures show that 278 new investment projects with a total investment of $1.5 billion were committed. The growth rate of committed FDI has been very impressive between 1991-1995, with the annual growth rate recorded at around 65 percent. FDI implementation also increased rapidly, especially during the 1991-1997 period, up from $213 million in 1991 to $3,250 million in 1997 but then reduced to $1,520 million in 1999. The ratio of implementation over commitment has also been on the rise since 1988, increasing from 21.1 percent in 1991 to 87.6 percent in 1998 and for the whole period from 1988 to 1998, $14.2 billion of FDI has been realised, accounting for 41 percent of total committed FDI. The implementation of committed FDI in Vietnam seems to be better compared to China, where the same ratio for the whole period 1979-1996 was only 37.3 percent (Zhang 1999, p.12). Such increasing FDI commitment and implementation since 1992 made Vietnam second in the world in terms of FDI as percentage of GNP in 1996 (WB 1997a, p.17).

The average size of FDI projects also increased from $7.6 million in 1988-1990 to $26.2 million in 1996 before reducing to $12.4 million in 1998. For the whole period 1988-1998, the average size of FDI projects was $16.3 million, $2-3 million higher than that of China (VEN 1998). Moreover, several existing projects requested an increase in their investment capital, adding to total FDI commitment by over $4.5 billion over the 1988-1998 period. In 1995, for example, such an increase of investment capital was $1,247 million, accounting for 16.9 percent of total FDI committed in that year.

On the other hand, a number of projects have been cancelled for various reasons, but mainly due to difficulties in mobilising investment capital and other difficulties associated with the regional financial crisis. The number of cancelled projects and their investment capital have increased since 1996 and reached $2.4 billion in 1998. Of the cancelled projects, the majority had been approved during the 1988-1992 period when the economy of Vietnam was still under significant reform toward market-oriented

economy and the knowledge of foreign investors about Vietnam's market was still limited (MPI 1998, p.8).

Table 4.3 reveals that since 1991, joint-ventures have been the dominant form of FDI flows in Vietnam, in terms of both commitment and implementation. In 1994, the amended Law on Foreign Investment allowed a new category of Build-Operation-Transfer to be implemented in Vietnam, and its share in FDI flows has increased since then. The 100 percent foreign-owned form also has been increasing as government policy toward such form of investment has changed. Another form of FDI flows, the Business Co-operation Contract (BCC), which played an important role in the early years, decreased to less than 6 percent of total FDI commitment in the 1993-1996 period. Moreover, Vietnam's major participants in all forms of FDI (with the exception of 100 percent foreign-owned) have been SOEs, while participation from the private sector has been small in terms of number of projects and committed capital. For the whole period 1988-1998, Vietnam's private sector has been involved in around 7.8 percent of the number of projects and less than 2 percent of committed FDI (MPI database). The reasons for this situation will be discussed in the following chapter.

The sectoral distribution of FDI in Vietnam during the 1988-1998 period shows that both committed and implemented FDI have increased in heavy, light and food industries but decreased in hotels and tourism, and apartments and office building (Table 4.4). The classification of FDI commitment and implementation, according to the International Standard of Industrial Classification (ISIC), gives another insight into the structure of FDI flows (Table 4.5). For the 1988-1998 period, the manufacturing and service sectors became dominant for both FDI commitment and implementation, while the primary sector, which played a key role during the 1988-1990 period, became less important.

Table 4.3: Foreign Direct Investment Commitment and Implementation by Forms of Investment, 1988-1998

(percent)

	1988-90	1991		1992		1993		1994		1995		1996		1997		1998	
	Com.	Com.	Impl.	Com.	Impl.	Com.	Impl.	Com.	Impl.	Com.	Impl.	Com.	Impl.	Com.	Impl.	Com.	Impl.
Joint ventures	36.7	60.6	61.9	56.3	45.9	66.9	47.2	74.1	51.2	69.1	51.7	76.7	58.4	50.2	64.5	57.3	34.8
- With SOEs		59.8	59.5	55.6	44.3	65.8	45.9	71.8	49.6	67.2	50.7	75.1	57.2	47.5	59.2	52.2	33.8
- With private sector		0.9	1.8	0.7	1.6	1.1	1.3	2.3	1.5	1.9	1.1	1.6	1.2	2.6	2.4	5.0	1.0
Business Co-operation Contract	60.1	28.3	36.3	25.1	29.1	4.7	32.8	3.5	32.8	5.4	29.8	1.2	13.4	17.8	2.3	17.5	54.4
Build-Operation-Transfer	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.2	7.2	0.0	5.1	0.1	0.0	0.4
100 % foreign-owned	3.1	11.1	1.8	18.6	25.3	28.5	20.2	22.5	16.1	25.0	18.3	14.9	28.2	26.9	33.2	25.3	10.5

Source: MPI database

Table 4.4: Foreign Direct Investment Commitment and Implementation by Sector, 1988-1998

(percent)

	1988-1991		1992		1993		1994		1995		1996		1997		1998	
	Com.	Impl.	Com.	Impl.	Com.	Impl.	Com.	Impl.	Com.	Impl.	Com.	Impl.	Com.	Impl.	Com.	Impl.
Heavy industry	9.8	16.9	11.7	5.3	16.6	8.3	14.3	17.6	24.5	12.8	18.3	18.9	18.1	19.0	13.7	21.2
Oil & gas	9.7	47.7	17.4	34.4	5.6	23.2	0.0	33.7	0.0	20.9	0.8	14.2	1.3	6.9	39.4	17.9
IP/EPZ infrastructure	3.7	0.0	0.7	0.9	0.3	0.3	5.1	1.0	0.2	2.1	3.7	4.8	5.1	3.2	0.0	2.2
Light industry	3.1	5.3	6.7	4.3	20.1	11.4	11.3	8.8	9.9	10.4	8.0	15.2	9.2	15.1	1.2	8
Food industry	26.7	0.9	4.9	4.0	2.8	16.3	8.5	6.8	3.9	6.8	6.4	2.9	4.0	6.6	1.2	6.2
Agriculture & forestry	5.1	4.1	2.6	3.8	5.4	5.9	7.5	2.8	8.6	5.2	4.1	3.9	4.6	8.1	1.5	5.3
Hotel & tourism industry	20.3	5.9	25.6	11.7	21.1	13.0	13.2	15.0	4.3	10.7	2.0	11.2	2.9	12.0	22.9	8
Service	0.2	0.3	0.3	0.1	0.0	0.2	2.5	1.0	0.3	0.4	0.2	0.1	0.5	0.3	4.4	0.2
Apartment & office	4.4	3.8	2.2	3.4	15.5	4.5	17.9	5.8	29.0	10.4	10.9	9.4	4.3	7.1	3.5	14.8
Transport & telecommunication	15.2	7.9	2.4	6.0	8.7	3.4	2.9	3.5	6.3	9.9	1.4	3.7	24.8	2.4	8.9	3.4
Construction	0.4	0.2	18.8	1.6	1.7	5.6	14.2	2.7	8.8	5.8	41.7	11.5	21.2	12.1	2.1	10.1
Culture, health & education	0.1	0.3	0.3	1.5	0.6	0.8	0.5	0.6	1.6	0.6	1.4	0.5	3.3	1.6	0.2	2
Fishery industry	0.9	4.7	0.3	1.7	0.3	0.9	0.8	0.4	0.4	0.6	0.1	0.5	0.5	0.4	0.0	0.6
Banking & finance industry	0.4	2.1	6.3	21.0	1.4	6.4	1.4	0.1	2.1	3.3	1.0	3.2	0.1	5.0	0.9	0.1

Note: Com. and Impl.: committed FDI and implemented FDI.

Source: MPI database

Table 4.5: Foreign Direct Investment Commitment and Implementation Classified by International Standard Industrial Classification, 1988-1998

(percent)

	1988-90	1991		1992		1993		1994		1995		1996		1997		1998	
	Com.	Com.	Impl.	Com.	Impl.	Com.	Impl.	Com.	Impl.	Com.	Impl.	Com.	Impl.	Com.	Impl.	Com.	Impl.
Primary	54.3	8.9	35.7	19.2	26.6	7.0	22.1	2.1	29.1	2.1	18.5	2.1	14.1	1.9	9.5	3.5	17.2
Manufacture	8.9	58.6	22.9	43.9	18.2	36.3	45.6	51.3	36.4	53.6	41.1	44.8	48.1	44.8	59.9	0.5	50.7
Service	36.8	32.5	41.5	36.8	55.2	56.7	32.3	46.6	34.5	44.3	40.4	53.2	37.8	53.3	30.6	95.9	32.1

Note: Com. and Impl.: committed FDI and implemented FDI.

Source: MPI database

The small share of FDI flows to the agriculture sector has been another concern. The agriculture sector has played an important role in the economy, accounting for over 24 percent of GDP and 68.8 percent of the labour force in 1997, but it received only a small amount of FDI flows of around $1.9 billion or less than 5.8 percent of the total FDI flows over the 1988-1998 period as shown in Table 4.4. However, due to Vietnam's system of industrial classification, the amount of FDI flows to the agriculture sector also includes several FDI projects that belong to manufacturing industries such as food processing, wood processing and animal feed production. If those FDI projects are excluded, the FDI flows to cultivation, animal raising, afforestration and other agricultural activities can be said to have fallen to $462.1 million or 1.5 percent of total FDI flows over the 1988-1998 period (MPI database). Compared with the total domestic investment in agriculture (including public and local private investment) over the same period, such FDI flows have been very small. The public investment fund in the agriculture sector in 1996 and 1997, for example, was $573 million, $110 million higher than the FDI flows to the agriculture sector for the whole period of 1988-1998. Hence such small amounts of FDI flows to agriculture did not create any significant impacts on the growth of this sector.

FDI flows to Vietnam from over 60 countries and territories in the world, including developing countries, developed countries and Newly Industrialising Countries (NICs). Table 4.6 shows the FDI flows to Vietnam from the top 10 foreign countries in terms of FDI commitment. While Asian NICs have been leading foreign investors in Vietnam, FDI from developed countries of EC and North America have become increasingly important.

4.2.2. Stages of foreign direct investment flows in Vietnam.

In general, the FDI flows in Vietnam can be divided into four stages reflecting the development of FDI flows in Vietnam and the changes in the international environment.

Early stage 1988-1990:

During the early stage, FDI flows focused solely on oil and gas, hotels and tourism and other service industries which accounted for 91.1 percent of the total FDI commitment. The FDI flows into the manufacturing sector, however, accounted for only 8.9 percent

due to the fact that foreign investors were not familiar with Vietnam's market and its Law on Foreign Investment.

The projects committed during the early stage, except for the oil and gas industry, were small, short-term and aimed for quick return. The BCC has been a dominant FDI form as the majority of FDI flows have taken place in telecommunication, oil and gas industries where only joint-venture and BCC are allowed.

Table 4.6: Top 10 Countries Classified by Foreign Direct Investment Commitment, 1988-1998

Rank	Country	Committed FDI ($ million)	Share in total (percent)
1	Singapore	5713.1	16.1
2	Taiwan	4415.9	12.4
3	Hongkong	3570.9	10.0
4	Japan	3299.1	9.3
5	South Korea	2973.7	8.4
6	France	1832.8	5.2
7	British Virgin Islands	1710.7	4.8
8	Russian Federation	1498.4	4.2
9	United States	1189.7	3.3
10	United Kingdom	1160.7	3.2

Source: GSO 1999b, pp. 249-250.

The take-off stage 1991-1994:

During this stage, annual FDI commitment increased significantly from $1 billion in 1991 to $3.85 billion in 1994 while annual FDI implementation increased more than nine times to $1.95 billion in 1994. At this stage, FDI flows from Asian countries, especially ASEAN and Asian NICs, increased very rapidly. The manufacturing and service sectors became important as foreign investors became more familiar with Vietnam's market and started looking for long-term business in Vietnam by establishing joint-ventures with local partners. By 1994, joint-ventures accounted for 74.1 percent of total FDI commitment while BCC fell to only 3.5 percent.

The consolidation stage 1995-1996:

This stage was marked by the lifting of the U.S. trade embargo against Vietnam and as a result, more FDI flows, especially from the U.S. and Japan, were registered. In 1995, FDI flows from Japan increased to $1.35 billion compared to $227 million in 1994 while FDI flows from North America increased by almost five times. In 1996, Vietnam achieved a record $8.3 billion of FDI commitment. The manufacturing and service sectors were still major components of FDI commitment, while the primary sector accounted for only 2.1 percent of total FDI commitment.

The fourth stage: 1997-1998:

This stage was associated with the regional financial crisis and marked by a sharp decline of FDI flows. In 1998, the newly committed FDI was as low as $1.46 billion, a decline from $4.18 billion in 1997. This was a direct consequence of the financial crisis that affected almost all East Asian NICs and ASEAN countries, the major foreign investors in Vietnam. For example, the FDI commitment from ASEAN countries in 1998 was only $8.06 million compared to 1996's commitment of $3.45 billion. Moreover, the devaluation of several local currencies as a direct consequence of regional financial crisis also reduced the comparative advantage of Vietnam's cheap labour and hence reduced its attractiveness to FDI. The FDI that took the form of 100 percent foreign owned also increased to over 25 percent of total FDI commitment during this stage due to factors that will be examined later.

In conclusion, inflows of FDI to Vietnam since 1988 increased significantly, moving from a focus on the primary sector (especially oil and gas industries) toward concentrating on manufacturing and services. That increasing trend of FDI flows may place Vietnam into the end of stage one or early part of stage two of Dunning's five stages of the investment development path, where inward direct investment starts to rise while outward investment is still low or negligible[9].

[9] By the end of 1999, just 29 outward investment projects with total investment capital of $18.3 million were approved for investment in other countries, mainly Laos, Cambodia and Russia (MPI database).

4.3. Factors Explaining Foreign Direct Investment Flows in Vietnam.

The FDI flows to Vietnam, especially the huge amount of FDI flows after 1990 as well as the significant decline of FDI flows after 1996, have been attributed to several factors and according to Dunning's eclectic theory, such factors can be classified into three groups: Locational advantages, Ownership advantages and Internalisation factors (Dunning and Narula 1996, pp. 1-2).

4.3.1. Locational advantages.

The locational advantages refer to natural, geographical and socio-economic conditions of Vietnam that attract FDI flows. The strategic location of Vietnam in Southeast Asia, the most rapidly growing region in the world during much of the 1950-1997 period, allows Vietnam to take part in a rapid and dynamic economic growth process, and makes it more attractive to foreign investors. Moreover, the proximity between Vietnam and other Asian NICs and ASEAN countries also attracts FDI flows from those countries to Vietnam.

The stable political and economic situation is another advantage of Vietnam. Since 1986, the economy of Vietnam has been stabilised and has grown rapidly at around 8 percent per annum. Exports and imports have also increased significantly while inflation has remained in single digits (Table 4.1). Several foreign investors have chosen Vietnam instead of other developing countries in Africa or Latin America because of its stable political and economic situation.

Vietnam has also a wide range of natural mineral resources that attract foreign investors, especially during the early stages. There are large and unexploited deposits of coal, wolfram, lead, zinc, bauxite and iron located in the North and Central parts of the country while promising large reserves of oil and gas are located off-shore of Vietnam as well as in the Mekong and Red River deltas. Since 1988, several oil companies have been working on those fields to explore for oil and gas.

Another advantage of Vietnam that attracts FDI is its abundant and cheap but relatively well-educated labour force. The total labour force of Vietnam in 1997 was 37 million or 47.7 percent of the total population. The labour force increases rapidly at an annual

growth rate of 3.5 percent or 1.2 million people and this makes Vietnam's labour force rather young (GSO 1999b, p.10). It is projected that by the year 2005, people aged between 20 and 30 years will account for 37 percent of the total labour force (GSO 1994, p.75). Moreover, about 24.8 million people (or 67.1 percent of the labour force) are now working in the agricultural sector. This creates a large labour pool to meet the increasing demand for labour for foreign invested enterprises (FIEs). On the other hand, because Vietnam has maintained its high literacy rate of 89 percent in 1997-1998, its labour force is also well-educated (UNDP 1999). The 1989 population census revealed that over 3 million of the total labour force of 29 million had obtained at least some technical training qualification.

Looking for cheap labour has been the main motivation of several foreign investors coming to Vietnam. Vietnam's labour costs have remained lower than those of other countries in the region. The wage levels in Vietnam in 1996 remained the lowest for all categories of labour (Table 4.7). Even after other countries in the region have significantly depreciated their currencies against the U.S. dollar as a consequence of the regional financial crisis, Vietnam still maintains its comparative advantage of cheap labour.

Table 4.7: Vietnam's Average Wage Level, 1996

($/day)

Country	Minimum wage for unskilled labour	Unskilled labour	Skilled labour	Techni-cians	Engine-ers	Middle Managers
Indonesia	0.70-2.85	2.00-3.00	6.10	250	380	560
Malaysia	None	7.97	13.28	578	1,395	1,992
Philippines	4.19-5.65	4.00-6.70	7.00-9.17	350-550	650-962	1,076-1,307
Taiwan	28.50	37.5	51.5	1,378	1,568	2,225
Thailand	5.07-6.25	5.12-6.13	6.61-7.28	282-560	584-749	700-1,221
Vietnam	0.78	1.29-1.37	2.15-2.38	100-185	195	220

Source: Table 1.3 in WB 1998, p.7.

On the other hand, as labour costs have risen dramatically in several developed countries, there has been a need for MNCs to invest overseas to secure lower labour

costs and hence reduce production costs. Table 4.7 shows that labour costs in Taiwan, for instance, are 10 to 40 times higher than in Vietnam. A survey of Japanese corporations operating overseas in 1996 revealed that 60.4 percent of Japanese corporations investing in Vietnam have done so to secure low-cost labour (Table 4.8) (Masuyama and Tamao 1998, p.70).

The large and fast developing domestic market is another reason that attracts FDI flows to Vietnam. With a population of around 78 million in 1998 growing at an annual rate of 1.7 percent, and an economy that grows at a high annual rate of around 8 percent, Vietnam is an important market for several kinds of manufactured products and services. Table 4.8 shows that 86.4 percent of responding Japan corporations investing in Vietnam have been either to cultivate new markets (63.5 percent) or to expand existing markets (22.9 percent).

Table 4.8: Reasons for Japan's Corporations to Invest Overseas

(percent of responding corporations)

	Viet-nam	Malay-sia	Thai-land	Indo-nesia	Philip-pines	Myan-mar	China
Expansion of existing local market	22.9	46.5	55.6	58.1	44.4	17.6	49.2
Cultivating new market	63.5	22.5	35.7	33.6	28.9	58.8	58.3
Export to Japan	28.1	22.5	27.0	29.4	33.3	23.5	30.8
Export to third country	30.2	38.0	31.7	35.3	44.4	35.3	27.9
Diversifying production	29.2	33.8	33.3	31.9	40.0	35.3	29.6
Securing low cost labour	60.4	31.0	32.5	44.5	57.8	76.5	47.9
Component supply to assembly manufacturers	14.6	23.9	34.1	24.4	33.3	11.8	18.3
Avoiding exchange risk	5.2	11.3	9.5	6.7	11.1	5.9	6.7

Source: Japan Export-Import Bank 1996 in Masuyama and Tamao 1998, p.70.

In addition to securing Vietnam's domestic market, several foreign investors consider Vietnam as a suitable place in which to produce export products for neighbouring countries and overseas markets such as Laos, Cambodia, Southern China, European Community (EC) or North America. Vietnam signed a trade agreement with EC in 1992, it joined ASEAN in 1995, and APEC in 1999, signed a trade agreement with the

U.S. in July 2000, and is currently negotiating to join the World Trade Organisation (WTO). As a result, foreign investors may expect to get access to the lucrative markets of North America, EC or ASEAN and other neighbouring countries. The trade agreement signed with the EC on textiles and garments, for example, has given Vietnam's textile and garment industries access to a large market of 350 million people and the quota for Vietnam's garments to the EC has increased from $250 million in 1993 to $450 million in 1997 and is expected to reach $600-$650 million per annum in the 1998-2000 period (Nguyen Hang 1999). By investing in Vietnam, FIEs exported garments worth $88.3 million to the EC market in 1998, accounting for about 15 percent of Vietnam's quota (MOT 1999).

The last, but very important factor, that attracts FDI flows to Vietnam is the positive attitude of the government of Vietnam toward FDI. This positive attitude is reflected in Vietnam's Prime Minister's statement that:

> All foreign businesses of various forms, including the 100 percent foreign-invested enterprises, are an integral part of the Vietnamese economy. That means Vietnam's interest is closely attached to that of foreign investors. If you are successful, the Vietnamese economy will develop. Otherwise, when you face difficulties or loss, we will partly suffer.
> (STM 1998).

The positive attitude toward FDI has also been seen in several changes, renewals and amendments regarding the Law on Foreign Investment as well as related regulations and circulars. Such changes and amendments aim to remove the obstacles against FDI or to improve the investment environment in Vietnam such as providing more tax incentives, reducing the charges for land, power and water supplies or simplifying procedures regarding FDI flows. The government also established a favourable legal environment for FDI flows by signing an agreement on promotion and protection of investment with around 30 countries, and participating in the Washington agreement to resolve the conflict between government and foreign investors. Recently, an agreement was signed with U.S. Overseas Private Investment Corporation (OPIC) to promote FDI flows from U.S.

While several Western researchers argue that the government of Vietnam has not done enough to improve the environment for FDI, and that government intervention should be reduced to a minimum (Fforde and deVylder 1996; WB 1999b; IMF 1999; Dixon 2000), such arguments seem not to suit the real conditions of Vietnam during the transition period towards a market-oriented economy. In fact, within the 10 years from 1988 to 1998, the government of Vietnam set up, almost from nothing, the legal system that promotes the operation of the multi-sector economy. Moreover, the gradual approach adopted by the government of Vietnam has contributed to the maintenance of social and economic stability and created a favourable environment for economic activities including FDI. The World Bank praised the success of Vietnam's gradual reform in its 1996 World Development Report (WB 1996). The reality in Vietnam has shown that government intervention over the transition period from 1986 has generated the necessary conditions to achieve social and economic stability, to mobilise domestic sources and foreign sources, including FDI, to achieve sustainable development. The Big-Bang approach, as suggested by many Western researchers, would have done more harm than good for Vietnam as it has done for many Central and Eastern European countries.

4.3.2. Ownership advantages.

Another set of factors that explains the large FDI flows to Vietnam is the ownership advantages of foreign investors who invest in Vietnam. The ability of MNCs, their technological capability, managerial and marketing skills as well as their access to key parts and the financial market give them special advantages as foreign investors in Vietnam. After several years of applying planning mechanisms, Vietnam's enterprises are in desperate need of foreign capital, technologies and management skill as well as access to international markets and financial sources.

4.3.3. Internalisation factors.

The last set of factors that attracts FDI flows to Vietnam is internalisation factors, chiefly government taxes, tariffs and other policies to protect the domestic market and infant industries. As the government industrialisation policies are to promote several essential infant industries, several financial incentives, high import tariffs and non-tariff barriers have been used to promote domestic production and protect local infant

industries. Vietnam's programme to implement the ASEAN Free Trade Area (AFTA) includes the reduction of tax to 5 percent by the year 2003 for only 1,661 groups of goods and accounts for only 51.6 percent of total groups of goods in Vietnam's import tax schedule (MOF 1998). The exclusion list, the temporary exclusion list and the agricultural-sensitive list consist of 1,556 groups of goods with higher import tax of 20 percent or over (ibid.). Moreover, several other non-tariff barriers such as export-import quotas and licences have also been used to protect the domestic market. The government's industrialisation policy, high import taxes and non-tariff barriers have attracted large amounts of FDI flows since the early 1990s to set up their production behind government protection or enjoy government incentives.

4.3.4. Obstacles to foreign direct investment in Vietnam.

While locational advantages, ownership advantages and internalisation factors explain the increasing FDI flows to Vietnam during the 1988-1996 period, there are several factors that explain the decline of FDI flows to Vietnam since 1997. Those factors are the regional financial crisis, a poor infrastructure system, high costs of operation and an ineffective bureaucratic system.

The regional crisis has several detrimental impacts on the economy of Vietnam and on the performance of FIEs in particular. As East Asian countries accounted for about 70 percent of the FDI and over 75 percent of the export market of Vietnam, the financial crisis in those countries has led to the reduction of around 12 percent of Vietnam's GDP (WB 1998, p.4 and p.14). The regional financial crisis has created financial difficulties for many foreign investors in Vietnam, and a reduction in demand for exports from Vietnam. In terms of FDI flows, the regional crisis has put several FDI projects on hold and either stopped or slowed down implementation. The implemented FDI in 1998 reduced by 40 percent compared to 1997. In total, the implementation of projects worth $8-9 billion which have been stopped or slowed down accounted for 25-28 percent of the total investment capital (MPI 1998, p.20).

More specifically, the implementation of FDI from the East Asian countries most affected by the financial crisis (i.e. South Korea, Thailand, Indonesia, the Philippines and Malaysia) has reduced by 40-50 percent and between 30-40 percent for other countries in the region (i.e. Japan, Hong Kong, Taiwan). The sector which suffered the

most was property development - where total investment capital of projects which were either terminated or slowed down totalled over $5 billion. Such terminated or slowed down projects in other sectors such as food processing, garment, footwear, construction steel, and electronics were also worth $2 billion, while $1 billion investment capital for projects in industrial zones was put on hold (ibid.).

While the regional financial crisis has imposed difficulties on FDI projects since 1996, poor physical and economic infrastructures have generated obstacles for FDI projects since the first days of operation. Poor transport systems, scarce or costly power and water supply systems are the major reasons that led to increasing operating costs for FIEs in Vietnam. In addition, an undeveloped banking and financial system also created many difficulties in terms of the financing and operation of projects (Le Dang Doanh 1997, pp. 84-85; Nestor 1997, p.168; Harvie and Tran Van Hoa 1997, p.76).

Other factors that have contributed to the delay in implementation of many FDI projects are land clearance and resettlement. Many projects have faced lengthy delays in obtaining land use rights[10], in negotiating on removal compensation and resettlement (Masuyama and Tamao 1998, p.76).

The lack of a long-term strategy for FDI flows from the beginning has led to the problem of oversupply in some industries of which the hotel and automobile industries are typical examples. The idle capacity of the hotel industry was 65 percent while that of the automobile industry was 80 percent in 1998 (MPI 1996, 1998).

Vietnam's labour is relatively cheap and abundant, but sometimes foreign investors have faced difficulties in recruiting appropriate workers as they need further training before starting to work and this may add some extra costs for operation in Vietnam.

The last problem that hinders the FDI flows and performance in Vietnam is the implementation of the Law on Foreign Investment. While the government of Vietnam has maintained very positive attitudes toward FDI, the implementation of the Law and

[10] Vietnam's constitution states that land belongs to the government but Vietnamese individuals have the land use rights. Such rights may be transferred, and used as collateral.

the bureaucratic system in Vietnam have created several difficulties for FDI flows. Such problems have been of less concern to foreign investors at the early stages but have become very serious recently, especially in the circumstances of the Asian financial crisis of the late 1990s. First, the lack of transparency in the Law and regulations regarding FDI flow is critical. While the Law on Foreign Investment of Vietnam was considered as liberal and several attempts have been made to amend and accommodate that Law, there are several issues which are still unclear within such Law and regulations. Such problems lead to different ways in interpreting Law and regulations between several agencies and organisations and this confuses foreign investors. This problem occurs in several aspects of FDI process, especially in implementing investment incentives and the land clearance and resettlement process (i.e. tax deduction, land price adjustment) (Okada 1996, pp. 61-62; Nguyen Quang Thai 1998, pp. 11-24).

Second, there exists a problem regarding government organisations' bureaucratic administrative procedures in the process of appraising and managing FDI projects. The government has attempted to streamline this process by decentralising the issuing of investment licences, and allowing provincial authorities to issue certain kind of licences, but there are still many government agencies involved in appraising and managing FDI projects (Okada 1996, pp. 61-62).

4.4. Conclusion.

The socio-economic reform in 1986, moving from highly concentrated planning toward a market-oriented economy, has brought many successes to the economy of Vietnam, creating high economic growth, constraining inflation, alleviating poverty and attracting large amounts of FDI. The factors that explain such large FDI flows in Vietnam since 1988 are the country's advantages of a cheap and well-educated labour force, abundant natural resources and strategic location, as well as the government's positive attitude toward FDI and its industrialisation policies to protect local infant industries. Moreover, the ownership advantages of MNCs in terms of access to modern technology and know-how, to export markets and financial sources as well as the increasing labour costs in their home countries, have allowed and created the need for MNCs to invest in Vietnam. The decrease of FDI flows to Vietnam since 1997, however, has been attributed to the

regional crisis and the poor physical and economic infrastructure as well as to the inefficiency of the bureaucratic system in implementing the Law on Foreign Investment in Vietnam. Though facing some difficulties in recent years, FDI flows have generated significant impacts to promote socio-economic development in Vietnam. Such contribution of FDI flows in Vietnam will be discussed in following chapters.

CHAPTER V:
MACRO-ECONOMIC IMPACTS OF FOREIGN DIRECT INVESTMENT FLOWS ON THE ECONOMY OF VIETNAM

The previous chapter has reviewed the FDI flows and major factors that explain FDI flows in Vietnam over the 1988-1998 period. This chapter examines the impacts of FDI flows, both positive and detrimental, on domestic savings and investment, on foreign currency earnings and on balance of payments and government revenue. Based on those examinations, this chapter will go further to examine the direct contribution of FDI flows to Gross Domestic Product (GDP) growth by looking at both the share of foreign invested projects (FIPs) in the whole economy and the performance of FIPs. The role of government policies in making use of FDI flows will be discussed as a decisive factor in underlining the impacts of FDI flows.

5.1. Foreign Direct Investment Flows and Domestic Savings and Investment.

Vietnam's domestic savings level before 1986 was very low and the major investment projects during this period were financed mainly by official development assistance (ODA) from socialist Eastern European countries, especially the former Soviet Union. While reliable data on domestic savings for the period before 1986 are not available, domestic savings remained very low at 7.6 percent of GDP in 1988 (Table 5.1). Such a low level of domestic savings has been attributed to the lack of government policies to promote the development of the private sector, unstable macro-economic conditions and in-efficient banking and finance systems. As a consequence, about of 75 percent of private savings had been held in gold, building and housing, construction materials and paddy stocks (Harvie and Tran Van Hoa 1997; WB 1998, p.23).

Under such circumstances, FDI flows to Vietnam are considered as important sources of investment capital to supplement national savings and investment. The impacts of FDI flows on domestic savings and investment may be through direct contribution of FDI flows to gross national investment or through indirect impacts by creating a better environment for the mobilisation domestic savings, by generating backward and forward effects and by co-operating with local firms, either state-owned enterprises (SOEs) or private enterprises (Gupta and Islam 1983; Lee et al. 1986; Borensztein et al.

1995; Fry 1997; Sun 1998). The indirect impacts of FDI flows, however, may also be detrimental to domestic savings and investment when FDI flows compete directly with local entrepreneurs (Frank 1969; Lall and Streeten 1977; Biersteker 1981; Jenkins 1987; Elson 1988; Lim and Fong 1991).

5.1.1. Direct contribution of foreign direct investment.

The direct contribution of FDI flows to domestic savings and investment can be seen in the total amount of FDI flows and in the contribution of FDI flows to Vietnam's total national capital formation (Table 5.1 and Figure 5.1).

Table 5.1 shows that while the absolute volume of FDI flows to Vietnam has increased since 1988, FDI flows as a percentage of GDP have also increased and reached their peak of 10.1 percent of GDP in 1993 and then fluctuated around 8-10 percent of GDP between 1994-1997, before reducing to 6.7 percent of GDP in 1998. Between 1994-1997, FDI flows have played a key role in Vietnam's capital formation, accounting for around one-third of domestic investment. After 1995, public investment overtook FDI as the leading investment source because ODA disbursement started to increase significantly and financed several large-scale public investment projects. Figure 5.1 shows that the contribution of FDI as a percentage of GDP in Vietnam was as high as over 60 percent of gross domestic investment in 1992 and 1993. The contribution of FDI to GDP in Vietnam has been higher than all Association of Southeast Asian Nations (ASEAN) countries except Singapore and Malaysia (IMF 1996, p.52).

The direct contribution of FDI flows to domestic investment comes from three sources:

- The contribution of foreign investors as equity
- The contribution of Vietnamese partners as equity
- FDI projects related commercial borrowing from overseas

Table 5.1: Structure of Capital Formation as Percentage of GDP, 1988-1998

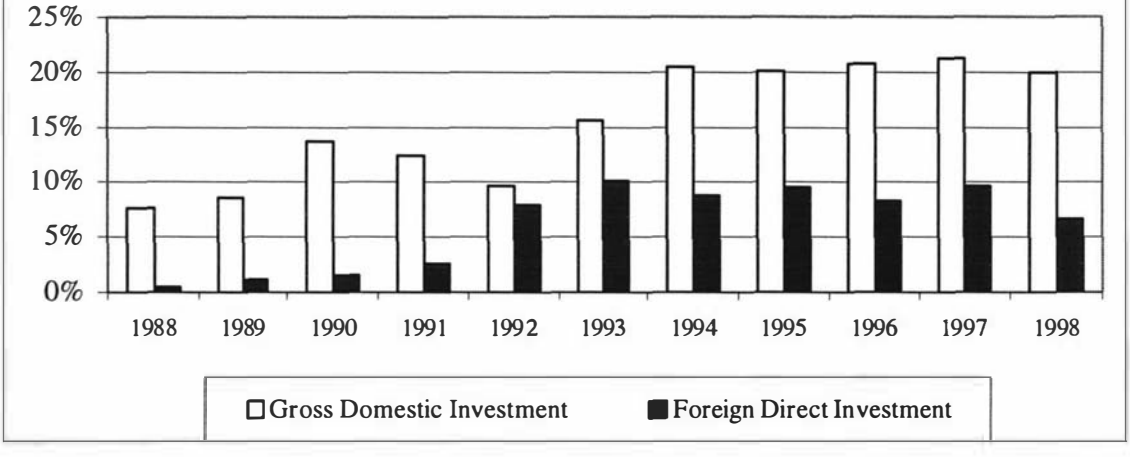
(percent)

	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998
Total	8.1	9.8	15.1	15.1	17.6	25.7	29.3	29.7	29.2	30.9	26.7
Public sector	3.9	6.3	5.1	2.8	5.8	7.0	5.4	11.4	13.2	14.8	14.3
Private sector	3.7	2.3	8.6	9.7	3.9	8.6	15.1	8.7	7.6	6.4	5.7
FDI sector	0.5	1.2	1.5	2.6	7.9	10.1	8.8	9.6	8.3	9.7	6.7
Memo items											
GDP*	15.4	28.1	42.0	76.7	110.5	136.6	170.3	228.9	272.0	313.6	361.0
Exchange rate (000.VND/ $)			5.13	9.27	11.15	10.64	10.98	11.10	11.50	12.94	13.98
Change in GDP deflators			42.1	72.5	32.6	14.3	14.5	19.5	6.1	6.6	8.9

*: GDP is at current price-VND 000 billion.

Source: Compiled based on data from GSO 1996; 1999 a,b,c; IMF 1995, 1999 and various World Bank country reports.

Figure 5.1: Gross Domestic Investment and Foreign Direct Investment as Percentage Share of GDP, 1988-1998



Source: IMF 1995, 1999; GSO 1996; 1999 a,b,c.

The contribution of foreign investors and commercial borrowings from overseas under the form of FDI have been recorded in Vietnam's balance of payments (Table 5.2). Such inflows of foreign currencies have been used to clear project's site, to import

machinery and equipment, materials, modern technologies and know-how and hence have contributed to cover the country's foreign exchange gap as shown in Table 5.2. Between 1991 and 1997, net FDI flows have bridged between 50 to over 80 percent of Vietnam's foreign exchange gap that was created by current account deficit as well as medium- and long-term amortisation. Between 1991-1997, FDI flows were the most important foreign currency source to bridge country's foreign exchange gap, and were many times higher than either ODA or short-term capital.

The data on FDI flows in Vietnam have not fully reflected the investment made by Overseas Vietnamese investors. Due to different treatment in terms of taxes, and land use rights between local and foreign investors - including Overseas Vietnamese investors - many Overseas Vietnamese investors have invested in Vietnam under local entrepreneurs' names in order to evade taxes. In Ho Chi Minh City, for example, it is estimated that by 1999, around $16 billion had been invested illegally by Overseas Vietnamese investors (Bich Ngoc 1999a). If such illegal investment by Overseas Vietnamese investors had been taken into account, the contribution of FDI flows in Vietnam since 1988 would have been higher.

FDI flows also led to increases in domestic savings by putting more idle capital, that otherwise would have remained unused, into effective operation. As shown in Table 5.3, while Vietnam's contribution to joint-venture projects in terms of cash, material and machinery has accounted for around 15 to 20 percent of the total contribution between 1988-1995, the contribution in terms of building, workshop, natural resources value and land and water surface use rights accounted for between 80 to 85 percent of the total contribution (Table 5.3). From 1988 to the end of 1999, except for cancelled projects, the land contribution of Vietnam's partners in legal capital in 660 projects was worth over $1.5 billion (MPI database). Without FDI flows, such building, workshop, natural resources, land and water would probably remain unused or underused. The FDI flows have not only mobilised such idle assets but have also put them under the effective control and management of multi-national corporations (MNCs) (WB 1995a, p.30).

Table 5.2: Balance of Payments of Vietnamese Economy, 1986-1998 (at current price)

($ million)

	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998
1. External balance													
Exports	494	610	733	1,320	1,731	2,042	2,475	2,985	4,054	5,198	7,330	9,145	9,365
Imports	-1,121	-1,184	-1,412	-1,670	-1,775	-2,107	-2,535	-3,532	-5,250	-7,543	-10,483	-10,460	-10,350
Service & transfer (net)	-28	-49	-72	-237	-218	-248	-284	-335	-221	-360	-500	-478	-556
Current account balance	-655	-624	-751	-586	-262	-134	-10	-767	-1,185	-1,928	-2,449	-1,642	-1,073
2. Financing requirements	**-943**	**-908**	**-1,088**	**-870**	**-543**	**-243**	**-564**	**-1,628**	**-1,853**	**-2,694**	**-3,112**	**-2,495**	**-2,257**
Current account deficit	-655	-624	-751	-586	-262	-134	-10	-767	-1,185	-1,928	-2,449	-1,642	-1,073
Medium & long term amortisation	-265	-233	-363	-350	-279	-104	-175	-652	-547	-733	-729	-804	-1,050
Errors and omissions	-23	-51	26	66	-2	-5	-379	-209	-121	-33	66	-49	-134
3. Financing resources	**943**	**908**	**1,088**	**870**	**543**	**343**	**564**	**1,628**	**1,853**	**2,694**	**3112**	**2,495**	**2,257**
ODA disbursements (incl. IMF credit)	513	574	727	763	233	103	540	15	447	535	950	968	1,042
Net FDI flows				100	120	165	333	832	1,048	2,236	1,838	2,003	800
-Share of total financing (%)				11.5	22.0	48.1	59.0	51.1	56.6	83.0	59.0	80.3	35.0
Short-term capital (net)	111	37	41	-213	48	19	-41	-313	124	-184	224	-534	-190
Change in net foreign assets (excl. IMF)	2	0	0	- 110	-159	-276	-463	477	-292	-439	-441	-265	63
Change in arrears (net)	317	297	320	296	301	332	195	-266	526	546	541	323	129
Debt rescheduling	0	0	0	34	0	0	0	883	0	0	0	0	413

Note: - Due to statistical discrepancy, the figures on financing requirement and financing resources in 1991 are not matched.

- All the data are at current prices.

Source: WB 1995a, 1996, 1999 and GSO 1996, 1999 b,c.

Moreover, the utilisation of such idle assets brought back to the Vietnamese side $152.7 million in 1994 and $167.1 million in 1995 as profit distribution (GSO 1998, pp. 544-551).

Table 5.3: Contribution to Legal Capital, 1988 - 1998

(percent)

	1988 -1992	1993	1994	1995	1996	1997	1998
Total ($ million)	**2,095.8**	**1,299**	**1,452**	**2,163**	**1,555**	**1,647**	**631**
Foreign investors ($ million)	**1,174.3**	**884**	**1,078**	**1,591**	**1,137**	**1,248**	**478**
Percentage share (%)	100.0	100.0	100.0	100.0			
Money	84.4	58.7	80.7	77.0			
Material	1.1	9.2	2.5	4.1			
Machinery and equipment	7.4	23.5	13.9	16.9			
Others	7.1	8.6	2.9	2.0			
Vietnamese partners ($ million)	**921.5**	**415**	**373.7**	**571.3**	**418**	**399**	**153**
Percentage share (%)	100.0	100.0	100.0	100.0			
Money	1.1	10.4	11	18.2			
Materials			0.4	0.1			
Machinery and equipment	1.0	5.3	6.6	2.6			
Houses, workshops	8.6	23.9	15.6	8.7			
Natural resource value	81.8	2.2	4.7	2.2			
Land & water surface use rights	7.5	58.1	58.7	63.2			
Others	-	0.1	3.0	5.0			

Source: GSO 1996, 1998 and MPI database.

In short, the direct contribution of FDI flows to domestic savings and investment in Vietnam has been very important, accounting for between 25 to 45 percent of total capital for the country's capital formation and investment. The net FDI flows from overseas also help to cover a very large part of the country's foreign currency gap, to finance the current account deficit as well as medium- and long-term amortisation. Moreover, FDI flows also put otherwise unused assets into operation and hence increase domestic investment.

5.1.2. Indirect impacts of foreign direct investment flows.

The positive indirect impacts of FDI flows on domestic savings and investment can be assessed through the impacts of FDI projects that created more favourable conditions to mobilise domestic savings as well as their backward linkages[11].

As mentioned previously in Chapter IV, poor infrastructure, including under-development of the banking and financial systems, is one of the major reasons that led to a low domestic savings rate in Vietnam. Therefore FDI flows that have been used to develop infrastructure will create a better environment for mobilising domestic savings.

Recent infrastructure reviews have revealed that the infrastructure development in Vietnam requires an annual investment of around $3 billion or 12 percent of GDP. Annual investment is expected to come from four sources of financing: ODA, government budget, FDI and self-financing from State-Owned Enterprises. FDI flows are estimated to cover one-fifth of such annual investment (WB 1998, p.69). Since 1988, FDI flows have contributed to improving the poor infrastructure system in Vietnam by establishing several projects in the areas of power and water supply, road and port development. Under the Law on Foreign Investment in Vietnam, foreign investors can participate in developing infrastructure either through a Business Co-operation Contract (BCC), joint-venture or new form of Build-Operation-Transfer (BOT). From 1988 to the end of 1999, FDI flows were used to finance six BOT projects with total investment capital of $1,321.8 million (Table 5.4). FDI also finances the development of several infrastructure projects in Export Processing Zones (EPZs) and Industrial Zones (IZs). By the end of 1999, 14 investment projects for developing EPZ and IZ infrastructure throughout the country have been approved, with total investment capital of $ 953.5 million (MPI database). Such important investment has contributed to attracting around $8 billion of committed FDI into EPZ and IZ (MPI database).

The future involvement of foreign investors in infrastructure development in Vietnam is very significant. The public investment programme prepared by the government of Vietnam has revealed that the development of transport and energy sectors in Vietnam,

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[11] A backward linkage is derived input demand in production of other relating industries generated by an increase in final demand for the products of FDI projects.

where foreign investors can be profitably involved via BOT, required total investment funds of around $10 billion (SRV 1996). Table 5.4 shows some potential infrastructure development projects in the energy sector where foreign investors have been preparing at the end of 1999 with a total investment capital of $1,950 million. Moreover, the proposed master plan for attracting FDI for the period 1997-2000 and beyond has been planned to attract $7.6 billion (or 17.8 percent of proposed FDI flows) to develop infrastructure in Vietnam (MPI 1997, p.12).

Table 5.4: Foreign Direct Investment Flows and Infrastructure Development, 1988-1999

($ million)

Project	Investment Capital
Licensed projects	**2,275.3**
• Linh An water supply project	35.8
• Vung Tau port development project	637
• Wartsila power station project	110
• Thu Duc water plant project	120
• Methanol production project	270
• Ho Chi Minh City water supply project	149
• 14 projects for developing infrastructure in EPZ and IZ	953.5
Pipeline projects	**1,950**
• Nam Con Son gas field project	430
• Development off-shore gas pipeline project	370
• Phu My 2-2 power station project	450
• Phu My 3 power station project	400
• Quang Ninh thermal power station project	300

Source: MPI database, WB 1998, p.69.

Another indirect impact of FDI flows is to increase the ODA commitment and disbursement to Vietnam. Several countries, notably Japan and France, are Vietnam's top foreign investors and also the country's biggest donors. Several programmes within bilateral ODA commitment have been designed to help foreign investors doing business in Vietnam such as assisting with feasibility studies, and purchasing products produced by FIPs etc. As FDI flows have increased since the early 1990s, the total ODA

commitment has also increased and reached $15.74 billion by 1999 (SRV 1999, pp. 18-19). Table 5.2 also shows the increase of ODA disbursement as it reached a record high $1,042 million in 1998.

Besides infrastructure improvement, FDI flows have also created indirect positive impacts on domestic savings by generating backward effects which promote domestic production. The backward effects of FDI flows in Vietnam may be seen in the agricultural and manufacturing sectors.

In the agriculture sector, the backward effects are the increasing demand of material supplies on tropical agriculture products for FDI-related food processing enterprises. As Vietnam is an agriculture-dominated country and is located in the tropics, it has comparative advantages in producing several agricultural products such as rice, coffee, tea, sugar, wood and seafood. This also attracts many foreign investors to Vietnam. By the end of 1999, there were 167 projects with a total investment capital of $1.93 billion operating in Vietnam to process agricultural products for export. The development of such foreign invested enterprises (FIEs) has required stable and secure supplies of agricultural materials and hence promoted agricultural production. The government of Vietnam has realised these important indirect impacts of FDI flows in the agricultural sector and required foreign investors investing in production and processing dairy products, vegetable oil and sugar as well as wood production to develop raw material sources. By the end of 1999, 26 projects with a total investment of $354.5 million had been approved to operate in those sectors and had generated large backward effects. The country's largest sugar cane processing factory in Nghe An province, for example, will purchase sugar from 10,000 farmers in a cultivated area of 9,000 hectares and an additional 1,000 people are expected to process raw materials and transport the finished products (Bich Ngoc 1999b). Another example is a dairy milk production joint-venture project in Song Be province that provided $6.6 million to local breeders to raise dairy cattle and supply milk for the project (Le Ngoc Hoan 1998).

In the manufacturing sector, the backward effects are in the development of supporting industries to meet the demand for materials and spare parts supplies by FIEs. Such demand on spare parts and accessory supplies has been relatively high for the automobile, motorcycle and electronic industries. The backward effects of FDI flows in

the manufacturing sector in Vietnam depend very much on government policies on local content requirements.

For the automobile industry, the local content requirement would be 5 percent of the value of the finished vehicle within five years, increasing to 30 percent by the tenth year (UNIDO and DSI 1999, p.181). The joint-ventures that achieve the local content of over 20 percent would then enjoy a 5 percent tariff rate on imported materials (Masuyama and Mitarai 1998, p.21). For the motorcycle industry, the FIEs are required to achieve a local content of 15-20 percent of the value in the first year, increasing to 60-70 percent after 5 years (Luu Quang Dinh 2000). The backward effects of FDI flows in the manufacturing industry have been small but increasing. Many local enterprises have been involved in producing spare parts for FIEs such as tyres, batteries and windscreens for the automobile and motorcycle industries. Moreover, several foreign investors have invested in Vietnam to supply spare parts for those industries. By the end of 1998, there were ten projects with total investment capital of $276.8 million operating in Vietnam to meet the demand of FIEs (MPI data).

In the motorcycle industry, the Honda joint-venture achieved over 50 percent local content for its products by 2000, while Yamaha achieved 34 percent and VMEP of Taiwan achieved between 37-61 percent for three types of its motorcycles. Several items such as tyres, batteries and mufflers have now been made in Vietnam, and Honda also plans to produce its engine in Vietnam after 2000 (Luu Quang Dinh 2000). By 1998, there were 20 motorcycle part manufacturers operating in Vietnam (Duc Hung 1998).

In conclusion, FDI flows in Vietnam have produced some positive indirect impacts to promote domestic savings by improving infrastructure, and creating backward effects. Several government policies have been introduced to encourage and support such indirect impacts. The backward effects generated by FDI flows, however, are still moderate as FDI flows in Vietnam focus mainly on exploiting the country's comparative advantage of cheap labour by concentrating on processing industries that generate very low backward effects. Moreover, several foreign parts and accessories manufacturers have found it has been difficult to negotiate with Vietnamese partners to

invest in Vietnam, as they are mainly small- and medium-size firms (Masuyama and Mitarai 1998, p.21).

5.1.3. Foreign direct investment flows, state-owned enterprises and private enterprises.

The indirect impacts of FDI flows on domestic savings, especially the possibility of competition between FIPs and local entrepreneurs, can also be assessed within the relationships between FDI flows, SOEs and private enterprises in the industry and service sectors.

In the agricultural sector, there is no competition between FIPs and local entrepreneurs. The direct involvement of FDI in agricultural production is very modest with 84 projects and total investment of $462.1 million (at the end of 1998). Such small FDI investment capital (which accounted for 1.5 percent of the total committed investment capital) would create almost no impact on agricultural production and hence there has not been any significant relationship between FDI flows, SOEs and private enterprises in agricultural production.

The relationship between FDI flows, SOEs and private enterprises in the industry and service sectors depends on the existing conditions of SOEs and private enterprises as well as relevant government policies. Such relationship could be co-operative or competitive depending on specific circumstances.

First of all, there is the need for co-operation between SOEs and FIEs for mutual benefit. Before the reform in 1986, the SOEs played a key role in the industrial and service sectors. However, under the central planning mechanism, many SOEs made losses and suffered from inefficient capital performance (UNIDO 1991 in Reinhardt 1993, p.82; Phan Van Tiem and Nguyen Van Thanh 1996, pp. 6-7). The SOEs achieved very poor average growth rates of – 2.7 percent for the 1976-1980 period, 7.8 percent for the 1980-1986 period and 6.0 percent for the 1985-1989 period (SPC 1990 cited in Reinhardt 1993, p.76). As the country moved toward a market-oriented economy, SOEs have gone through severe reform, in which several loss-making SOEs have been restructured, merged or equitised. As a result, the number of SOEs was reduced from 12,296 in 1989-1990 to 5,962 in 1995 (Le Dang Doanh and Tran Tien Cuong 1996, pp.

6-7). However, the number of unprofitable SOEs still remains high, accounting for 60 percent of total SOEs (WB 1998, p.9). The poor performance of SOEs has been attributable to several reasons such as obsolete technology, lack of investment capital and lack of access to international markets (UNIDO 1991 cited in Reinhardt 1993, p.82; Phan Van Tiem and Nguyen Van Thanh 1996, pp. 6-7). In terms of investment capital, the 1993 classification of Vietnam's SOEs found that Vietnam's SOEs were small in size: 49.2 percent of SOEs had capital of less than $0.1 million, 26.6 percent had between $0.1 million and $0.3 million 16.3 percent had between $0.3 and $1 million and 7.9 percent had between $0.3 and $1 million and 7.9 percent had capital in excess of $1 million (Nguyen Ngoc Tuan et al. 1996, p.26). The machinery and equipment of SOEs have been considered as obsolete as two to five generations compared to international standards (Bezanson et al. 1999, p.63). Small capital size and obsolete technology have hindered SOEs' development and their penetration of international markets. Under such circumstances, FDI flows have been considered as a vital source of capital, technology and access to international market for SOEs.

On the other hand, SOEs possess essential factors that are crucial to the operation of FDI and hence generate the need for co-operation between SOEs and foreign investors. Those factors are:

- SOEs have better access to land.
- Compared to the private sector, SOEs are large in terms of capital, and availability of facilities.
- SOEs have a closer relationship with government and policy makers.
- SOEs have better knowledge of the local market.

(UNIDO and DSI 1997, p.29).

The importance of those factors has also been confirmed by a survey of 19 Australian firms investing in Vietnam (Maitland 1996, p.102). By the end of 1998, joint-venture between foreign investors and SOEs accounted for over 74 percent of total committed FDI (MPI database). In short, the conditions of SOEs as well as their nature have made co-operation, rather than competition, between SOEs and FDI vital for both SOEs and foreign investors to achieve mutual benefit.

Second, while there exists the need for co-operation between SOEs and FIEs, there is also little possibility of competition between the local private sector and FIPs. The nature and conditions of Vietnam's private sector have made it unlikely that the majority of private enterprises could be direct competitors of FIEs. In Vietnam, private enterprises have been always smaller than SOEs. The number of private enterprises employing fewer than 100 workers accounted for 91.7 percent of the total in 1997 (GSO 1999 cited in MPDF 1999a, p.69). The private sector has developed rapidly since 1986 with the rate of annual increase in the number of private enterprises remaining as high as 66 percent in 1994 and between 24-40 percent between 1995-1997 (GSO 1999). Such high growth rates can be largely attributed to the change in government policies in moving towards a market-oriented economy and recognising the importance of the private sector (WB 1995a, pp. 24-25).

The small-size and labour-intensive nature of private enterprises has encouraged their participation in sectors where size and scale are not significant cost-advantages. They target mainly the medium and low end of the domestic market while leaving the high-end domestic market for either imported products or products produced by FIEs. There is also less competition between FIEs and large local private enterprises for the domestic market. Large private enterprises which employ more than 100 full-time workers operate in labour-intensive sectors like garments, footwear, plastic products and seafood, account for around 8 percent of the total private sector in manufacturing, and are highly export orientated (WB 1999b, p.12). On average, those enterprises export about 75 percent of their production (MPDF 1999 cited in WB 1999b, p.12).

Many surveys on the development of the private sector in Vietnam have identified several obstacles that have constrained its development, none of them identified with FDI flows. A survey of 95 large private enterprises, which were most likely to face competition from FIEs, revealed that several problems other than competition by FIEs have constrained their development. Those problems are summarised in Table 5.5.

Another survey, conducted in 1997 by the Japan International Co-operation Agency and Ministry of Planning and Investment in seven regions, found that most important issues for the development of the private sector were:

- Access to financial credit

- A more streamlined tax system
- Strengthening of government investment funds
- Simplifying administrative procedures
- Technological support
- Export finance
- Access to foreign market information

(Ebashi, Sakai and Takada 1998, p.50).

Table 5.5: Problems for the Development of Private Enterprises

Problems	Percentage of the answer
Difficult access to investment capital	53 percent of the answers
Lack of information	41 percent of the answers
Insufficient working capital	39 percent of the answers
East Asian economic crisis	19 percent of the answers
Unclear government policies	16 percent of the answers

Source: MPDF 1999a, p.30.

While not considering FDI flows as an obstacle to the development of the private sector, those surveys actually showed that FDI flows may play the role of supplementing sources of investment capital, modern technology and know-how and access to international markets that are needed for the development of the private sector.

While on the one hand, the nature and existing conditions of SOEs and private enterprises allow and require co-operation with FDI flows, on the other hand government policies also promote such co-operation and minimise the competition. In general, government policies have changed toward creating an equal playing field for both SOEs and the private sector in terms of tax policies, access to the international market and, especially, access to capital. The government also promotes co-operation between the private sector and FDI as seen by the rise in the committed capital of joint-ventures with the private sector - from 0.9 percent of total committed FDI in 1991 to 5 percent in 1998 (Table 4.3).

In terms of incentives, the government has made several attempts to provide a level playing field for both FIEs and local enterprises. While FIEs have been given several incentives regarding profit tax, personal income tax and export-import tax, domestic enterprises enjoy several advantages in terms of capital, land hire, government subsidies (mainly for SOEs) and export requirements. Regarding profit tax, FIEs enjoy ordinary profit tax of 25 percent compared to 32 percent for local enterprises, and profit tax can be reduced to as low as 10-20 percent for priority projects compared to 15-25 percent for local enterprises of the same category. Also, the tax holiday could be as long as eight years for FIEs compared to local enterprises.

Domestic enterprises, on the other hand, can establish either a limited or an unlimited liability company, with no limit on operation duration - as compared to FIEs that can be established as limited liability companies only with operation of no longer than 50 years or, in some special cases, 70 years. Local enterprises can also contribute to investment capital by either land use rights or local currency, can issue shares to mobilise investment capital, enjoy lower fees for water and electricity supply, telecommunications and land hire, and receive government subsidies in terms of low interest rates. Moreover, in order to promote co-operation between FDI and local enterprises, the government also limits foreign investors to establishing only joint ventures or Business Co-operation Contracts, not 100 percent foreign-owned firms, in the strategic sectors mentioned in Appendix 2. The government has also gone further to reduce competition by requiring FIEs to export at least 80 percent of their production output for the products that domestic enterprises have already produced at the same quality and with which they have met local demand. The list of such products may change over time (see Appendix 3 for the 1999 list).

Government policies in general and the policies related to the operation of FIEs seem to work very effectively in limiting the crowding-out effects of FDI flows. Statistical data as well as results of the 1995 economic survey and 1998 industrial survey revealed that despite FDI flows to Vietnam having increased rapidly since 1990, SOEs and private enterprises in the industrial sector - which received over 63 percent of FDI flows in Vietnam - still achieved high growth rates in terms of number of employees and turnover (Tables 5.6 and 5.7)

Table 5.6: Major Indicators of Industrial Enterprises, 1995 and 1998

	30 Jun 1995			30 Jun 1998		
	SOEs	Private enterp-rises	FIEs	SOEs	Private enterp-rises	FIEs
Number of enterprises	2382	6215	395	1281	559706	830
Number of employees (000)	724	246.7	74.5	745.08	1682.5	242.1
Total capital ($ million as 31/12/1994 and 31/12/1997)	4614.6	517.3	3606.6	9901.0	1639.3	9312.6

Note: Exchange rates of Vietnam Dong (VND) 10,978 and 12,938 per $1 have been used to convert data from VND to $ in 1994 and 1997.

Source: GSO 1999 b,c.

Between 1995 and 1998, the number of SOEs fell by 1,101 enterprises as the result of the process of restructuring SOEs. However, the number of employees increased by 21,052 workers or about 3 percent of the total employees in 1998 and total capital has almost doubled. In the private sector, there was a more than ninety-fold increase in the number of enterprises, a sevenfold increase in the number of workers and a more than threefold increase in investment capital. Figure 5.2 shows that capital outlay increased in all major industrial sectors for all SOEs, private sector and FIEs between 1994 and 1998. This means that there was not much competition between them, but that they did respond positively to market opportunity and government reform policy.

Such increases have also been seen in industrial output growth, where both SOEs and private enterprises achieved very high growth rates between 1991 and 1998 as shown in Table 5.7.

Table 5.7: Industrial Output Growth Rate, 1989-1998

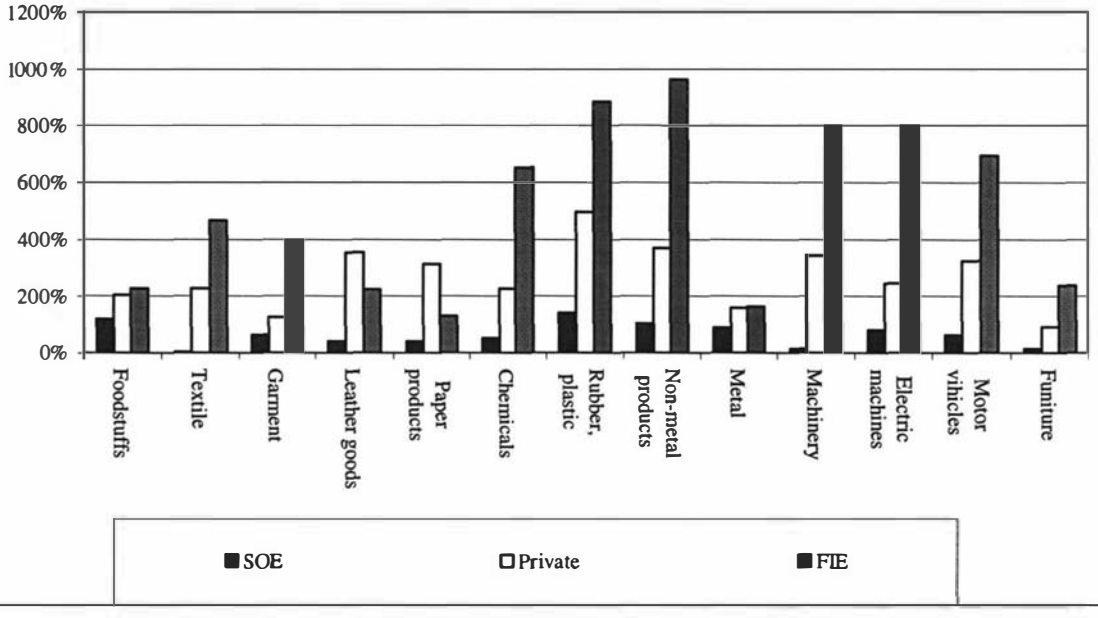
(percent)

	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998
-SOEs	-2.5	6.1	11.9	20.6	14.6	14.7	13.9	11.9	10.8	7.9
-Private sector	-4.3	-0.7	7.4	9.6	8.1	11.2	14.0	11.5	9.5	6.7
-FDI sector				23.3	302	153.2	127.1	21.7	23.2	23.3

Source: Complied from various Statistical Yearbooks

Despite the high growth rate of SOEs and private enterprises, the large FDI flows and high growth rate of FIEs may possess some potential threats to the development of SOEs and private enterprises in some industries. It was estimated that by 2000, FIEs will hold two-thirds of the total detergent output and 80 percent of the beverage market (Nguyen Hong Son 1996, pp. 19-24).

Figure 5.2: The Growth Rate of Industrial Capital Outlay of Major Industries, 1994-1998



Source: GSO 1998, 1999 c.

A typical example of competition between FDI and local enterprises may be seen in the hotel industry during the regional crisis. As a result of Vietnam's open door policy and high economic growth rate, the number of foreigners visiting Vietnam increased from 440,000 in 1992 to 1.7 million in 1997 (GSO 1999b). Such increases in the number of visitors have induced large investment in the hotel industry from both local and foreign investors. Between 1988 and 1998, 107 foreign-invested projects with total investment capital of $ 3.4 billion were approved (MPI database). Such FDI flows in the hotel industry increased the number of foreign-invested hotels from 15 in 1993 to 49 in 1997 with a total capacity of 5,716 rooms, mainly classified as three-star or above (GSO 1996, GSO 1999b). For the hotel industry as a whole, the number of rooms increased rapidly from 50,000 in 1995 to 62,000 in 1999 (VTA 2000). As the number of foreign investors did not increase significantly between 1996-1998 due to the regional crisis,

several hotels have been left empty. The occupation rate fell from 51 percent in 1995 to 43 percent in 1999 (Ngo Thi Hong Hanh 1999). In 1998, for example, the occupancy rate of hotels in Hanoi reduced by 15-25 percent for foreign-invested hotels, by 10-20 percent for state-owned hotels and by 5 percent for private hotels (Nguyen Hanh 1999). As a consequence, several foreign-invested hotels have competed directly with locally owned mini-hotels by reducing hotel room rates or providing several other incentives. Luxury hotel room rates have fallen by an average of 30-50 percent or even 70 percent (ibid.).

In short, the serious competition in the hotel industry has been attributed to the regional crisis and hence the reduction of foreign visitors to Vietnam. However, a more efficient government management and strategy to develop the hotel industry may ease this competition and improve the operation efficiency of the industry.

The competition between FIEs and local enterprises may also be seen in the increasing trend of switching from joint-venture to 100 percent foreign-owned enterprises since 1997. Since the introduction of the Law on Foreign Investment in Vietnam up to the end of 1999 (except cancelled projects), 53 projects have changed their investment form, of which 43 cases (accounting for 81.1 percent of the total) occurred between 1997 and 1999. Of those 43 cases, 42 projects with a total investment capital of $677.4 million changed into 100 percent foreign-owned, while only one project with total investment capital of $0.7 million changed into joint-venture (MPI database). The reasons behind this trend are changes in government policy, better knowledge of Vietnam's market of foreign investors, interest conflict and limited capacity of Vietnamese partners (MPI 1996, pp. 11-12).

Since FDI flows started to decline during the regional crisis, the government of Vietnam has made several attempts to liberalise the Law on Foreign Investment in order to attract more FDI flows, relaxing restrictions on establishing 100 percent foreign-owned enterprises. Also, after a certain time operating as a joint venture, foreign investors have secured the land, gained better knowledge about the law, regulations, and local market and established important connections in Vietnam. Hence they no longer need Vietnamese partners. Another reason is the limited capacity of Vietnamese partners in joint ventures as their contribution has accounted for around only 30 percent – which

has been mainly in terms of land use rights. Moreover, there are some conflicts of interest between foreign investors and Vietnamese partners and "due to lack of capable representatives in joint ventures, the Vietnamese side is often cheated on, leading to losses" (VIR 1998a). As Vietnam's representatives in the joint ventures have not had the capability to manage the joint venture operation thoroughly as well as having to operate under unclear regulations, many foreign investors in several joint ventures have managed to swallow up local partners through "strategic losses". Local partners in those joint ventures have blamed foreign partners for intentionally causing losses and imposing such losses on local partners in order to force them out of the joint ventures (Lao Dong 2000). The Coca-Cola joint venture in Vietnam is one example.

The joint venture between Coca-Cola and a Vietnamese counterpart in the Northern part of the country has legal capital of $15.4 million and total investment capital of $35.4 million, of which the Vietnamese counterpart contributed $4.64 million to legal capital. Since the joint venture began operation in 1996, up to 1999, its losses increased gradually to $21 million due to Coca-Cola's decision to continue its costly promotion strategy to penetrate the domestic market (Hoang Mai 1999). If the losses had been divided for both sides according to their contributions, the Vietnamese counterpart would have lost all its contribution and would have had to choose either to increase its contribution (normally very difficult because the Vietnamese contribution is mainly in terms of land use rights), or to sell their shareholding in the joint venture. This situation also occurred to two other Coca-Cola joint ventures in the central and southern parts of Vietnam, which - by using the same costly promotion strategy - made huge losses that went beyond the local partner's capability. All three Vietnamese partners in those joint ventures eventually sold their stakes to Coca-Cola and left the joint ventures. Besides the case of Coca-Cola, other notable MNCs such as Pepsi, Procter and Gamble, Caltex and Colgate-Pamolive have also bought out all, or almost all, of their local partners' stakes in the joint ventures by using the same tactic (Duc Hung 1998).

In conclusion, the nature of state-owned enterprises and private enterprises, as well as FDI flows, allow and require the co-operation between them to achieve mutual benefit. Government policies, on the other hand, also promote such co-operation and minimise unnecessary competition in order to promote domestic savings and investment. The FDI flows, therefore, have provided positive direct and indirect impacts to mobilise domestic

savings and investment. In some cases, or in some industries, FIEs may even compete with local enterprises, but such negative impacts are small compared to the positive impacts created by FDI flows. However, the increasing trend of changing the investment form from a joint venture toward 100 percent foreign-owned may require the close attention of government in order to minimise the negative impacts of FDI flows to domestic savings and investment.

5.2. Foreign Direct Investment Flows and their Effects on the Balance of Payments.

Like other developing countries, Vietnam has faced foreign currency shortages during its development created by low levels of exports, heavy dependence on imports of raw material and consumer goods, and a huge debt burden. This section examines the impacts of FDI flows, positive or negative, on Vietnam's exports and imports and other foreign currency flows, and on the country's foreign debt burden.

5.2.1. Foreign direct investment flows and their effects on the exports and imports of Vietnam.

Before the reform in 1986, the foreign trade of Vietnam was mainly with Eastern European countries, especially the former Soviet Union, and Vietnam maintained large trade deficits that were covered by ODA from those countries. Since the reforms in 1986, Vietnam's exports and imports have increased very rapidly at an annual growth rate of 20 percent, while the trade deficit has been kept under control (Table 4.1) thanks to the government's open door policy, policies to promote the development of the private sector and moving towards a market oriented economy. However, the exports of Vietnam have been dominated by unprocessed or semi-processed agricultural products, or labour-intensive manufacturing products with low added value (Than and Tan 1993; Forde and deVylder 1996; Harvie and Tran Van Hoa 1997; Wolff 1999).

The FDI flows have contributed to such increases in Vietnam's exports by providing necessary investment capital, know-how and modern technology, and access to international markets. Table 5.8 shows that exports generated by FIPs increased as much as 127.7 percent in 1997, many times higher than the growth rate of the country's exports. Even in 1998 when exports of the whole country grew at a low rate of only 2.4 percent due to the regional crisis, the exports of FIPs still remained at 10.7 percent. The

share of FIPs' exports in the country's total exports also increased steadily from 2.5 percent in 1991 to 24.2 percent in 1999, and FIPs have become very important in creating export products for the whole country.

The access to international markets, modern technology and management have assured the steady increase of exports of FIPs and made them one of the important factors behind the country's export growth. The contribution of FIPs to Vietnam's export growth increased from 2.9 percent in 1992 to 13.7 percent in 1997 before reducing to 2.1 percent in 1998 and 6.5 percent in 1999. Over the 1991-1998 period, FIPs have contributed to about 9.5 percent of Vietnam's export growth (Table 5.8). The list of export products of FIPs also reflects the country's comparative advantage in producing agricultural products and labour-intensive products. Except for crude oil, the major export products of FIPs in 1998 were:

- Electronic products $562 million
- Footwear $346 million
- Garments $183 million
- Seasonings and bi-organic products $53 million
- Household electrical products $48 million
- Seafood $22.9 million
- Coffee $8.5 million
- Rice $4 million

(MOT 1999).

The import volume of FIPs has also increased rapidly, with a growth rate of 144.5 percent in 1995 (Table 5.8). However, the imports of FIPs decreased in 1998 and 1999 as a consequence of the regional crisis and lower demand for Vietnam's export products. The rapid increase in FIPs imports before 1998 has led to large trade deficits. In 1996, for example, the FIPs trade deficit was $1.2 billion, accounting for 40 percent of the country's trade deficit. However, this figure increased to 83.7 percent of the country's trade deficit as the government tightened imports and reduced non-FIPs trade deficit by $1.7 billion, while FIPs trade deficit reduced by only $156 million. The FIPs trade deficit then turned into a surplus of $582 million in 1999. In general, the large imports of FIPs have accounted for a large share of the country's trade deficit. However,

the trade deficit created by FIPs is not as serious as in the case of China, where FIPs' imports were many times higher than exports (as high as seven times in 1985) (Chen 1999, pp. 80-82). Moreover, closer examination of FIPs imports has revealed that their imports of the equipment and machinery that are necessary for their establishment in Vietnam have accounted for a large part of FIPs' imports. Between 1988 and June 1996, the contribution of foreign investors to the legal capital of joint ventures in the form of equipment and machinery was 19 percent, ranked second after the contribution by cash (GSO 1996, p.104). Imports of equipment and machinery were $708 million and $831 million in 1995 and 1996 respectively, reducing to $637 million and $416 million in 1998 and 1999 (MOT 1999). If such imports of machinery and equipment were to be excluded, the trade deficit of FIPs would become less serious. The reduction of FIPs' imports of machinery and equipment between 1995-1996 and 1998-1999 that reflected the declining trend of FDI flows to Vietnam actually turned FIPs trade balance from a deficit into a surplus.

Table 5.8: Share of FIPs Exports and Imports in Total Exports and Imports of Vietnam, 1991-1999

	1991	1992	1993	1994	1995	1996	1997	1998	1999
FIPs exports ($mil.)	52	112	257	352	440	786	1,790	1,982	2,591
Growth rate of FIPs exports (%)		115.4	129.5	37.0	25.0	78.6	127.7	10.7	30.7
Share in country's exports (%)	2.5	4.5	8.6	8.7	8.5	10.7	19.6	21.2	24.2
Contribution to country's export growth*		2.9	5.9	3.2	2.2	6.7	13.7	2.1	6.5
FIPs imports ($mil.)	na	na	na	600.5	1,468	2,042.7	2,890	2,668	2,009
Growth rate of FIPs imports (%)					144.5	39.1	41.5	-7.7	-24.7
Share in country's imports (%)				11.4	19.5	19.5	27.6	25.8	19.9
FIPs trade deficit ($mil.)				-248.5	-1,028	-1,256.7	-1,100	-686	582
Share in country's trade deficit (%)				-20.8	-43.8	-39.9	-83.7	-69.6	97.0

* FIPs contribution in year t = $\frac{\text{(FIPs exports in year t - FIPs exports in year t-1)}}{\text{Country's exports in year t-1}}$

Source: MPI database; WB 1995a, 1996, 1999; GSO 1996, 1999b; MOT 1999.

Moreover, the imports of raw materials necessary for FIPs to produce products for the domestic market may create a trade deficit but - on the other hand - it surely has saved foreign currencies that had been used in the past to import either finished products for the local market or raw materials for local producers. During the 1995-1997 period, when the economy of Vietnam was growing at a very high rate, the imports of some products of which FIPs dominate the production actually decreased. For example, the imports of motor vehicles reduced by 31 percent, lubricating oil by 54 percent, sodium glutamate by 5 percent, televisions by 86.7 percent and motorcycles by 67.5 percent (GSO 1999b, pp. 282-283). Nevertheless, the large import volume of materials for FIPs has shown that Vietnam does not have sufficient basic industries to provide materials and other supplies which are up to international standard.

Besides generating foreign currency income through the export of goods, FIPs also help to increase the country's foreign currency income through tourism activities and other services. In 1993, for example, the foreign currency income of FIPs in the tourism industry was $20.8 million, accounting for 23.5 percent of the total foreign currency income of the whole industry - while in 1997, the turnover of FIPs in the tourism and hotel industry was $760 million (GSO 1998, p.789; GSO 1999a, p.269).

5.2.2. Other effects of foreign direct investment flows on the balance of payments.

Other effects of FDI flows on the balance of payments include the generation of debt for Vietnam and the outflows of foreign currencies as remittances.

Of the total FDI implementation between 1991-1998, foreign loans were $4,538 million, accounting for 31 percent of total FDI implementation as detailed in Table 5.9. However, such implemented loans were only 30 percent of total committed loans (MPI 1998, p.8).

Of those loans, about 50 percent are long-term loans and 90 percent of the loans have actually come from parent companies and 10 percent from international financial organisations (MPI 1998, p.8; GSO 1999c, p.245). Compared to the loans committed by local firms, such loans committed by FIPs have more favourable conditions. In general, the payment terms of FIPs loans are over seven years and interest rates are about one

percent higher than the London inter-bank offer rate (LIBOR)[12] (WB 1997b, p.32). Those loans, however, have not seriously deepened the debt situation of Vietnam. The total external debt burden of Vietnam as at December 1998 stood at $18.8 billion and the annual debt service of Vietnam is estimated at around 16 percent of the country's exports, or between 5-7 percent of GDP, well within the manageable range (WB 1998, p.79; IMF 1999; OECF 1999).

To service their loans, every year FIPs have paid the interest and principal that were $338 million and $314 million respectively in 1998. However, the IMF has estimated that by 2001, Vietnam will have to pay $151 million for interest and $894 million for principal (IMF 1999, p.12). Such a large debt service may influence the balance of payments situation of Vietnam by then.

Table 5.9: Foreign Loans Classified by Form of Investment, 1991-1998

($ million)

	1991	1992	1993	1994	1995	1996	1997	1998	1991-98
Total	10	38	238	594	989	921	1,072	560	4,538
100 % foreign owned	0	4	47	95	208	263	333	35	977
Joint venture	8	20	95	273	431	626	706	170	2,369
Business Co-operation Contract	2	14	97	226	350	32	32	355	1,194
Build-Operation-Transfer	0	0	0	0	0	0	0	0	-2

Source: MPI database and State Bank of Vietnam data in IMF 1999, Table II. 6, p.10.

Another source of foreign currency outflows as a consequence of FDI flows is the remittance in terms of salaries and wages of foreigners working in Vietnam, as well as dividend on foreign contribution. It is estimated that between 6,000-7,000 foreigners have been working in FIPs with monthly wages and salaries of between $1,000 to $2,000, many times higher than those of local workers.

The payment of dividends on foreign contribution, however, depends on the performance of FIPs as foreign investors can receive dividends only when the FIPs make profits. Such dividend payments were $429 million in 1998 and are expected to be

[12] For local firms' loans, the interest rates would normally be 2 percent higher than LIBOR.

around $400 million for the period from 2000 to 2004 (IMF 1999, p.12). The government of Vietnam has encouraged foreign investors to reinvest their profit in Vietnam by providing tax incentives on profit reinvested in Vietnam and imposing taxes on remittances. The remittance tax rates are 5 percent, 7 percent and 10 percent depending on the size of the capital contribution of foreign investors. However, if the profit is reinvested in Vietnam, foreign investors will receive a refund of profit tax on the amount of reinvested profit and the specific rates of refund (50 percent, 75 percent and 100 percent) will depend on the priority level of foreign invested projects (NPPH 1999, p.51). By mid-1996, 18 FIPs had used their profit to reinvest in Vietnam and received returning profit tax of $0.5 million and by the end of 1999, about 30 FIPs had reinvested their profit to expand their production (MPI 1996, p.10; VEN 1999a).

Moreover, under the pressure of the regional financial crisis, the government required all profit-making FIPs to sell 80 percent of their hard currency reserves to the State Bank of Vietnam. The ratio has since been reduced to 50 percent (Ha Thang 1999). This short-term solution was designed to minimise the pressure on the country's foreign currency reserves, especially during the regional financial crisis, and hence maintain macro-economic stability.

In conclusion, FDI flows have promoted and generated positive impacts to increase exports by providing access to the international market, especially for manufactured exports, modern technology and know-how and investment capital. However such increases have been largely offset by huge amounts of imports of FIPs. Nevertheless, when the imports of machinery and equipment are disregarded, the deficit in the trade account of FIPs appeared to be less serious, or even in surplus in 1999. On the capital account, foreign investors on the one hand have brought into Vietnam a large amount of investment capital, but on the other hand they have also created a large amount of debt and debt service obligation as well as the outflows of foreign currency as remittance on foreign contribution. However, the favourable terms of FIPs loans have made such debt manageable. Moreover, the government of Vietnam has tried to reduce foreign currency outflows by encouraging foreign investors to reinvest their profit in Vietnam through providing several tax incentives.

5.3. Foreign Direct Investment Flows and Government Revenue.

Another macro-economic impact of FDI flows is their contribution to the government budget and therefore to reducing the fiscal gap. Before the reform in 1986, the government of Vietnam always faced a fiscal deficit. While government expenditure programmes were very ambitious, covering large capital intensive projects and subsidies for SOEs, government income was very limited and had been financed by ODA from Eastern European countries. The government had to use high inflation as means to cover its large fiscal gap and finance its ambitious expenditure (Than and Tan 1993; Forde and deVylder 1996; Harvie and Tran Van Hoa 1997). Since reform in 1986, the fiscal balance has been improved thanks to the abolition of the subsidy system, the tax reform and the contribution of FIPs to government revenue through turnover tax, profit tax, income tax, import-export tax and remittance tax. Table 5.10 shows the increasing contribution of FIPs to government revenue from 0.02 percent of GDP in 1991 to 1.2 percent of GDP in 1997 and 1998 before declining to 0.9 percent of GDP in 1999.

Table 5.10: Vietnam's Budgetary Operations, 1990-1999

(percent of GDP)

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
Revenue and grant	14.7	13.5	19	22.5	24.7	23.9	22.9	21.1	19	17.8
State-owned enterprises	8.6	8.1	10.8	11.2	12.1	9.8	9.5	8.8	7.5	7
Private enterprises	2.3	2.2	3	3.5	3.3	3.6	3.7	3.4	3.5	2.7
External trade	1.7	1.4	2	4.7	5.9	6	5.6	4.3	4.6	5
FDI related sector		0.02	0.07	0.2	0.7	1	1.1	1.2	1.2	0.9
Other revenue	2	1.4	2.5	2.2	2.1	2.9	2.5	2.6	2	1.6
Grants		0.4	0.8	0.7	0.7	0.7	0.6	0.8	0.5	0.5
Current expenditure	15.4	12.2	14.9	20.0	18.9	18.6	17.4	16.3	14.3	12.8
Capital expenditure	5.1	2.8	5.8	7	6.9	5.4	5.7	6.2	5.5	5.9
Financing	5.8	1.5	1.7	4.6	1.1	0.5	0.2	1.4	1.1	1.3

Source: Ministry of Finance and several Statistical Yearbooks in WB 1999b; GSO 1999; MPI database.

In the industrial sector (including manufacturing, mineral and water, gas and electricity generation and supply), the contribution of FIPs to government revenue also increased from $456.08 million in 1994 to $809.9 in 1997 (Table 5.11). The share of FIPs' contribution within the total industrial contribution to government revenue increased from 34.6 percent in 1994 to 49.2 percent in 1997. In particular, the contribution of FIPs dominated in the mineral industry at the ratio of 96 percent in 1997. The contribution of FIPs per sale, however, decreased from $0.132 in 1994 to only $0.083 in 1997 for the manufacturing sector, while remaining unchanged for the mineral industry. Such a decrease coincides with the decline in the contribution of SOEs in manufacturing, which decreased from $0.13 in 1994 to $0.117 in 1997.

In general, the low percentage share of FIPs' contribution to government budget is attributed to the fact that many of them have just started their operations and are still in the tax deduction period. The lower contribution per sale of FIPs in 1997 compared to that of 1994 can be attributed to the fact that as FDI flows to Vietnam increased rapidly during 1993 and 1994, many new FIPs have just started their operation in 1996 and 1997 and still enjoyed a tax holiday. Between 30 June 1995 and 30 June 1998, the number of FIPs increased from 395 to 830 (GSO 1999b, c).

Moreover, in order to promote exports, the government has allowed zero tax on the imports of machinery and equipment and materials for producing export products - and that also lowers the government income from FIPs. By the end of 1998, the government of Vietnam had given tax preference to 523 FIPs (STD 1999). Hence, while the volume of FIPs' contribution to government revenue almost doubled between 1994 and 1997, the contribution per sale actually declined.

In short, while the contribution of FIPs to government budget has been small, it has become an important source of government revenue, especially in the coming time.

Table 5.11: Industrial Budget Contribution 1994 and 1997

	1994							1997						
	Total	SOEs	Share (%)	Private	Share (%)	FIEs	Share (%)	Total	SOEs	Share (%)	Private	Share (%)	FIEs	Share (%)
Budget contribution ($ million)	1,318.7	830.7	63.0	31.9	2.4	456.1	34.6	1,647.0	754.0	45.8	83.1	5.0	809.9	49.2
Total manufacturing	700.4	582.8	83.2	31.791	4.539	85.81	12.25	901.6	524.6	58.2	82.01	9.10	295.0	32.72
Mineral industry	429.3	59.0	13.8	0.109	0.025	370.19	86.22	536.3	20.5	3.8	1.08	0.20	514.7	95.97
Water, gas, electricity generation and supply	189.0	188.9	100.0	0.005	0.002	0.08	0.04	209.1	208.9	99.9	0.02	0.01	0.2	0.07
Budget contribution per sale ($)														
Total manufacturing	0.116	0.130		0.034		0.132		0.086	0.117		0.034		0.083	
Mineral industry	0.366	0.224		0.025		0.410		0.308	0.047		0.019		0.412	
Water, gas, electricity generation and supply	0.333	0.334		0.005		0.102		0.151	0.151		0.021		0.027	

Note: Exchange rates of VND 10,978 and VND12,938 per $1 have been used to convert data from VND to $ in 1994 and 1997.

Source: GSO 1999 b,c.

5.4. Foreign Direct Investment Flows and Economic Growth.

The previous sections have examined the impacts of FDI flows on domestic savings and investment, on generating foreign currency earnings and on government revenue. Overall, FDI flows have contributed to covering the saving-investment gap, foreign exchange gap and fiscal gap, even to different extents, and hence they have promoted economic growth. This section will examine how FDI flows contribute to the economic growth of Vietnam by looking at the role of FDI flows in several government development projections, by estimating their direct contribution to economic growth and, finally, by reviewing the performance of FIPs.

In the government projections for socio-economic development up to the year 2000, FDI was considered as one of the major sources of investment capital. In order to achieve the target of doubling the 1990's GDP per capita by the year 2000 and hence an average annual GDP growth rate of 8 percent for the whole period, a total investment of $40 billion was needed. Of that $40 billion investment fund, 51 percent would have come from domestic sources and 49 percent from external sources - and a projected FDI flow of $12-13 billion would have been needed (SRV 1993, pp. 73-74). In the accelerated growth plan for 1996-2000, the annual target growth of 9-10 percent was set and estimated FDI flows of $13 billion would have been needed to make up the total investment of $41-42 billion (SRV 1996, pp. 13-14).

Several of the World Banks' short-term projections of Vietnam's socio-economic development have considered FDI flows as a major source of investment. In its 1999 projection, the World Bank has estimated that in order to achieve the annual GDP growth rate of 4-5 percent for 2000, 5.5-6 percent for 2001 and 6-7 percent for 2002, estimated FDI flows of $0.75 billion, $0.85 billion and $1.03 billion would have been needed for 2000 and 2001 and will be needed for 2002 (WB 1999b, p.50). In general, FDI flow is projected to account for around one-third of the country's financing requirements (ibid.).

Several projections have shown the positive impacts of FDI flows on economic growth in Vietnam, but the estimation of direct contribution of FDI flows on GDP growth is not a simple task. As FDI flows have begun in Vietnam since 1988, the data on FDI flows

do not cover long enough period to establish the time series regression analysis to test the correlation between FDI flows and GDP growth. Another way to estimate the direct contribution of FDI flows to GDP growth is to use the Harrod-Domar model and to examine the structural share of FIPs in Vietnam's GDP.

The Harrod-Domar model allows the estimation of the contribution of FDI flows to GDP growth based on the data of the share of FDI flows in GDP and the Incremental Capital Output Ratio (ICOR). The determination of ICOR in Vietnam is a complicated issue. In several projections, the ICOR of 3 has been used to calculate the necessary investment fund. However, such an ICOR is low compared to China, the country that shares several conditions with Vietnam, where the ICOR of 4 has been used to project long-term economic development (Harvie and Tran Van Hoa 1997, p.67). For FDI projects that tend to use more modern, and hence expensive equipment, an ICOR of 5 may be appropriate in the condition of Vietnam. Based on the data on the FDI flows as a share of GDP provided in Table 5.1, the direct contribution of FDI flows to GDP growth has been calculated by using the Harrod-Domar model with an ICOR of 5 (Table 5.12). In this case, the direct contribution of FDI flows to GDP growth increased from 0.1 percent in 1988 to around 2 percent during the 1993-1997 period before reducing to 1.3 percent in 1998.

The application of the Harrod-Domar model faces the problem of time-lags, where FDI flows may not generate any impacts on GDP growth until the construction work to establish FIPs has been finished. In the case of FDI flows in Vietnam, the construction duration is about five years for the oil and gas industry, four years for hotels and offices, the cement industry, and for establishing infrastructure for industrial zones, two years for transport, telecommunication and manufacturing, and one year for light industry (Do Quoc Sam 1996, p.6).

An examination of the share of FIPs in GDP provides a better result. The share of FIPs in GDP increased from 2 percent in 1992 to 3.6 percent in 1994, 6.7 percent in 1995 and 9.1 percent in 1998. The FIPs have remained at the highest economic growth rate among all economic sectors in Vietnam, with an annual growth rate of around 20 percent for 1996 and 1997, and reducing to 16.9 percent for 1998 (GSO 1999b, pp. 25-26). Based on the data on the share of the FDI sector in GDP, the direct contribution of

FIPs to GDP growth has been estimated as shown in Table 5.12. Except for 1994, the average contribution of FIPs to GDP growth has been between 1 percent to 1.5 percent, just lower than that of the state and household sectors. Such contribution would be very significant if bearing in mind the fact that the FDI-related sector is much smaller than the state and household sectors.

The contribution of FDI flows to economic growth can also be seen in the contribution of FDI flows in creating new industries or increasing significantly the output of existing industries. As shown in Table 5.13, in 1998 FIPs produced 100 percent of the output of crude oil, automobiles and mono-sodium glutamate, 67 percent of television, 44.8 percent of glass production, 42.9 percent of steel and 40.7 percent of garments. In other industries such as canned fruits, vegetable oil or transformer production, FIPs also accounted for more than 30 percent of the total output. More specifically, FIPs produced 100 percent of printed circuits, VCRs, 100 percent of PE and PES fibres and 70 percent of electronic tubes (MPI 1988, p.11).

Another way to examine the contribution of FDI flows to GDP growth is to look at the performance of FIPs in the sense that the better the performance of FIPs, the higher the contribution of FDI flows to GDP growth. In general, the performance of FIPs has been low, only one-third of operating FIPs has made a profit. Only 40 percent of FIPs in food processing, garment, footwear, telecommunication, construction, and the apartment renting business, and 20 percent of FIPs in agriculture, fishery, forestry and hotel and the development of infrastructure of industrial zones are profitable (MPI 1998, p.18; Phan Van Hien 1998, pp. 9-10). While data on the performance of FIPs for the whole period 1988-1998 are not available, the survey of FIPs in 1996 shows that the number of inefficient FIPs had increased from 197 in 1994 to 317 in 1995, and to 342 for the first 6 months of 1996. The losses hence increased from 54.3 million in 1994 to $133.7 million in 1995, and $96 million for the first 6 months of 1996 (Table 5. 14). The low efficiency performance of many FIPs has lowered the contribution of FDI flows to GDP growth.

Table 5.12: Contribution of Foreign Direct Investment to GDP Growth

	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998
GDP real growth rate (percentage)	5.9	8.0	5.1	6	8.6	8.1	8.8	9.5	9.3	8.2	5.8
Based on the Harrod-Domar model											
FDI flows as share of GDP	0.5	1.2	1.5	2.6	7.9	10.1	8.8	9.6	8.3	9.7	6.7
ICOR	5	5	5	5	5	5	5	5	5	5	5
FDI contribution to GDP growth (percentage point)	0.1	0.24	0.3	0.5	1.6	2.0	1.8	1.9	1.7	1.9	1.3
Based on the structure of GDP											
GDP at 1994' price (VND billion)					144,761	156,487	170,258	195,567	213,833	231,264	244,676
- State sector (VND billion)							71,620	78,367	87,207	95,638	100,879
- Collective sector (VND billion)							18,164	18,978	19,654	20,173	20,782
- Private sector (VND billion)							5,469	5,978	6,838	7,507	8,088
- Household (VND billion)							64,025	70,287	74,913	79,128	82,594
- Mixed (VND billion)							7,812	8,802	9,511	9,848	10,162
- FDI sector (VND billion)					2,895	5,634	11,441	13,155	15,709	18,970	2,2171
Contribution to GDP growth (percentage point)											
- State sector								4.0	4.5	3.9	2.3
- Collective sector								0.5	0.3	0.2	0.3
- Private sector								0.3	0.4	0.3	0.3
- Household								3.7	2.4	2.0	1.5
- Mixed								0.6	0.4	0.2	0.1
- FDI sector						1.9	3.7	1.0	1.3	1.5	1.4

Note: FDI sector contribution in year t = (FDI sector share of GDP in year t - FDI sector share of GDP in year t-1) / GDP of year t-1

Due to changes in the constant price system used to calculate GDP, there was a large increase in 1995's GDP compared to 1994's GDP.

Source: Compiled based on data from GSO 1996; 1999 a,b,c; IMF 1995, 1999; MPI 1998.

Table 5.13: Major Industrial Products, 1995-1998

Products	1995				1996				1997				1998			
	Total	Share in Total (%)			Total	Share in Total (%)			Total	Share in Total (%)			Total	Share in Total (%)		
		SOEs	Private	FIPs		SOEs	Private	FIPs		SOEs	Private	FIPs		SOEs	Private	FIPs
Crude oil (000. tons)	7,620	0.0	0.0	100.0	8,803	0.0	0.0	100.0	10,090	0.0	0.0	100.0	12,500	0.0	0.0	100.0
Canned fruits (ton)	12,784	43.9	0.0	56.1	16,318	76.3	0.5	23.2	21,422	69.6	0.0	33.7	23,550	63.9	0.0	36.1
Vegetable oil (ton)	38,612	64.6	35.4	0.1	78,076	39.5	21.0	39.5	87,718	48.1	17.2	34.7	98,163	51.3	16.5	32.3
Beer (mill.litters)	465	67.5	3.2	29.2	533	68.5	5.3	26.3	581	67.5	5.9	26.7	656.1	67.9	5.5	26.6
Fabrics (mill. meters)	263	57.0	27.4	15.6	285	53.3	22.1	24.6	298.6	51.2	26.9	21.9	316.6	52.4	26.0	21.6
Garment (000. pieces)	171,900	42.1	42.3	15.6	206,959	34.2	55.3	10.5	302,192	27.5	36.4	36.1	289,923	28.6	30.7	40.7
Soft leather (000.sheets)	1,383	0.0	70.9	29.1	1,226	52.1	7.1	40.8	2,970	77.3	0.4	22.3	3065	76.7	0.5	22.8
Detergent (000.tons)	129	72.1	10.1	17.8	167	58.7	12.0	29.3	213.3	56.0	15.0	29.0	216	55.6	15.3	29.2
Glass products (000.tons)	77	31.2	15.6	53.2	93	21.5	21.5	57.0	65.6	24.4	30.9	44.7	67	22.4	32.8	44.8
Steel (000. tons)	470	84.7	2.1	13.2	868	57.9	1.7	40.3	978	49.7	0.8	49.5	853.1	56.1	1.1	42.9
Transformer (piece)	6,186	79.8	0.0	20.2	6,910	74.3	0.0	25.7	6,549	80.6	0.0	19.4	4525	68.3	0.0	31.7
Television (000. pieces)	770	78.8	3.6	17.5	741	63.2	5.8	31.0	533	31.2	2.5	66.3	538	29.6	2.8	67.7
Automobile (piece)	3,524	0.0	0.0	100.0	5,806	0.0	0.0	100.0	6,535	0.0	0.0	100.0	6,404	0.0	0.0	100.0
Mono-Sodium Glutamate(000. tons)	65	0.0	0.0	100.0	87	0.0	0.0	100.0	91	0.0	0.0	100.0	105	0.0	0.0	100.0

Source: GSO 1999b, pp. 214-224.

Table 5.14: The Performance of Foreign Invested Projects

	1994	1995	First 6 months - 1996
Loss ($ million)	54.3	133.7	96
• Number of loss making projects	197	317	342
Profit ($ million)	539.5	627.9	385.5
Profit distribution ($ million)			
• Vietnam side	152.7	167.1	93.3
• Foreign investors	174.6	197.9	106.6

Source: GSO 1998, pp. 544-551.

There have been several reasons for the low efficiency performance of FIPs, such as poor physical and economic infrastructure or the "strategic losses" tactic that foreign investors have been accused of applying to force local partners to quit the joint venture. However, the low level of production capacity utilisation is also another reason that has led to the losses. Table 5.15 shows that FIPs have recorded the highest percentage of enterprises which utilised less than 50 percent of their production capacity in the 1997 industrial survey. The number of FIPs that achieved from 50 percent to 95 percent of production capacity was also lower than that of domestic enterprises. Such low level of production capacity utilisation is due to the fact that many FIPs were still in the early stage of their operation and still needed some time to accelerate production. The results of the 1995 economic survey and the 1998 industrial survey also showed that the turnover-capital ratio of FIEs in manufacturing sector had increased from 0.45 in 1994 to 0.52 in 1997, while the ratio reduced from 1.29 to 0.81 for the whole sector (GSO 1999 b,c).

The regression analysis in the following chapter will show that the performance of FIEs has a statistically significant positive correlation with the duration of their operation in Vietnam.

In short, while many FIPs have been making losses, the contribution of FDI flows to GDP growth has been very important, accounting for between 1 to 1.5 percentage points of GDP growth annually. Moreover, FDI flows have also created many new industries or increased the output of many others. The low efficient performance of

FIPs, however can be attributed to the low level of production capacity utilisation, as many of them had just started their production.

Table 5.15: Industrial Enterprises Classification According to Level of Production Capacity Utilisation, 1997

(percent)

	Total surveyed firms	Percentage of Utilisation			
		Less than 50%	From 50% to 75%	From 75% to 95%	Over 95 %
Total	9,314	20.8	47.7	23.9	7.6
Central SOEs	569	11.4	36.2	34.3	18.1
Local SOEs	1,252	15.8	38.4	31.6	14.2
Collective owned enterprises	949	25.2	48.5	17.7	8.6
Private owned enterprises	4,213	21.3	53.7	21.7	3.3
Limited liability enterprises	1,438	20.7	47.6	22.8	8.9
State joint-stock companies	33	6.1	33.3	48.5	12.1
Non- state joint-stock companies	30	23.3	43.3	30.0	3.4
100 % foreign-owned enterprises	435	25.1	40.2	24.8	9.9
Joint venture with SOEs	294	29.6	5.0	25.2	10.2
Joint venture with private sector	76	29.0	51.3	18.4	1.3
Joint venture with both SOEs and private sector	10	50.0	20.0	20.0	10.0
Business Co-operation Contract	15	46.7	26.7	26.7	0.0

Source: GSO 1999c, pp. 77-82.

5.5 Conclusion.

This chapter has examined the macro-economic impacts of FDI flows on the economy of Vietnam. In general, FDI flows have contributed to covering the savings-investment gap by directly providing investment capital or indirectly promoting and encouraging domestic savings. In some industries, FDI flows have even competed with local industries, but such negative impacts are not significant.

FDI flows also increase the exports of the whole country by providing modern technology and access to international markets. Even FIPs require large imports of machinery, equipment and materials and have generated a trade deficit, but such trade deficit has been reduced recently. FIPs also contribute to government revenue through several forms of tax, and such contributions will become more significant in the future. By contributing to covering the saving-investment gap, foreign exchange gap and fiscal gap, FDI flows have contributed to promoting GDP growth of between 1 to 1.5 percentage point annually.

The government of Vietnam has played a very decisive role in making use of FDI flows by introducing several tax incentives to encourage them to priority sectors that will, in turn, create important backward effects for the whole economy, by limiting the direct competition with local enterprises, and minimising the outflows of dividends on foreign contributions by encouraging reinvestment in Vietnam. In general, the government of Vietnam has promoted the positive impacts and minimised the detrimental effects of FDI flows, and hence made FDI flows a very important investment source for socio-economic development in Vietnam. In this regard, the government has made FDI flows a supplement, rather than substitute, source of capital for socio-economic development. Not only do they act as a supplement for local savings and investment, but FDI flows also bring into Vietnam modern technology and management skills, and promote the industrialisation process. Such impacts will be examined in following chapter.

CHAPTER VI:
FOREIGN DIRECT INVESTMENT FLOWS AND THE INDUSTRIALISATION PROCESS IN VIETNAM*

The previous chapter examined the significant contribution of FDI flows to increasing national investment, foreign exchange earnings and, in general, economic growth. However, the impacts of FDI flows have gone further in supporting the industrialisation process in Vietnam. This chapter analyses the contribution of FDI flows to the industrialisation process in Vietnam by examining the role of FDI flows in transferring modern technology, know-how and management skills, in promoting the government's dual industrialisation strategy of export-oriented industrialisation and import-substitution industrialisation. Moreover, this chapter will also analyse the related government policies that influence the contribution of FDI to the industrialisation process in Vietnam. Several regression analyses will be used to support the finding that government policies have important contributions in making use of FDI flows in the industrialisation process.

6.1. Foreign Direct Investment Flows and Technology Transfer.

The 1986 socio-economic reforms aimed to mobilise local capital as well as foreign capital, technology and management skills to promote the industrialisation process in Vietnam. In this sense, FDI flows were considered a major source of modern technology, know-how and management skill to replace the old and obsolete technologies and hence to promote the industrialisation and modernisation of Vietnam.

In general, technologies that have been used in Vietnam are obsolete. Machinery and equipment that are still being used in many enterprises are between two to five generations out of date (Thu 1997 cited in Bezanson et al. 1999, p.63). The technologies and equipment used in many state-owned enterprises (SOEs) that receive extensive financial support from government have also been in very poor condition.

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* An article "The export performance of foreign invested enterprises in Vietnam", that was written based on this Chapter, has been accepted for publication and will appear in the *ASEAN Economic Bulletin*, Vol. 18, No. 3 (forthcoming).

Several surveys have revealed that only 18 percent of SOEs have been equipped with new technology, and such new technology has been introduced only since 1986. A survey of 200 SOEs in 1997 conducted by the Central Institute of Economic Management in co-operation with Japan's Overseas Economic Co-operation Fund also found that one of the three most serious difficulties for the development of SOEs is outdated technology and equipment (Hagiu et al. 1998, p.165). About 82 percent of SOEs still use technology that is between two to four generations older than in other countries. Some SOEs still use equipment manufactured in 1939, or even earlier. Of those SOEs, only a quarter use integrated equipment, while others use equipment supplied by many manufacturers and this leads to the problem of incompatibility and waste (Nguyen Ngoc Tuan et al. 1996, pp. 24-25).

Under such circumstances, FDI flows have been considered as one of the major sources for transferring modern technology to Vietnam, and several government policies have been issued to create favourable conditions to promote the technology transfer process.

6.1.1. Foreign direct investment flows and technology transfer.

In general, modern technology has been brought into Vietnam with FDI flows since 1988 and has contributed to the production of several new products or improved the production of existing products that better satisfy domestic and export demand. The products produced by foreign invested enterprises (FIEs) at least meet Vietnam's quality standards and some products meet ISO quality standards (MPI 1998, p.12).

The Law on Foreign Direct Investment in Vietnam requires that technology transfer under FDI flows must be:

- Technology that creates new and essential products in Vietnam or products for export.
- Technology that improves technical capability, product quality and production capacity.
- Technology that saves materials and energy; that exploits and utilises natural resources effectively.

(NPPH 1999, p.41).

Between 1988 and 1998, 219 foreign invested projects (FIPs) were registered as including technology transfer, accounting for around 10 percent of the total FIPs (Table 6.1).

Those projects have concentrated mainly in the manufacturing sector with 128 projects (accounting for 58.4 percent) while only 71 projects are in the service sector and 20 projects are in the primary sector. In the manufacturing sector, labour-intensive industries (including food, beverages, textiles, garments, leather goods and wood products) account for 44 projects, while capital-intensive industries account for 84 projects that were involved in the technology transfer process. The heavy concentration on the manufacturing sector in technology transfer projects has coincided with the general trend of FDI flows toward manufacturing in Vietnam. Moreover, the high percentage share of capital intensive industries in total technology transfer projects and the lower share for export-oriented industries illustrate Vietnam's comparative advantage of cheap labour and the government's policies to promote the development of infant import-substitution industries.

Regarding the form of investment, joint ventures are the dominant form for technology transfer with 128 projects, and they account for 58.4 percent of the total technology transfer projects. On the other hand, the 100 percent foreign-owned form accounts for only 33.5 percent and business co-operation contract (BCC) accounts for 8.2 percent. This reflects the fact that up until recently, joint-ventures were still the dominant form of FDI in Vietnam. Regarding the country of origin, the Asian Newly Industrialising Countries (NICs) and Association of Southeast Asian Nations (ASEAN) countries are the major sources of modern technology transfer to Vietnam under FDI flows that account for 58.9 percent of total technology transfer projects. Of the developed countries, those of the European Union account for 11.4 percent, Japan accounts for 8.2 percent while the U.S. and Canada account for 5 percent. This trend implies that technology that has been adapted to suit the conditions of developing countries is more suitable for Vietnam. On the other hand, it also reflects the fact that ASEAN and Asian NICs are the major foreign investors in Vietnam while FDI flows from the US, Japan have flowed to Vietnam in large amounts only since 1995.

Table 6.1: Technology Transfer of Foreign Investment Projects, 1988-1998

	Number of project	Share in Total (%)	Total Investment ($ million)	Share in Total (%)
Total	**219**	**100.00**	**5,075.1**	**100.00**
Sectoral classification				
Manufacturing	**128**	**58.4**	**2,749.6**	**54.2**
Food and beverage	24	11	758.4	15
Textile	5	2.3	612.7	12.1
Garment	12	5.5	42.4	0.8
Leather goods	1	0.5	20.0	0.4
Wooden, bamboo products	2	0.9	2.2	0.0
Paper products	3	1.4	7.1	0.1
Chemicals	17	7.8	178.8	3.6
Coke, oil products and nuclear fuel	1	0.5	6.9	0.1
Rubber and plastics	11	5	55.2	1.1
Non-metal products	11	5.0	92.2	1.8
Metal	3	1.4	15.3	0.3
Metal products	2	0.9	74.8	1.5
Electric machines and equipment	9	4.1	60.9	1.2
Motor vehicles	2	0.9	62.0	1.2
Professional equipment	1	0.5	0.4	0.0
Other manufacture	24	11.0	760.5	15.0
Primary	**20**	**9.1**	**737.0**	**14.5**
Agriculture, fishery and forestry	6	2.7	69.1	1.4
Mining	14	6.4	667.9	13.2
Service	**71**	**32.4**	**1,588.5**	**31.3**
Construction	14	6.4	443.9	8.7
Trade, restaurants, hotel	34	15.5	999.2	19.7
Transport	6	2.7	74.9	1.5
Business services	15	6.8	63.0	1.2
Personal services	2	0.9	7.6	0.1
Classification by form of investment				
100 % Foreign Investment	73	33.3	1,312.1	25.9
Joint-venture	128	58.4	3,087.3	60.8
Business Co-operation Contract	18	8.2	675.7	13.3
Classification by country of origin				
ASEAN	62	28.3	1,433.7	28.2
Europe	25	11.4	834.2	16.4
Japan	18	8.2	138.6	2.7
North America	11	5	48.4	1.0
Asian NICs	67	30.6	1,754.4	34.6
Others	36	16.4	865.8	17

Source: Compiled from MPI database.

While 218 projects were registered as including technology transfer during the 1988-1998 period, only 94 technology transfer contracts were submitted to relevant government agencies for approval, though according to regulations, any projects involving any kind of technology transfer are subject to government approval. Of those 94 contracts, 80 contracts valued at $200 million were approved, including 56 industrial projects, 15 food processing projects, nine projects for cosmetic production, one health care project and one project in the cultural area (MOSTE 1999).

In general, FDI flows have brought with them modern and better technology compared to technology that has been used by local enterprises. This situation has been illustrated in the industrial sector that received over 63.4 percent of FDI flows between 1988 and 1998. In fact, FIEs have been using more modern machinery and equipment, and generating higher productivity as shown in Table 6.2. The data collected from the 1995 economic survey and the 1998 industrial survey revealed that FIEs had higher levels of fixed assets per enterprise, higher fixed assets per employee and higher total capital per employee than those of SOEs or private enterprises for both 1995 and 1998 (GSO 1998; 1999 b, c). The ratio of fixed assets over capital for FIEs was also higher than that of SOEs and private enterprises for both 1995 and 1998. Those indices show that FIEs have been capital-intensive, using more expensive machinery and equipment[13], and hence were more likely to have used more modern technology. The gap between SOEs and FIEs in terms of fixed assets per employee and total capital per employee was reduced between 1995 and 1998 but widened between FIEs and private enterprises over the same period due to government attempts to reorganise and restructure the SOEs, and the rapid growth of the private sector as well as the less capital-intensive nature of private enterprises in Vietnam.

Moreover, the data in Table 6.2 show that the FIEs also generated higher productivity compared to local enterprises as the level of turnover per employee for FIEs is twice as high as that of SOEs and private enterprises for both 1995 and 1998. The reduction of level of turnover per employee between 1995 and 1998 for FIEs, SOEs and private

[13] The value of machinery and equipment imported for FIEs is sometimes overvalued due to transfer pricing problem.

enterprises, however, reflects the impacts of the regional financial crisis on the economy of Vietnam. The capital-intensive nature of FIEs, on the other hand, made their ratio of turnover over total capital the lowest compared to SOEs and private enterprises, though this ratio increased from 43.6 percent in 1995 to 58.6 percent in 1998 (GSO 1998; 1999b, c).

Table: 6.2: Major Indicators of Vietnam's Industry, 1995-1998

	1995			1998		
	SOEs	Private enterp-rise	FIEs	SOEs	Private enterp-rise	FIEs
Net fixed assets/capital (%)	64	49.6	78	34.7	44.7	64.5
Fixed asset per firm (VND bill.)	13	0.4	53.3	24.4	0.013	93.7
Fixed assets per employee (VND bill.)	0.05	0.018	0.377	0.06	0.004	0.321
Total capital per employee (VND bill.)	0.079	0.036	0.483	0.172	0.009	0.5
Turnover per employee (VND bill.)	0.121	0.088	0.211	0.093	0.02	0.2
Turnover/total capital (%)	153.4	242.6	43.6	80	310	58.6

Note: - 1998's turnover per employee is at 1994 prices.

- Data on 1995 capital are as at 1 January 1995.

- 1998's turnover is converted from 1998's turnover at 1994 prices by using GDP deflators.

Source: GSO 1998; 1999 b, c.

The introduction of modern technology in FIEs can also be seen in their level of automation of production lines, life-time of equipment and the introduction of waste processing systems.

Table 6.3 shows that the production lines of FIEs are mostly fully automated, partly automated or fully mechanical, and only a small number of production lines are partly mechanical or manual. On the other hand, the number of production lines of SOEs and private enterprises classified as fully automated is lower compared to FIEs. For SOEs, the majority is partly automated, fully mechanical or partly mechanical - while those of private enterprises are mainly fully, or partly, mechanical and manual. Of the FIEs, the

joint-venture form, especially joint ventures with SOEs, seem to use more modern technology. This coincides with the data in Table 6.1 where joint venture is the most important form for technology transfer in Vietnam.

Table 6.3: Industrial Enterprises Classification According to Level of Automation of Production Lines, 1998 (percent)

	Total surveyed enterpri-ses	Fully auto-mated	Partly auto-mated	Fully mech anical	Partly mech anical	Man -ual
Total	9,134	1.9	19.6	26.6	35.7	16.2
-State owned enterprises	1,821	2.9	31.4	29.8	30.0	5.9
-Private enterprises	6,663	0.6	13.1	26.1	39.6	20.5
-100% foreign owned	435	8.5	43.2	21.4	20.5	6.4
-Joint venture with SOEs	294	12.9	50.0	24.8	10.9	1.4
-Joint venture with private enterprises	76	6.6	44.7	23.7	22.4	2.6
-Joint venture with both SOEs and private enterprises	10	10.0	50.0	20.0	20.0	0.0
-Business Co-operation Contract	15	6.7	46.7	26.7	6.7	13.3

Source: GSO 1999c, p.64.

However, the technological superiority of FIEs is not demonstrable in terms of the life-time of equipment as shown in Table 6.4. In general, the majority of FIEs (95.8 percent) used equipment and machinery of less than 20 years old compared to 83.9 percent for SOEs and 95.2 percent for private enterprises. However, private enterprises held the largest share of enterprises using machinery and equipment less than 10 years old as many of them were established after the socio-economic reform of 1986. In contrast, only 59.2 percent of FIEs use machinery and equipment less than 10 years old.

Another index that demonstrates the high level of technology used in FIEs is the level of waste processing systems introduced in FIEs. In 1998, 53.9 percent of FIEs had introduced waste processing systems compared to 44 percent for SOEs and 36.1 percent for private enterprises. Of the FIEs waste processing systems, 82.3 percent are classified as capable of processing over 75 percent of industrial waste, while only 58

percent of the waste processing systems of SOEs and 53.2 percent of those of private enterprises are able to process over 75 percent of the industrial waste. On the other hand, only 6.3 percent of FIEs used systems that process under 50 percent of industrial waste compared to 6.6 percent for SOEs and 8.3 percent for private enterprises (GSO 1999c, pp. 65-67).

Table 6.4: Industrial Enterprises Classification According to Life-time of Equipment, 1998 (percent)

	Under 10 years	From 10 years to less than 20 years	From 20 years to less than 30 years	Over 30 years
Total	61.5	29.1	7.2	2.2
State-owned enterprises	49.5	34.4	11.7	4.4
Private enterprises	72.8	22.4	4.0	0.8
Foreign invested enterprises	59.2	36.6	3.6	0.6

Source: GSO 1999c, pp. 88-90.

In short, the examination of several indices of FIEs and SOEs and private enterprises, such as fixed assets per employee, turnover per employee, fixed assets over total capital, level of automation of production lines, life-time of equipment and the capacity of waste processing system, has shown that FIEs have used more modern technology and equipment, generating higher productivity compared to local enterprises. In other words, FDI flows have brought into Vietnam relatively modern technology and equipment that is needed to promote the country's industrialisation and modernisation.

In addition to introducing modern machinery and equipment, foreign investors also transfer modern technology to Vietnam through several kinds of local staff and workers training and by bringing foreign experts to Vietnam. The research into the technological capability and learning patterns of Vietnam's textile/ garment and electronic industries has found that 100 percent of textile/garment firms and 90 percent of electronic firms involved in the research have used their co-operation with foreign partners, either through the forms of business contract or joint venture, to obtain modern technology, modern management and marketing skills by sending Vietnamese

workers and staff to attend overseas training courses or receiving advice from foreign experts attached to Vietnamese firms (Tran Ngoc Ca 1999).

In the joint venture to produce television picture tubes worth $170 million between Hanoi Electronic Co. (HANEL) and Orion Electronics Co. (a subsidiary of Daewoo), 72 engineers and technicians as well as several workers were sent to Korea for training in the production of television picture tubes, technology handling, assembly tubes or production management. On the other hand, about 20 Korean engineers have visited the project to help in setting it up (ibid. p.215). Another example is the Business Co-operation Contract between Vietnam Post and Telecommunication and Australia's TELSTRA in the telecommunications area, where 2,000 Vietnamese staff have been trained either in Vietnam, in Australia or in third countries to obtain modern technology (VIR 1997b).

The level of technology transferred through FDI flows, however, has varied among industries. Advanced technology has been transferred in the oil and gas industries, telecommunications, cement, electronic, automobile industries and some processing industries (such as banana and mushroom processing, and vegetable production by using advanced biological technology). Thanks to modern technology brought in by foreign investors, Vietnam has been able to produce several kinds of modern telecommunication equipment such as switchboards, optical fibre cables and hence improve the quality of telecommunication services within a short period. Ordinary technology has been transferred in mechanical, metallurgy, chemical, light industries and some food processing industries. Old and obsolete technology has been transferred in some projects in the areas of mineral resources exploitation, animal feed production, and footwear industries (MPI 1996, pp. 13-14).

While technology transferred through FDI flows has been considered modern, equal to - or better than - advanced technology that has been used by local enterprises, such transferred technology has been mainly labour-intensive, simple assembly and equal to only the medium level of technology that has been used in other countries in the region (MPI 1998, p.17; VNN 1999). This has been attributed to the fact that the majority of foreign investors in Vietnam are small and medium corporations from ASEAN or the Asian NICs, and they have not had access to the latest technology. Moreover, as 40

percent of equipment and machinery imported into Vietnam for FIEs are over 10 years old, this has limited the transfer of very advanced technology. On the other hand, cheap local labour and low incomes also limit the opportunity to introduce modern technology. Such a conclusion on the nature of transferred technology is supported by regression analyses in the following sections, where it is shown that modern technology has not played a decisive role in determining the exports and profit level of FIEs.

Nevertheless, technology brought to Vietnam by FDI has generally played an important role in the industrialisation process in Vietnam, and contributed to the production of several new products or improved the production of existing products that better satisfy domestic and export demand.

6.1.2. Technology transferred and associated problems.

Besides bringing modern technology, know-how, equipment and management skills to Vietnam, the technology transfer process under FDI flows has also generated several accompanying problems, namely transfer pricing and the importation of old technology and equipment.

The problem of transfer pricing occurs when foreign investors overstate the prices of imported machinery, equipment and technology. By overstating these prices, foreign investors will increase their share in a project's legal capital and hence increase their share in the project's profit and avoid paying high tax. In several cases, those prices are 10-20 percent higher than the world's market prices (MPI 1996; Nguyen Anh Tuan 1996).

Between 1993 and 1995, the examination of 14 FIEs found that 30 percent of imported equipment had prices higher than the market prices by an average 10 percent and in one special case, 20 percent (MPI 1996, p.14). Another investigation of 12 FIEs in 1995 by the Swiss quality control firm, SGS, had also found the transfer pricing problem in 6 FIEs with overpricing of $14 million. On average, the prices had been inflated 1.4 times. A typical example is the BGI Tien Giang Brewery joint venture, where the cost of the project was inflated by $9.1 million (Nguyen Anh Tuan 1995). The price transferring problem occurs also in the technology transfer process. Of the 82 technology transferring contracts that have been approved by Vietnam's authorities, the

final prices that all parties agreed to were half the initial prices offered by foreign investors (MOSTE 1999).

Another problem associated with technology transfer under FDI flows is the importation of old machinery and equipment and, therefore, old technology in some sectors. The importation of second-hand machinery and equipment happened mainly in mineral exploitation, food processing, animal feed production and shoe-making. An examination of 727 equipment and 3 production lines in 42 FIEs has revealed that 60-70 percent of the equipment was second hand, and some of it had been made as long ago as 1929 (MPI 1996; Nguyen Anh Tuan 1996). Some foreign investors even intended to produce detergent with the old technology, using the substance (such as DBSA) that created environmental problems (MOSTE 1999).

The major reasons that lead to the transfer pricing problem and the importation of old equipment and technology are the lack of information, experience and knowledge of Vietnamese partners. As a consequence, they leave foreign partners to decide on the importation of machinery, equipment and technology for the joint ventures. Another reason is the lack of government control over the technology transferring process. While the regulations require that any kind of technology transfer (including transfer of technology, know-how, technical information, training etc.) needs to be done through a technological transferring contract, and is subject to government approval in order to avoid the transfer of inappropriate technology or equipment, in reality this has happened in around only two-thirds of FDI projects. Only 94 contracts have been submitted for approval. The majority of technology transferring activities have been left to depend on the approval of Vietnam and the foreign parties involved (MOSTE 1999). Therefore, in the cases where the foreign investors are not honest and lack government supervision, problems of transfer pricing and importation of old technology and equipment can easily occur.

In short, while technology transferred to Vietnam through FDI flows has been considered as equal to the medium level of technology used in other countries in the region, there are several problems of transfer pricing and the importation of old equipment and technology associated with this transfer process, and these problems have reduced the impact of modern transferred technology.

6.1.3. Government policies and technology transfer.

The relatively modern technology transferred to Vietnam under FDI flows, and the contribution of technology transferred in the manufacturing sector - especially in developing import-substitution industries - have been attributed to the role of government policies in providing a favourable environment for the promotion of technology transfer. Considering FDI flows as an important source of modern technology, know-how and management skill, the government of Vietnam has given tax incentives to projects that include technology transfer. The FDI projects that use advanced technology or invest in research and development will enjoy a profit tax of 20 percent (compared to 25 percent for ordinary projects) and a one year profit tax exemption and 2 years' profit tax deduction of 50 percent after the projects start making profits. For projects that include technology transfer and also belong to the special priority investment list - such as producing new and rare materials, using bio-technology and electronic technology, new technology to produce telecommunication equipment or information technology - the tax exemption period will be increased to four years. Moreover, in order to provide better infrastructure for FDI projects that use modern technology, the government of Vietnam has established high-technology zones and offered tax incentives of 10 percent profit tax and tax exemption of eight years after projects have started making a profit for FDI projects that use modern technology invested in high-technology zones (NPPH 1999).

While promoting the transfer of modern technology and equipment, the government of Vietnam also discourages the transfer of technology that generates detrimental effects on the environment, work safety, people's health, national defence, security and culture.

Realising the potential problem of transfer pricing, the government has required that the value of transferred technology, while still subject to agreement between concerned parties, would not be beyond the following limitations:

- 0-5 percent of the sale price of related products during the technology transfer period, or
- 0-25 percent of the after-tax profit earned from the sale of related products or service during the technology transfer period, or

- 0-8 percent of the total invested capital in the case where technology has been used as the legal capital contribution.
- 20 percent of legal capital in the case where technology has been used as the legal capital contribution and the time for technology transfer would not be longer than 7 years.

(VIR 1998c; NPPH 1999).

Moreover, ten years after of implementing the Law on Foreign Investment in Vietnam, by July 1998 the government of Vietnam had issued the regulation to regulate the technology transfer activities. In order to protect the Vietnamese side from dependence on foreign technology, the Government of Vietnam has also not allowed several restrictive conditions to be imposed in the technology transfer contracts. Those restrictive conditions are:

- Forcing the local partners to buy or accept raw materials, simple working methods or rights to use other industrial property subjects provided by the transferor or any other party appointed by the transferor.
- Forcing the local partners to accept certain norms relating to the production scale and selling price of product.
- Setting out limitations on the consumption and export markets of the local partners.
- Prohibiting the local partners from using the transferred technology after the expiry date of the contract.

(VIR 1998c).

In general, government policies regarding technology transfer under FDI flows have promoted technology transfer by providing tax incentives. On the other hand, realising several problems accompanying technology transfer under FDI flows, the government recently issued a new decree to prevent the transfer of inappropriate technology and equipment, avoiding the problems of transfer price or dependence on foreign technology.

In conclusion, FDI flows to Vietnam since 1988 have brought with them modern technology, contributed to produce new products or improved the quality of existing products and in general, generated higher productivity. Several tax incentives have

been given in order to promote such technology transfer process. However, due to the shortage of knowledge and experience of the Vietnamese partners, several problems such as transfer pricing, importation of old equipment and technology have occurred and required the closer attention of the government.

6.2. Vietnam's Industrialisation Process and Foreign Direct Investment Flows.

This section and following sections will examine how FDI flows have contributed to the industrialisation process in Vietnam and the government's dual industrialisation strategy of promoting the development of both export-oriented-industries and import-substitution industries. In particular, the contribution of FDI flows in making use of the country's comparative advantages to produce export products as well as contributing to the establishment of infant import-substitution industries will be analysed. Moreover, several regression analyses will be used to analyse the impacts of government policies on maximising the contribution of FDI flows.

The industrialisation process in Vietnam started in 1975 when the country was reunited, with the main priority being given to development of heavy industries. This industrialisation process accelerated after the socio-economic reforms of 1986 and more attention has been given to the development of export-oriented industries. As shown in Table 6.5, the share of industrial and service sectors in both Vietnam's gross domestic product (GDP) and total output increased, while the share of agriculture in GDP decreased - from 40.7 percent in 1990 to 23.6 percent in 1998, and from 35 percent to 26 percent in total output for the same period. In particular, the share of industry in GDP increased from 33.2 percent in 1990 to 40.8 percent in 1998. Industry also maintained a high and stable growth rate during the 1990s with an average growth rate of over 11 percent. The service sector, while remaining the largest share in GDP recorded unstable growth rates during the 1990s.

Such an accelerated growth of industrialisation in Vietnam, especially the increasing share of the industrial sector in GDP as well as in total output, has been attributed to the government's dual industrialisation strategy of promoting the development of both export-oriented industries and infant import-substitution industries. The major content of Vietnam's industrialisation strategy that was set out by Vietnam's Communist

Party's 8th Party Congress is to industrialise and modernise Vietnam by "establishing some key industries in the areas of food processing, oil and gas, electronics and informatics, biological technology, manufacturing and producing new material" (NPPH 1996, p.179). Based on this dual industrialisation strategy, priority will be given to developing the following industries:

- Export-oriented industries such as food processing, garments, leather products, electronics that make use of Vietnam's comparative advantages of cheap labour and abundant natural resources.
- Basic industries that will promote and facilitate the development of other industries and create strong export-oriented industries.
- New industries that will maintain Vietnam's comparative advantages in the future such as mechanical and electronic industries, chemical and petrochemical industries.

(Ishikawa 1998a, p.9).

Table 6.5: Vietnam's GDP and Output Structure, 1990 - 1998

(percent)

	1990	1991	1992	1993	1994	1995	1996	1997	1998
GDP structure									
Industry share	18.6	19.3	20.4	21.2	21.9	22.5	23.4	24.5	25.9
Agriculture share	40.7	39.2	38.6	37.1	35.5	26.2	25.1	24.2	23.6
Service share	40.7	41.5	41.0	41.7	42.6	51.3	51.5	51.3	50.5
Output structure									
Industry share	33.2	34.9	36.0	36.4	36.5	35.8	37.1	39.0	40.8
Agriculture share	35.0	34.3	32.7	31.3	28.9	28.5	27.2	26.8	26.0
Service share	31.8	30.8	31.3	32.3	34.6	35.7	35.7	34.2	33.2
Growth rate									
Industrial growth rate	2.5	9.9	14.6	12.1	12.9	13.2	14.2	13.8	12.1
Agricultural growth rate	1.5	2.2	7.3	3.8	3.9	4.4	4.4	4.7	3.4
Service growth rate	10.2	7.6	7.1	10.1	11.1	19.6	9.9	7.8	4.0

Source: GSO 1996, 1999b, c.

Such a dual industrialisation strategy of developing both export-oriented industries and infant import-substitution industries is similar to the industrialisation strategy of Japan, South Korea, and Taiwan in their early stages of industrialisation when the

development of infant import-substitution industries created favourable conditions for the development of export-oriented industries.

The government of Vietnam on the one hand has recognised domestic sources as decisive factors for the success of the industrialisation process, but on the other hand has considered foreign sources, especially FDI flows, as a supplementary source of the investment capital, foreign exchange and modern technology needed for accelerating the industrialisation process. Several government policies have been issued to promote FDI flows to support Vietnam's dual industrialisation strategy. Tax incentives - including low profit tax and tax exemption and deduction - local market protection, and foreign currency balancing support have been given to FDI projects that contribute to the development of either export-oriented industries or import-substitution industries. As a result of those policies, large amounts of FDI have flowed into the industrial sector and contributed significantly to high industrial growth as well as increasing the share of the industrial sector in GDP and total output.

While the data of FIEs' contribution to the industrial share of GDP are not available, the data on the contribution of FIEs to industrial output in Table 6.6 show that FIEs have accounted for an important share in both industrial capital and output. In terms of the share of FIEs in industrial capital, this increased from 41.3 percent of total industrial capital at the beginning of 1995 to 44.7 percent in 1998. Also, the share of FIEs in industrial output increased from 20 percent in 1994 to 31.8 percent in 1998. FIEs achieved high growth rates of over 50 percent in 1995 and over 20 percent for the 1996-1998 period, many times higher than that of SOEs or the private sector.

As FIEs account for about one-third of total industrial output and recorded high growth rate, they have been considered as an important factor in promoting industrial growth and increasing the industrial share in GDP and total output and hence they have contributed significantly to the industrialisation process in Vietnam. The data in Table 6.6 also show that, except for 1996, FIEs accounted for about half of total industrial growth in Vietnam over the 1994-1998 period. In other words, FIEs are the main driving force for industrial growth in Vietnam.

Table 6.6: Structure of Vietnam's Industrial Output and Capital, 1994 - 1998

(percent)

	Capital	Output	Output growth rate	Contribution to growth*
1994 - SOEs	52.8	68.1		
- Private	5.9	11.9		
- FIEs	41.3	20.0		
1995 - SOEs		50.3	-10.8	-7.3
- Private		24.6	14.9	17.8
- FIEs		25.1	51.8	10.3
1996 - SOEs		49.3	11.9	6.0
- Private		24.0	11.5	2.8
- FIEs		26.7	21.7	5.4
1997 - SOEs		48.0	10.8	5.3
- Private		23.1	9.5	2.3
- FIEs		28.9	23.2	6.2
1998 - SOEs	47.5	46.2	7.9	3.8
- Private	7.9	22.0	6.7	1.5
- FIEs	44.7	31.8	23.3	6.7

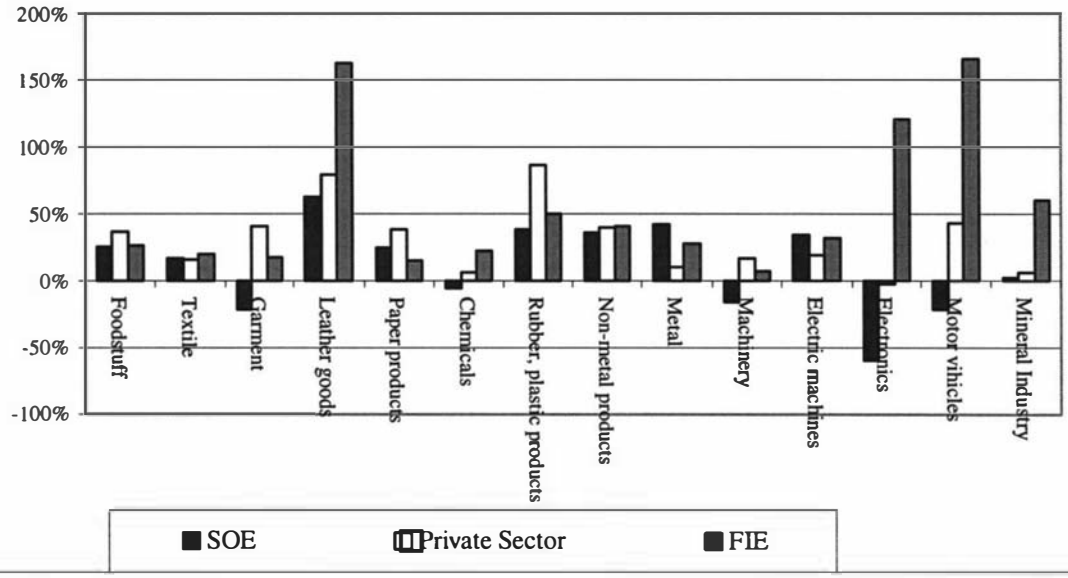
* Calculated based on the formula in Table 5.12.

Source: GSO 1999 b.

Figure 6.1 also shows that in some industrial sectors like minerals, motor vehicles, leather or electronics, FIEs were the major source of growth over 1994-1998 period.

In conclusion, the industrialisation process of promoting the development of both export-oriented industries and infant import-substitution industries accelerated during the 1990s. The share of industry in GDP and in total output increased significantly while the growth rate of industrial output remained at a relatively high level during the 1990s. The FDI flows, through the performance of FIEs, have contributed significantly to such development. The high and stable growth rate of FIEs output has been the major means to achieve higher share of industrial output in the total output as well as a high industrial growth rate.

Figure 6.1: Contribution to Industrial Growth in Major Industries, 1994-1998



Source: GSO 1999 b.

6.3. Foreign Direct Investment Flows and the Development of Export-Oriented Industries.

This section examines the contribution of FDI flows to the development of export-oriented industries and how FDI flows make use of the comparative advantages of Vietnam to produce export products. Moreover, the government policies to attract FDI flows to develop export-oriented industries will be reviewed. A regression analysis will be used to investigate the importance of government policies in creating a favourable environment for the promotion of FIEs' export performance.

6.3.1. Foreign direct investment flows and their contribution to the development of export-oriented industries.

As mentioned in Chapter IV, the exports of Vietnam have increased significantly after the 1986 reforms. One of the main purposes of government reform policy is to attract FDI flows to increase Vietnam's exports and increase the value-added component of these exports by using foreign capital, technology and expertise as well as access to foreign markets to make use of Vietnam's comparative advantages of cheap labour and abundant natural resources.

However, the FDI flows to Vietnam over the 1988-1998 period focused on the industries in which Vietnam has comparative advantages as well as the industries in which Vietnam does not have comparative advantages. Table 6.7 shows the revealed comparative advantages[14] of Vietnam for the 1991-1997 period that have been calculated based on the National Asia Pacific Economic and Scientific database (NAPES)[15] and rearranged to be comparable to the International Standard Industrial Classification (ISIC). The data show the country has a comparative advantage in producing agricultural products such as rice, fish and eggs; mineral products such as crude oil, coal coke briquettes; and processing products such as coffee, tea or garments. On the other hand, Vietnam has not had comparative advantages in producing capital - intensive products such as chemicals, machinery, metal and non-metal products or electric and electronic products. However, the data on both committed and implemented FDI flows show that in general, FDI flows have focused both on industries in which Vietnam has comparative advantages and high cost, capital-intensive and import-substitution industries in which Vietnam has less, or no, comparative advantage.

Table 6.7 shows that of the total FDI commitment in manufacturing and primary sectors during 1988-1998, only 20 percent went to the food, foodstuff, drink and tobacco industries, 6.5 percent to the garment industry, 3 percent to raw material production and 6.6 percent to mineral industries. In contrast, 63.8 percent of committed FDI went to other capital-intensive import-substitution industries. However, the data on implemented FDI show a different trend. Over 51 percent of total implemented FDI during 1988-1998 was channelled to industries that Vietnam has a high revealed comparative advantage such foods, foodstuff, drink and tobacco, textile, garments,

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[14] The revealed comparative advantage (RCA) has been calculated based on the following formula:

$$RCA = (X^k / X) / (X^k_p / X_p)$$

where: X^k is the exports of commodity k from Vietnam to the World.
X is the total exports of Vietnam
X^k_p is the exports of commodity k of the whole World
X_p is total World exports.

[15] As the official data on Vietnam's trade classified by SITIC standard are not available, Vietnam's trade data in this chapter have been compiled from the National Asia Pacific Economic and Scientific database (NAPES) unless otherwise stated.

minerals, and raw materials, and less than 49 percent was channelled to capital-intensive industries. Notably, 24 percent of implemented FDI has gone to the mineral industry, mainly the oil and gas industry.

Though the actual FDI flows to export-oriented industries of Vietnam during 1988-1998 account for only half of the total FDI flows, their contribution to promoting the development of export-oriented industries was significant. As mentioned in chapter V (Table 5.8) the export volume of FIPs increased from a mere $52 million in 1991 to $2.6 billion in 1999 and the share of FIPs' exports in total exports also increased from 2.5 percent in 1991 to 24.2 percent in 1999. Moreover, the growth rate of FIPs exports remains at a high level while the country's export growth rate has fluctuated as a consequence of the regional financial crisis.

While FIPs have generated exports in all sectors, exports generated by FIEs in the mineral and industrial sectors have been the most important, accounting for over 90 percent of the total exports generated by FDI flows (MOT 1999). A closer examination of the export performance of FIEs in mineral and industrial sectors reveals several interesting points.

The share of FIEs output in industries in which Vietnam has a comparative advantage and has exported a large percentage of output also increased rapidly between 1994-1998 (Table 6.8). Except for the oil and gas industry, where FIEs played a dominant role throughout the 1990s, the share of FIEs' output in garments, leather goods, office machines, furniture and mineral industries increased significantly. In the case of the garment industry, Vietnam's most rapid growing export-oriented industry during the 1990s, the share of FIEs output increased from 11.5 percent of total garment output in 1994 to 21.4 percent in 1998. Moreover, the inflows of FDI to capital-intensive industries like electrics and electronics also create new export products that make use of Vietnam's cheap and educated labour. As shown in Table 6.7, the revealed comparative advantage of this industry increased from zero in 1991 to 0.4 percent in 1997.

Table 6.7: Sectoral Revealed Comparative Advantages and Foreign Direct Investment Flows

(percent)

	Revealed Comparative Advantage							Share in total com. FDI 1991-98	Share in total implemented FDI 1991-98	Share in implemented FDI							
	1991	1992	1993	1994	1995	1996	1997			1991	1992	1993	1994	1995	1996	1997	1998
Mineral raw material (incl. crude oil)	4.1	3.5	3.8	3.7	3.2	3.5	3.2	6.6	24.07	47.8	57.2	30.8	38.7	28.2	19.2	10.9	24.4
Raw materials	3.3	1.6	1.9	1.9	1.4	1.5	0.9	3.0	1.82	12.8	2.2	1.4	1.4	1.3	2.0	2.2	1.0
of which: - Eggs	17.8	10.8	9.8	13.7	10.0	9.7	7.0										
- Oil seeds, nuts	13.8	5.0	6.5	7.2	4.3	3.7	1.2										
- Silk	22.0	17.0	13.0	11.0	1.0	2.0	3.0										
- Crude animal	11.6	5.8	5.0	5.9	4.4	4.4	1.9										
- Rice	61.8	44.8	28.9	47.3	29.2	46.6	30.2										
- Fish	18.5	10.5	11.3	12.8	9.7	10.7	10.6										
Food, foodstuffs, drinks, tobacco	1.1	1.1	1.1	2.1	2.3	1.6	1.8	20.1	14.96	4.3	13.0	29.8	10.7	17.1	8.7	17.0	15.7
of which: - Process. fruit	6.3	5.7	7.5	10.4	6.3	5.0	4.4										
- Coffee	8.9	11.7	13.9	26.5	33.0	20.6	19.7										
- Tea	3.7	5.0	5.0	6.6	4.8	6.5	5.5										
- Spices	14.8	13.0	17.0	24.3	20.0	24.5	28.3										
Garments	2.1	3.2	4.4	5.7	5.8	7.8	8.3	6.5	6.62	10.1	4.5	5.5	4.7	7.4	9.3	8.2	1.9
Textiles	0.5	2.6	2.4	0.8	2.2	0.9	0.8	6.3	4.44	0.4	0.6	4.2	1.5	3.1	5.3	8.7	1.1
of which: textile product	3.0	8.6	9.1	4.8	7.8	5.0	4.7										
Leather goods	0.5	0.2	0.2	0.2	0.3	0.7	0.7	0.1	0.06	0.2	0.0	0.0	0.0	0.0	0.0	0.1	0.2

	Revealed Comparative Advantage							Share in total com. FDI 1991-98	Share in total implemented FDI 1991-98	Share in implemented FDI							
	1991	1992	1993	1994	1995	1996	1997			1991	1992	1993	1994	1995	1996	1997	1998
Wood, bamboo, furniture	4.2	2.0	1.9	1.3	1.2	1.0	0.4	0.4	0.59	3.5	2.1	1.2	0.7	1.1	0.3	0.3	0.1
Paper products	0.1	0.2	0.1	0.1	0.2	0.2	0.1	0.6	0.37	0.1	0.7	0.5	0.1	0.3	0.4	0.4	0.4
Coke, oil products	1.3	0.7	0.6	0.6	0.5	0.4	0.5	1.7	0.26	1.0	2.5	0.2	0.1	0.0	0.0	0.2	0.8
of which: Coal coke briq.	9.4	4.8	4.1	4.6	3.4	3.7	3.9										
Chemicals and chemical products	0.0	0.1	0.1	0.0	0.1	0.1	0.1	10.4	7.34	0.9	1.1	3.8	2.0	3.8	11.1	6.6	17.1
Rubber, plastic products	0.0	0.6	0.6	0.1	0.3	0.2	0.2	1.8	1.51	0.9	3.1	1.5	1.1	1.6	1.0	1.7	1.8
Non-metal products	0.4	0.5	0.6	0.6	0.6	0.7	0.7	12.3	10.83	0.4	0.7	8.1	5.8	7.4	16.4	15.8	7.6
of which: Pottery	3.2	3.3	4.4	5.8	5.2	5.9	5.7										
Metal	0.3	1.1	0.8	0.1	0.4	0.1	0.1	0.2	0.23	0.0	0.0	0.0	0.3	0.1	0.0	0.6	0.0
of which: Tin	24.5	27.8	25.7	14.7	12.3	11.0	7.0										
Metal products	0.0	0.7	0.5	0.1	0.3	0.2	0.2	4.1	4.55	0.3	0.0	1.4	7.8	6.7	1.5	4.7	4.8
Machinery and equipment	0.0	0.2	0.1	0.0	0.2	0.1	0.1	8.7	7.48	2.8	4.4	3.3	11.6	6.8	8.6	6.7	6.6
Office machine, computer, calculator	0.0	0.1	0.0	0.0	0.0	0.0	0.0										
Electric and electronic machines and equipment	0.0	0.3	0.2	0.0	0.1	0.1	0.4	8.0	6.58	2.1	1.4	2.3	10.7	5.6	8.0	5.6	6.5
Transport equipment	0.0	0.1	0.2	0.0	0.1	0.0	0.0	7.9	7.37	11.7	6.2	5.7	2.4	8.2	7.7	8.9	8.8
Other manufacture	na	na	na	na	na	na	na	1.3	0.93	0.8	0.3	0.5	0.5	1.3	0.6	1.1	1.3

Source: NAPES database and MPI database.

Table 6.8: Foreign Invested Enterprises' Output Share in Industrial Output, 1994-1998

(percent)

	Export/output ratio - 1997	FIEs output share				
		1994	1995	1996	1997	1998
Manufacturing total	34.6	10.8	18.1	20.1	22.9	25.3
Food, foodstuffs, drinks	37.8	14.0	19.1	20.0	21.0	21.4
Tobacco	0.5	0.4	0.1	0.4	0.8	0.7
Textiles	41.3	11.0	17.3	16.2	20.1	20.2
Garments	93.4	11.5	18.2	15.0	20.5	21.4
Leather goods	81.8	31.8	35.7	41.4	46.1	48.1
Wooden, bamboo,	67.4	10.4	8.7	8.7	10.1	11.4
Paper products	11.5	11.8	15.3	15.2	14.8	14.9
Coke, oil products and nuclear fuel	11.1	10.8	86.6	0.0	0.0	0.0
Chemicals and chemical products	6.3	4.5	14.6	22.2	20.5	21.5
Rubber, plastic products	48.4	4.9	13.8	14.3	18.5	20.0
Non-metal products	3.3	1.2	4.9	6.8	12.5	19.4
Metal	5.5	26.4	29.6	31.9	32.4	30.1
Metal products	9.8	12.0	11.5	18.1	24.9	2.5
Machinery and equipment	14.0	3.1	10.9	6.0	9.1	9.5
Office machines, computers, calculators	99.9	16.7	2.9	79.5	100.0	100.0
Electric machines and equipment	15.1	14.8	13.9	20.4	25.5	25.3
Radio, TV and commun. equipment	40.1	7.3	46.0	59.5	75.2	80.6
Medical instrument, optics and clocks	45.7	19.4	20.6	53.2	35.4	33.8
Motor vehicles	1.9	44.0	70.6	68.9	71.0	73.1
Other transportation means	28.0	15.9	45.0	41.5	33.9	6.0
Furniture and others	67.8	15.7	7.5	16.2	20.0	20.1
Mineral Industry	80.4	77.1	77.8	78.0	77.7	81.4
of which: oil and gas	96.9	93.8	99.7	99.7	99.8	99.8

Source: GSO 1999b, c; NAPES database

Compared to local enterprises, FIEs have achieved a higher ratio of exports over total turnover. For the 1988-1998 period, 528 FDI projects were registered to export part of their output, of which 335 projects exported 80-100 percent of output, 103 projects exported between 50-80 percent of output, and 90 projects exported less than 50 percent of their output (MPI database). The 1998 industrial survey also revealed that in 1997,

FIEs (especially 100 percent foreign-owned enterprises and joint ventures with both the state sector and non-state sector) recorded the highest ratios of exports over turnover of over 70 percent and over 55 percent for joint venture with the state sector (Table 6.9). With foreign connections and access to international markets, FIEs have performed better compared to local enterprises in terms of penetrating foreign markets. At least 40 percent of FIEs have already exported their products, and the number of FIEs classified as unable to export has been very low at around 10-15 percent compared to an average of 62.5 percent for the whole of Vietnam's industrial enterprises.

Table 6.9: Industrial Enterprises' Classification According to Capacity to Export, 1998

(percent)

	Export share of total turnover 1997	Total	Of which		
			Already exported	Potentially to export	Unable to export
Total	37.07	100.0	23.8	13.7	62.5
Central SOEs	9.4	100.0	36.9	24.3	38.8
Local SOEs	42.3	100.0	33.0	14.6	52.4
Co-operatives	21.1	100.0	12.5	6.0	81.5
Private enterprises	28.7	100.0	8.8	11.0	80.2
Limited liabilities	59.6	100.0	38.0	15.5	46.5
Joint stock with government capital	39.5	100.0	36.4	24.2	39.4
Joint stock without government capital	16.3	100.0	40.0	6.7	53.3
100% foreign owned	71.1	100.0	78.6	12.9	8.5
Joint venture with SOEs	55.5	100.0	49.0	34.7	16.3
Joint venture with private enterprises	11.3	100.0	50.0	39.5	10.5
Joint venture with both SOEs and private enterprises	78.7	100.0	40.0	50.0	10.0
Business Co-operation Contract	7.7	100.0	46.7	40.0	13.3

Source: GSO 1999c, pp. 75-76, p. 314.

The export structure of FIEs shows an interesting trend over the 1990-1998 period. Over that period, the labour-intensive export products such as garments, textiles, food, wood and furniture were the major exports of FIEs (Table 6.10). Moreover, the FDI flows

have created new export products of electrical and electronic apparatus and appliances. The exports of new labour-intensive electrical and electronic apparatus and appliances (such as home audio-video equipment, electronic accessories and electrical transformers) increased and their share of total exports of FIEs also increased from zero in 1992 to 41.2 percent in 1998 (Table 6.10) while their ratio of exports over turnover achieved as high as 67.3 percent for the whole 1991-1998 period (MPI database).

Table 6.10: Export Structure of Foreign Invested Enterprises in Manufacturing and Primary Sectors, 1991-1998 (percent)

	Share in total exports of FIEs								
	1991	1992	1993	1994	1995	1996	1997	1998	1991-1998
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Beverage	0.00	0.00	12.40	0.36	0.75	0.13	0.13	0.06	0.84
Textile	0.00	0.00	13.69	9.46	11.16	5.79	4.68	4.59	6.08
Garments	99.14	96.83	19.47	51.30	49.61	41.63	36.51	36.73	38.48
Leather production	0.86	3.17	0.19	0.30	0.23	0.05	0.00	0.00	0.06
Industrial chemical	0.00	0.00	0.80	0.53	0.27	0.71	0.64	0.55	0.59
Other chemical	0.00	0.00	0.95	0.49	0.20	0.08	0.26	0.25	0.26
Rubber production	0.00	0.00	0.72	0.63	0.91	0.44	0.72	0.11	0.46
Plastic production	0.00	0.00	0.82	0.27	0.77	1.02	1.82	0.89	1.13
Fabricated metal	0.00	0.00	10.34	0.45	1.95	0.78	0.45	1.27	1.47
Machinery	0.00	0.00	0.00	0.00	0.16	0.03	0.02	0.02	0.03
Electric apparatus and appliances	0.00	0.00	2.10	1.22	4.58	17.73	35.98	41.18	28.36
Transport equipment	0.00	0.00	3.22	0.80	0.36	0.08	0.44	0.10	0.41
Professional equipment	0.00	0.00	1.93	0.12	0.14	0.72	0.31	0.00	0.34
Other manufacture	0.00	0.00	3.65	2.01	5.18	1.50	2.90	3.81	3.14
Food	0.00	0.00	7.13	12.86	12.23	10.09	10.22	6.76	9.06
Wood-furniture	0.00	0.00	10.20	8.99	6.18	2.66	2.13	1.45	3.06
Paper-printing	0.00	0.00	1.01	2.48	0.24	0.50	0.04	0.04	0.30
Petroleum products	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00
Non-metallic products	0.00	0.00	2.32	0.80	1.38	0.84	1.25	1.20	1.20
Basic metal	0.00	0.00	0.00	0.05	0.11	0.03	0.05	0.00	0.03
Agriculture, forestry and fishery	0.00	0.00	9.02	6.87	3.52	1.43	0.97	0.93	1.95
Mining (except crude oil)	0.00	0.00	0.00	0.00	0.07	13.74	0.49	0.08	2.73

Source: MPI database.

A typical example of these new labour intensive electronic export products is the case of Fujitsu's 100 percent foreign-owned project in Vietnam. Fujitsu has established two factories to produce printed circuit board assemblies for computers since 1995 and has reached an average output of 1.5 million units per year. All Fujitsu's products are exported to its factories around the world, especially in Japan, Thailand and the Philippines. The export volume of the project has increased steadily from $47 million in 1996 to $279 million in 1997, $395 million in 1998 and was expected to have reached $1 billion in 2000 (Nguyen Ngoc Chinh 1999). Another example is the joint-venture between Daewoo and Hanoi Electronics Co. (HANEL) to produce home electronic appliances. The Daewoo-HANEL joint-venture has exported altogether more than 100,000 colour television sets to East Asia and the Middle East. Television picture tubes produced by another joint venture between Orion (a subsidiary of Daewoo) and HANEL have been exported in large quantities. Of the 1.6 million picture tubes produced in 1997, 1 million were exported (UNIDO and DSI 1999, p.139).

Motor vehicles are another new export product of Vietnam thanks to FDI flows. As FDI in producing transportation means, has focused mainly on meeting domestic demand, a small number of locally assembled vehicles have been exported by FIEs. In 1999, Suzuki's joint venture in Vietnam exported the first batch of thirty truck bodies, eight trucks and two Lambros to Myanmar (VIR 1999b).

Most of the foreign investment in Vietnam from Japan and Asian NICs tends to be for export orientation - while foreign investment from the US, Europe and ASEAN countries has focused on the domestic market. Table 6.11 shows that between 1991-1998, the average ratio of exports over turnover of Asian NICs FDI projects was 48.1 percent, 44.8 percent for Japan FDI projects, 14.8 for FDI projects from the European Union and 11.8 percent for ASEAN FDI projects and 9.2 percent for FDI projects from the U.S. and Canada. When the exports of FDI projects have been broken down into sub-sectors, this pattern still remains. Except for the service sector, where the foreign currency earnings mainly come from domestic activities, in manufacturing and primary sub-sectors, Asian NICs and Japan still record the highest ratio of exports over turnover. This high exports ratio of FDI projects from Japan and Asian NICs compared to the low ratio of FDI projects from the U.S. and European Union support the Kojima hypothesis that Japanese FDI tends to be outward and export orientated, focusing on using cheap

labour in developing countries to produce export products. In contrast, FDI from the U.S. and the European Union tends to be inward, capital-intensive and focused on the local market.

Table 6.11: Export Share in Total Turnover of Foreign Invested Projects, 1991-1998 (percent)

	1991	1992	1993	1994	1995	1996	1997	1998	1991-1998
Total	1.28	3.29	33.68	20.19	17.83	30.16	33.20	39.44	30.44
ASEAN	0.00	0.00	18.95	17.49	11.73	12.03	11.78	9.16	11.75
European Union	0.83	1.28	39.03	12.85	11.31	15.58	13.35	16.42	14.82
Japan	23.92	19.90	65.90	25.46	10.50	33.23	53.22	47.72	44.79
North America	0.00	0.00	2.06	0.03	0.06	25.42	16.41	9.19	9.18
Asian NICs	0.16	14.52	75.54	37.95	34.08	47.29	46.52	55.23	48.10
Manufacturing	9.15	12.80	62.26	30.21	25.65	35.81	37.58	41.58	37.28
ASEAN	0.00	0.00	9.69	17.54	13.05	12.88	8.47	7.46	10.40
European Union	6.35	15.14	47.44	22.43	16.64	21.17	13.12	16.92	19.57
Japan	24.15	19.97	70.56	31.33	17.71	35.20	56.14	48.91	48.22
North America	0.00	0.00	2.04	0.03	0.07	0.03	2.02	1.71	1.22
Asian NICs	0.17	18.38	80.18	44.42	39.88	51.48	49.33	58.71	51.63
Service	0.00	0.00	8.79	4.15	2.49	3.47	16.70	15.04	7.95
ASEAN	0.00	0.00	61.79	16.91	6.24	6.75	29.07	24.85	17.89
European Union	0.00	0.00	0.80	0.00	0.82	1.73	12.29	11.40	3.84
Japan	0.00	0.00	3.55	0.00	0.00	0.00	1.06	0.02	0.27
North America	0.00	0.00	0.00	0.00	0.00	80.36	87.16	56.97	65.74
Asian NICs	0.00	0.00	11.40	13.40	8.58	12.62	32.71	9.44	19.16
Primary	0.00	0.00	96.53	57.52	36.92	90.94	48.45	32.96	54.80
ASEAN	0.00	0.00	0.00	0.00	0.00	0.00	46.35	24.52	35.12
European Union	0.00	0.00	0.00	0.00	27.93	17.07	67.47	33.81	44.42
Japan	0.00	0.00	26.98	98.59	99.22	99.32	97.84	95.34	91.88
North America	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Asian NICs	0.00	0.00	99.81	39.45	21.13	41.94	37.43	24.75	43.57

Note: For 1993, due to problems with data collection, the ratio of exports over turnover has been exceptionally high in some cases, and requires caution in explanation.

Source: MPI database.

In conclusion, while only half of actual FDI flows has been channelled to industries in which Vietnam has a comparative advantages, and another half channelled to capital-intensive industries, FDI flows have contributed significantly to promoting the

development of export-oriented industries as FIEs are the major factors behind the increase in output of export-oriented industries, and FIEs have achieved a higher ratio of exports over turnover. Moreover, the FDI flows to import-substitution industries have also created new export products such as electric and electronic apparatus and appliances. Of the FDI projects in Vietnam, Japan and Asian NICs FDI projects are export orientated while the FDI projects from the U.S. and the European Union are inward orientated.

6.3.2. Government policies and the export performance of foreign invested enterprises.

The government of Vietnam has realised the importance and contribution of FIEs in promoting the development of export-oriented industries and has issued many policies and regulations to promote FDI flows as well as provided favourable conditions for FIEs that make use of Vietnam's comparative advantages of cheap labour and natural resources to produce export products. Such policies could be classified into the three following groups:

- Providing incentives to make FDI projects more profitable by offering tax incentives
- Providing a favourable environment to improve the performance of FIEs such as providing better infrastructure and reducing the costs of basic supplies
- Providing a stable macro-economic environment

(MOT 1998).

The government has provided tax incentives to attract FDI flows into export-oriented industries, in order to make use of Vietnam's comparative advantages of cheap labour and natural resources. There are two categories of FIEs that can enjoy government tax incentive. The first category is FIEs that use large amounts of local labour or process agricultural products for export. Of this category, the FIEs that export over 50 percent of output will enjoy a reduced profit tax rate of 20 percent, a tax exemption for one year and a tax deduction of 50 percent for two years after the project starts making a profit. Other FIEs that export over 80 percent of output enjoy a reduced profit tax rate of 15 percent, a tax exemption for two years and a tax deduction of 50 percent for three years after the project starts making a profit. Moreover, FDI projects enjoy an import tax refund on materials imported to produce export products (NPPH 1999).

The second category is for other FIEs. Of this category, FIEs that export less than 50 percent of output will enjoy a reduced profit tax rate of 15 percent, and tax exemption for two years. FIEs that export between 50 percent and 80 percent of output will be given similar incentives, plus an additional two years of 50 percent tax deduction after the project starts making a profit. FIEs that export over 80 percent of output will enjoy a profit tax of 10 percent, two years tax exemption, and two years' tax deduction of 50 percent (NPPH 1999).

In order to provide better infrastructure such as water and energy supply for FDI projects, especially export-oriented projects, the government has established several industrial and export processing zones and offers attractive tax incentives. For FIEs that specialise in producing export products, the profit tax of 10 percent and tax exemption of four years will be given if they invested in industrial and export processing zones. In general, the FDI projects located in industrial zones (IZ) and export processing zones (IPZ) have recorded higher ratios of exports over revenue. In 1998, for example, the FDI projects in IZ and IPZ achieved 52.8 percent of exports over revenue compared to 39.3 percent for all FDI projects (MPI database).

Providing a stable macro-economic environment and a competitive playing field for all enterprises is another set of government policies. Since 1986, the government of Vietnam has maintained relatively stable macro-economic conditions, despite the regional financial crisis. The economy maintained a high growth rate for most of the time during the 1990s while inflation was kept under control. Furthermore, the government adjusted the charges on telephone, water and energy supplies to FIEs in accordance with local enterprises. Moreover, several changes were made in the adjustment of the Law on Foreign Investment in Vietnam in 2000 in order to narrow the gap in treatment provided to local enterprises and FIEs. For instance, the FIEs can for the first time use their rented land for collateral purposes.

Those government policies have created a favourable environment for the exports of FIEs and made them a major factor behind the industrialisation process, promoting the development of export-oriented industries. The regression analysis on the export performance of FIEs has revealed the decisive role of government policies, especially tax incentives and domestic protection policies.

The model

In this regression analysis, the ratio of exports over revenue (ER) has been used to measure the export performance of FIEs. As mentioned in chapter III and previous sections, the export performance of the FIEs in primary (mainly mining) industry and manufacturing sectors has been argued to be influenced by government tax policy, government domestic market protection policies, the share of foreign investors in FIEs' legal capital, the transfer of modern technology and the country of origin of foreign investors.

As mentioned in Chapter III, tax incentives have played a very significant role in attracting FDI flows that focused on export-oriented industries. In fact, tax incentives may become an important determinant for export oriented foreign investment decisions (Well 1986; Gold 1991; Bishop 1997). In the case of Vietnam, tax incentives have been used intensively to attract as well as promote such kinds of FDI flows. The impacts of government tax policy on the export performance of FIEs that have been measured by the ratio of profit and revenue tax over revenue (TAX) are that the lower the tax ratio, the higher the export performance.

Domestic market protection policies (PROTECT) are another government instrument to protect and promote the development of infant import-substitution industries. However, such policies may have adverse impacts on export performance as FIEs may find it is easier to produce for the lucrative protected local market than to export to the competitive international market. Details about domestic market protection policies will be discussed in the following section and in Appendix 8.

The foreign share in legal capital (FOREIGN) may have a positive correlation with export performance as foreign investors have better knowledge of, and access to, the international market and 100 percent foreign-owned projects may be more export-oriented than joint venture and BCC. The technology transfer (TECH) may have either positive or negative impacts on export performance. It will have positive impacts if modern technology has been transferred to produce advanced products for exporting to the international market. However, if foreign investors intend to use cheap local labour to produce labour-intensive export products, then technology transfer will not play a decisive role in FIEs' export performance.

The country of origin of foreign investors (COUNTRY) may influences the export performance of FIEs. As mentioned in chapter II, Kojima has argued that FDI that comes from Asian NICs and Japan tends to be export-oriented, while FDI from the US, the European Union and ASEAN countries tends to be inward-oriented (Kojima 1978; 1991).

Based on those arguments, the export performance of FIEs will be the function of those variables as follow:

$$ER = f\ (PROTECT;\ FOREIGN;\ TAX;\ TECH;\ COUNTRY) \qquad (6.1)$$

ER: Ratio of exports over revenue
PROTECT: Domestic market protection policies
FOREIGN: Foreign share in legal capital
TAX: Ratio of profit and revenue tax over revenue
TECH: Technology transfer
COUNTRY: Country of origin of foreign investors

Data

Data for the regression analysis have been selected for all FIEs in primary and manufacturing sectors in Vietnam, as they account for the majority of exports of foreign-invested projects. The data for the regression analysis come from the MPI's database. Moreover, the regression analysis focuses only on those FIEs with a record of profit or loss, as several FIEs in the survey data have not completed the start-up period.

The data on the ratio of exports over revenue have been available in large numbers only from 1996, and hence the regression analysis is used only for the 1996-1998 period. The analysis covers only three years from 1996 to 1998, and therefore may not yet reflect fully the export performance of FIEs. Moreover, the 1996-1998 period is also the period when committed and implemented FDI flows to Vietnam started to contract, largely as a consequence of the regional financial crisis. However, the regression analysis of the period 1996-1998 still reflects the impact of government policies on the export performance of the majority of FIEs. As FDI flows to Vietnam increased significantly

between 1993 and 1996, a substantial proportion of those investment projects contained in the survey data had been in operation for more than two to three years (Do Quoc Sam 1996).

Data on the ratio of tax over revenue are derived from the ratio of total revenue tax and profit tax over revenues for each project. The government domestic protection policies variable is a dummy variable, which is equal to one for protected products, and zero for unprotected products. The determination of this variable is based on the government's tariff reduction schedule under AFTA, and its Common Effective Preferential Tariff scheme. Products that belong to the general exception list, temporary exclusion list and the products of inclusion list, but which carry a high tariff rate of over 20 percent, will have a value equal to one, while other products on the inclusion list will be zero.

The data on the foreign equity share are based on the percentage contribution of foreign investors in the legal capital of FDI projects. The technology transfer variable is a dummy variable that is equal to one with projects that are registered as having technology transfer, and zero with projects that are not involved in technology transfer. The variable for "country of origin" is also a dummy variable and has been constructed for seven groups of country (or countries), based on the average ratio of exports over revenue for the 1991-1998 period. The country that ranked lowest in terms of exports over revenue will have this variable equivalent to one, and the country that ranked highest is equivalent to seven. On that basis, this variable is equal to: one for FDI projects from the U.S. and Canada, two for FDI projects from Australia and New Zealand, three for FDI projects from ASEAN countries, four for FDI projects from the European Union, five for FDI projects from other countries, six for FDI projects from Japan and seven for FDI projects from Asian NICs.

Results

As there are no strong reasons to assume any other functional forms other than a linear relationship, a simple linear regression analysis is applied. Based on those data, the linear regression analysis has been tried to test the relationship between the export performance of FIEs and those explanatory variables for three years 1996, 1997 and 1998 when the data were available in sufficient number (the data appear in Appendix 4).

The full details of the regression analysis appear in Appendix 4 and the main results of the regression analysis are as follows:

1996

ER96 = - 0.017 – 0.249 PROTECT* + 0.144 FOREIGN - 0.369 TAX***
(0.053) (- 1.9) (1.11) (- 2.85)

- 0.062 TECH + 0.302 COUNTRY**
(-0.48) (2.32)

$\bar{R}^2$ = 0.253 D-W = 2.1 $F_{(5,41)}$ = 4.112*** SE = 0.40 N = 47

1997

ER97 = 0.126 – 0.291 PROTECT*** + 0.088 FOREIGN - 0.195 TAX***
(0.765) (- 4.08) (1.2) (- 2.72)

- 0.087 TECH + 0.227 COUNTRY***
(-1.19) (3.13)

$\bar{R}^2$ = 0.171 D-W = 2.09 $F_{(5,158)}$ = 7.71*** SE = 0.4 N = 164

1998

ER98 = - 0.263* – 0.303 PROTECT*** + 0.269 FOREIGN*** - 0.257 TAX***
(- 1.89) (-5.04) (4.49) (- 4.2)

- 0.175 TECH*** + 0.279 COUNTRY***
(- 2.9) (4.6)

$\bar{R}^2$ = 0.308 D-W = 1.98 $F_{(5,189)}$ = 18.296*** SE = 0.35 N = 195

***, ** and * indicates significant at 1, 5 and 10 percent level respectively. The figures in brackets are t-statistics.

In general, the tax ratio has a statistically significant (at the 1 percent level in 1996, 1997 and 1998) negative correlation with export performance of FIEs. This result means that the government tax incentives have very strong impacts on the export performance of FIEs. The lower the tax rate, the higher the export ratio. This result also supports the government's intensive use of tax incentives as means to attract FDI to develop export-oriented industries.

The domestic market protection policies also have a statistically significant (at the 1 percent level in 1997, 1998 and at the 10 percent level in 1996) negative correlation with the export performance of FIEs. This result implies that the higher the protection of the domestic market, the lower the export ratio of FIEs as they found that producing for the protected domestic market is easier than for the competitive international market.

The technology transfer has a negative correlation with the export performance of FIEs, though this was statistically significant at the 1 percent level only in 1998. This result implies that the production of export products in Vietnam has not yet used modern technology as, in the early stage, FDI flows were mainly involved in simple, labour-intensive and low value-added processing agriculture and light industry's products for exports. While modern technology may not play a decisive role in producing export products in FIEs, the modern machinery and equipment and modern management method have played important roles in the production of FIEs as mentioned in previous sections. Due to the problem of collecting and classifying data on technology transfer, the import of modern machinery and equipment and modern management method have not been always recorded as technology transfer. Hence the result of the regression analysis has not reflected the role of modern machinery and equipment or modern management method in producing export products in FIEs.

The share of foreign contribution in a project's legal capital also has a positive correlation with export performance, though statistically significant at the 1 percent level in 1998. This may imply that the higher the share of foreign investors in projects' legal capital, the higher the export ratio. In other words, 100 percent foreign-owned enterprises may have a higher export ratio than other forms of FDI.

The dummy variable of country of origin of foreign investors also has a statistically significant (at the 1 percent level in 1997 and 1998 and at the 5 percent level in 1996) positive correlation with export performance. Based on the way of determining this dummy variable, the result supports the conclusion that the FDI projects with foreign investors coming from Asian NICs and Japan (which carry the highest dummy value of six and seven) have higher export ratios compared to other FDI projects. Once again, the Kojima hypothesis that Japanese FDI tends to be export-oriented while FDI flows

from U.S. tend to be inward looking has been supported by the empirical evidence of FDI flows in Vietnam.

The correlation matrixes show no multi-collinearity problem between independent variables (Appendix 4) except in 1997 between FOREIGN and TECH. However, the multi-collinearity test latter shows no multi-collinearity problem as condition indices and collinearity statistics are within an acceptable range. Especially, the values of the variance inflation factor (VIF) are low for all independent variables.

The interpretation of this regression analysis must be carried out with care due to the low level of reliability of the data, and FIEs may have inflated their exports revenues in order to enjoy government tax incentives. Moreover, the export performance of FIEs in Vietnam has depended also on several factors that have not been included in this model, such as exchange rate changes in the international market etc. However, the high value of F-statistics for the 3 years 1996-1998 means that those variables do have significant correlation with the export performance of FIEs.

In short, the regression analysis has shown the important role of government policies such as tax policies and domestic market protection policies on the export performance of FIEs. The lower the tax rate, the higher the export performance of FIEs and the higher the domestic market protection, the lower the export performance-and the fact that the FDI flows from Japan and Asian NICs tend to be export-oriented are the major findings of this regression analysis.

In conclusion, the examination of the role of FDI flows in promoting the development of export-oriented industries has found that FDI flows have played an important role in making use of Vietnam's comparative advantages of cheap labour and abundant natural resources to produce export products. The share of FIEs' output in the total output of those products increased significantly between 1994 and 1998. The regression analysis found that government policies, especially tax incentives and domestic market protection policies, have played a decisive role in determining the export performance of FIEs. Other government interventions such as providing better infrastructure or a stable macro-economic environment also contribute to facilitating the export performance of FIEs.

6.4. Foreign Direct Investment and Infant Import-Substitution Industries Development.

Another objective of Vietnam's dual industrialisation strategy is to develop infant import-substitution industries to support the development of export-oriented industries as well as to maintain and create new advantages for Vietnam in the future. This section examines the arguments behind the development of such infant import-substitution industries as well as the contribution of FDI flows to this development process and the role of government policies in promoting FDI flows to support this development process.

6.4.1. The contribution of foreign direct investment flows to the development of infant import-substitution industries.

While the industrialisation process in Vietnam started in 1975 when the country was reunited, the share of import-substitution industries in its industrial output has remained low. Before promulgating the Law on Foreign Investment at the end of 1987, the share in the total industrial output of such import-substitution industries (including fuel, metallurgy, equipment and machinery production, electric and electronic, chemical, rubber and plastic, and metallic production industries) has been as low as 27.6 percent in 1985, 27.8 percent in 1986, 28.1 percent in 1987 and 29.6 percent in 1988 (GSO 1996, p.42). In addition to that low percentage share, the machinery and equipment used in those industries are old and obsolete and hence the contribution of import-substitution industries to the support of export-oriented industries as well as the industrialisation process has been small and insignificant. In other words, Vietnam has almost no infant industries (Ishikawa 1998a, p.7).

The major reasons for promoting the development of infant import-substitution industries is, therefore, to reduce the dependence on imports as well as reduce the trade deficit and promote the development of local industries to meet increasing domestic demand. A typical example is a government plan to promote the development of metallurgy industries in order to meet the increasing domestic demand for steel that stood at 1.3 million in 1996 and is projected to increase to 3.4 million tons in 2005 (Fukui 1998, pp. 38-39).

Another reason to promote the development of infant import-substitution industries is to create strong support industries to facilitate the development of export-oriented industries and create firm foundation from which to move up the ladder of technology. The development of import-substitution industries will, in the long run, generate new comparative advantages, generate higher value added and therefore avoid dependence solely on cheap labour (Ishikawa 1998a, p.15). During the 1990s, the underdevelopment of such import-substitution industries has led to the fact that the export-oriented industries have been developed based on exports of unprocessed or simply processed raw materials, or on a sub-contract basis.

In the case of the garment industry, its export value increased significantly from $67.7 million in 1986 to $1.5 billion in 1997 (GSO 1996, 1999b). But such an increase was based on sub-contracts, where Vietnamese contractors made garments for export using foreign supplies of fabrics, designs and necessary materials. As the textile industry has grown more slowly than the garment industry, the fabrics needed to fulfil sub-contracts have been imported and, as a consequence, the high export earnings of the garment industry have been made at the cost of high imports of fabrics, which increased from 33.2 million metres in 1986 to 414.3 million metres in 1997 (GSO 1996, 1999b; Masuyama and Mitarai 1998, p.27; UNIDO and DSI 1999, p.115). Moreover, the exports of garments based on sub-contract and imported materials have led to a low value-added earning per worker for the garment industry, that stayed at $1,770 in 1998 compared to $7,980 in Malaysia and $15,560 in Singapore (UNIDO and DSI 1999, p.115). This situation has happened also in other industries. Automobile, motorcycle, measurement instrument and electronic industries have to import materials which accounted for 70-95 percent of the products' value (Tran Nguyen Ngoc Anh Thu 1998, p.25; UNIDO and DSI 1999, p.137).

The international economic integration process may be another factor that requires the development of infant import-substitution industries that will create a strong basis for Vietnam's industries to compete with foreign producers when Vietnam removes its tariff and non-tariff barriers as a requirement of joining trading blocs like the ASEAN free trade area (AFTA), the Asian Pacific Economic Co-operation (APEC) or the World Trade Organisation. Based on those arguments, there is the need to develop the infant

import-substitution industries in order to increase the value added and reduce the dependence on imports of materials and machinery.

The infant supportive import-substitution industries in Vietnam are likely to be the following industries:

- Automobile and parts
- Iron and steel
- Oil refining
- Petrochemical
- Urea fertiliser
- Cement

(MPI and JICA 1998).

The promotion of such infant supportive import-substitution industries has been reflected in the list of priority investment projects, where the projects produce import-substitution products which account for a large share of the total industrial priority projects (Appendix 5).

As the development of these import-substitution industries requires large amounts of investment capital and modern technology, FDI flows have been considered as an important source to promote their development. Moreover, FDI is also able to promote the development of such industries within a short period of time before Vietnam starts to reduce its tariff and non-tariff barriers in order to join trading blocs like AFTA. Since FDI started to flow into Vietnam in 1988, FDI has played a very important role in creating whole new infant industries (such as the oil and gas industry, oil refinery industry, automotive industry) or expanding and modernising the existing ones (such as the metallurgy industry, chemical industries and cement industries).

In general, as mentioned in Chapter IV, the volume of FDI committed and implemented in those industries increased over the 1990s until 1997 when the regional crisis led to the reduction in FDI flows to Vietnam. Table 6.12 shows that the contribution of FDI

flows in the total capital stock of infant import-substitution industries[16] in Vietnam increased between 1994 and 1998. The total capital of FIEs in those industries increased from $468 million in 1994 to $3,087.4 million in 1998. The share of FIEs' capital in total capital of those industries also increased from 27.3 percent in 1994 to 57.3 percent in 1998, higher than the share of SOEs and private enterprises in the total capital. Of the $3.7 billion increase in the total capital of those industries between 1994 and 1998, the increase in FIEs' capital accounts for over 70 percent or, in other words, FDI flows were the major source of increasing the capital of infant import-substitution industries in Vietnam between 1994 and 1998. Such increases in capital have led to the increase in the share of FIEs' output in the total output of those infant import-substitution industries, though at a lower magnitude. Between 1994 and 1998, the share of FIEs in the total output of those industries almost doubled, and such increase in FIEs' output has explained 18.6 percent of the total increase in output of those industries. Moreover, the non-metal products industries (especially the cement industry) and radio, television and telecommunication equipment industries have achieved the highest growth rate of output of over 36 and 17 times respectively.

Not only do they generate high growth rates of output, but also FDI flows create whole new industries such as oil and gas industries, petrochemical industries and automotive industries. For the automotive industries, eleven joint ventures with well-known car manufacturers from Japan, Germany, U.S. and Korea have established a whole new industry with the capacity to assemble 83,260 vehicles annually, ranging from small family cars to large trucks (UNIDO and DSI 1999, pp. 165-169). Another example is in the electronics industry, where foreign investment has helped to produce for the first time the made-in-Vietnam computer. The $25 million joint venture between US's Harrison Industries and Vietnamese firms has produced six models of computers "Sai gon 300" based on Harrison Industries' design. With an output of 2,000 units per month, the joint venture is estimated to take 10-20 percent of Vietnam's personal computer market that has previously been dominated by imported products

[16] Those industries are coke, oil products, chemical and chemical products, rubber and plastic products, non-metal products, metal, metal products, machinery and equipment, electric machine and equipment, radio, television and communication equipment and motor vehicle industries.

Table 6.12: Foreign Invested Enterprises' Contribution to Total Industrial Capital and Output, 1994 and 1998

($ million)

	1994 Capital			1994 Output			1998 Capital			1998 Output		
	Total	FIEs	Share	Total	FIEs	Share	Total	FIEs	Share	Total	FIEs	Share
Total	1,711.3	468	27.3	2,229.2	177.4	8.0	5,387.5	3,087.4	57.3	7,176.5	1,096.4	15.3
Coke, oil products and nuclear fuel	15.6	11.2	71.9	148.9	16	10.8	54.4	41.9	77.1	7.8	0	0
Chemicals and chemical products	277.7	42.6	15.4	577.8	26.1	4.5	654	296.2	45.3	710.5	152.9	21.5
Rubber, plastic products	83.6	20.5	24.5	133.1	6.6	4.9	388	186.7	48.1	365.7	73	20
Non-metal products	604.2	89.8	14.9	586.8	6.8	1.2	1,920.4	883.1	46	1,269.3	246.1	19.4
Metal	163.1	71.7	43.9	215.1	56.7	26.4	341.5	174.9	51.2	386.2	116.2	30.1
Metal products	69.3	19.5	28.1	80.8	9.7	12	431.2	319.8	74.2	3,649.4	91	2.5
Machinery and equipment	127.2	17.9	14	145.7	4.6	3.1	279.3	136.4	48.9	156.4	14.9	9.5
Electric machines and equipment	78.4	24.3	31	93.2	13.8	14.8	303	199.7	65.9	172.6	43.6	25.3
Radio, TV & communication equipment	215.1	121.8	56.6	196.1	14.3	7.3	609.8	491.4	80.6	310.2	250.2	80.6
Motor vehicles	77.1	48.7	63.2	51.7	22.8	44	405.9	357.3	88	148.4	108.5	73.1

Note: Exchange rates of VND 10,978 and VND12,938 per $1 have been used to convert data from VND to $ in 1994 and 1997. Outputs are at 1994 constant price

Source: GSO 1999b, c.

from Taiwan and Singapore (Nguyen Ngoc Chinh 1998; UNIDO and DSI 1999, p.141).

FDI flows have also contributed to improvement and extension of the existing production of import-substitution industries. In the iron and steel industry, three joint-ventures have been approved since the mid-1990s and those joint ventures have added 620,000 tons of capacity to existing capacity of 430,000 tons of local SOEs (Fukui 1998, p.39).

The contribution of FDI flows to the development of infant import-substitution industries has also been reflected in the change of Vietnam's specialisation ratio (SR)[17]. The specialisation ratio of Vietnam for the 1991-1997 period has been calculated based on the NAPES database and classified into 15 groups as shown in Table 6.13.

Overall, the specialisation ratio of all industries that have been considered as infant import-substitution industries was improved between 1991 and 1997, except in the cases of coke, oil products and nuclear fuel, and the metal and motor vehicle industries. In the case of electric machinery and the equipment industry, the specialisation ratio was improved significantly from – 0.93 in 1991 to – 0.06 in 1997. In other words, the exports of Vietnam's electric machines and equipment were almost equal to its imports. As FDI flows have contributed significantly in increasing the capital stock as well as to the output of those industries, such improvement of the specialisation ratio has been attributed substantially to FDI flows in Vietnam since 1988.

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[17] The specialisation ratio has been calculated based on the following formula:

$$SR_{g,c} = (EXP_{g,c} - IMP_{g,c}) / (EXP_{g,c} + IMP_{g,c})$$

where:
$SR_{g,c}$: Specialisation ratio
$EXP_{g,c}$: Exports of Vietnam
$IMP_{g,c}$: Imports of Vietnam
g : The product concerned
c: trading partner, in this case is the whole World

The specialisation ratio may change between – 1 and + 1 and when it is equal to + 1, the host country specialises in producing the product concerned and when it is equal to - 1, the host country has not produced sufficiently of the product concerned, and has imported them from overseas to meet domestic demand.

Table 6.13: Vietnam's Specialisation Ratio, 1991-1997

(percent)

	SR91	SR92	SR93	SR94	SR95	SR96	SR97
Paper products	-0.87	-0.68	-0.77	-0.80	-0.65	-0.73	-0.79
Coke, oil products and nuclear fuel	0.49	-0.44	-0.67	-0.73	-0.75	-0.69	-0.71
Chemicals and chemical products	-0.98	-0.96	-0.94	-0.97	-0.89	-0.90	-0.88
Rubber, plastic products	-0.97	-0.38	-0.35	-0.92	-0.67	-0.84	-0.80
Non-metal products	-0.17	-0.09	-0.30	-0.40	-0.44	-0.40	-0.28
Metal	-0.21	-0.05	-0.28	-0.84	-0.50	-0.87	-0.87
Metal products	-0.90	-0.16	-0.41	-0.89	-0.69	-0.83	-0.85
Machinery and equipment	-0.97	-0.77	-0.88	-0.94	-0.77	-0.94	-0.89
Office machine, computer, calculator	-0.79	-0.46	-0.73	-0.91	-0.86	-0.85	-0.76
Electric machines and equipment	-0.93	-0.57	-0.91	-0.96	-0.70	-0.72	-0.06
Radio, TV & communication equipment	-0.99	-0.57	-0.67	-0.96	-0.78	-0.85	-0.65
Medical instrument, optics and clocks	-0.98	-0.63	-0.55	-0.88	-0.74	-0.68	-0.73
Motor vehicles	-0.97	-0.70	-0.79	-0.96	-0.77	-0.99	-0.99
Other transportation means	-0.97	-0.77	-0.53	-0.90	-0.75	-0.98	-0.85
Oil and Gas	1.00	0.51	0.66	0.65	1.00	1.00	1.00

Source: Compiled from NAPES database.

In conclusion, FDI flows have played an important role in promoting the development of infant import-substitution industries by creating whole new industries (such as oil and gas industries, petrochemical industries, automotive industries) or improving and extending the existing industries. Between 1994 and 1998, FDI flows contributed to over 70 percent of the increase in capital of those infant import-substitution industries and 14 percent of the increase in output of those industries. Such small contributions to increasing output may be attributed to the fact that many FIEs had just started their production and had not reached full operation capacity. However, the increase in FIEs output has contributed to the improvement of country's specialisation ratio of infant import-substitution industries, and thus towards both a decrease in its dependence on imports and an increase in its ability to exports.

6.4.2. Government policies and the contribution of foreign direct investment flows to the development of infant import-substitution industries.

The positive and important contribution of FDI flows to the development of infant import-substitution industries in Vietnam since 1988 has been attributed to government policies that provide favourable and attractive conditions for foreign investors to invest in those industries. The government policies to attract FDI flows to those industries can be classified into four groups: domestic protection policies, tax incentives policies, foreign currency balance, and local content requirement.

Domestic market protection for the products produced by infant import-substitution industries is the most important factor necessary to attract FDI flows. The domestic market protection includes high tariffs on imported products, and import licenses and quotas on the products produced by import-substitution industries. The tariff on those products is as high as 200 percent for motor vehicles. Moreover, the general exception and temporary exclusion lists of Vietnam's tariff reduction schedule under the ASEAN Free Trade Area (AFTA) programme have included a majority of products produced by infant import-substitution industries in order to protect them from competition for as long as it is allowed under AFTA. Those products are:

- All kinds of vehicles, motor cycles,
- Bicycles, toys,
- Home appliances,
- Cosmetic products and unessential products,
- All types of fabrics and several types of garments,
- All types of iron and steel,
- General mechanical products.

Those products accounted for over 41 percent of total items in the import tariff list of Vietnam in 1998 (MOF 1998, p.31).

Besides tariff protection, the local market for import-substitution products has also been protected by import quotas and licences. In 1998, for instance, such import quotas were set up for petroleum, fertiliser, cement, construction glass, paper, sugar and steel of

various kinds. Moreover, imports of used consumer goods, used automobiles spare parts, automobiles and motorcycles were banned (IMF 1999, p.61).

A second group of government incentives is tax incentives given to FDI projects to develop infant import-substitution industries. The profit tax of 15 percent applying for 10 years, two years' tax exemption and three years' tax deduction of 50 percent from the time projects start making profit will be given for the FDI projects that invested in the areas of metallurgy, basic chemicals, mechanics, petrochemical, fertiliser, electronic accessories, automotive and motorcycle accessories (NPPH 1999).

The third group relates to government policies of guaranteeing foreign currency balance for FDI projects that produce import substituted products. While ordinary FDI projects should balance the foreign currency needed by themselves, the government will sell foreign currencies to meet the production demand of FDI projects that produce import substituted products belonging to the industries above mentioned.

The fourth group of government policies relates to local content requirements. As mentioned in Chapter IV, local content requirements have been set in the licence of each project (where applicable, especially for the automotive and motorcycle industries). The purpose of local content requirements is to require foreign investors to establish the supportive industries to produce needed accessories locally. Moreover, the profit tax of 20 percent and tax exemption of one year and tax deduction of 50 percent for two years from the time when projects start making profit will be given to projects that produce products with high local content (NPPH 1999). While this achieved some initial results as mentioned in Chapter IV, the establishment of supportive industries, especially in the automotive and electronic industries, has faced several difficulties due to the lack of local capacity and low domestic demand for final products. For the automotive industries, the highest local content has been 5 percent for Daihatsu's joint venture, 2 percent for Toyota and Isuzu joint-ventures and zero for others (UNIDO and DSI 1999, pp. 165-169).

In short, government policies have been designed to attract FDI flows to develop infant import-substitution industries and those policies have generated positive impacts,

though to different extents, to increase the contribution of FDI flows in developing infant import-substitution industries.

6.5. Government Policies and Foreign Invested Enterprises' Performance.

The previous discussion has focused on government policies in promoting FDI flows to develop both export-oriented industries and infant import substitution industries. This section will examine the effectiveness of government policies and how government policies influence the performance of FIEs, by using the cross-section regression analysis to analyse factors that influence the performance of FIEs.

The model

In general, the performance of FIEs has been measured by profit ratio or profit over revenue (PROFIT). The higher the profit ratio, the better the performance of FIEs. Based on the analysis of the factors that explain the FDI flows in Vietnam as well as the government preference policies to attract FDI flows to establish infant import-substitution industries, the performance of FIEs is expected to depend on the tax ratio, domestic market protection policies, the share of foreign contribution in projects' legal capital, the transfer of modern technology, the average wage of local worker and the time for which projects operate in Vietnam.

As the government provides tax preference to attract FDI flows, the tax ratio (TAX) seems to influence the profit ratio in the sense that the higher the tax rate, the lower the profit ratio. The domestic market protection policies (PROTECT), in contrast, protect FIEs from the competition of cheap imported products and hence make their operation more profitable. The more protection (through quota, tariff, local content requirement), the better the performance of FIEs. The share of foreign investors in projects' legal capital (FOREIGN) may have positive impacts for export-oriented industries, but little - or even negative - impacts on the performance of the projects, especially in import-substitution industries, as local partners may have better connections and knowledge about the domestic market. The transfer of technology (TECH) may have positive impacts on FIEs performance if their operation is capital-intensive and focuses on the local market, but no impacts on FIEs that intend to make use of local cheap labour to produce export products. The average wage of local labour (WAGE) will influence the

profit ratio in the sense that the lower the average wage, the higher the profit ratio. The time that the projects operate in Vietnam (YEAR), on the other hand, may influence the profit ratio in the sense that the longer they stay in a market, the better the knowledge of the market and connections they achieve and hence the higher the performance. Based on these arguments, the profit ratio of FIEs will be the function of those variables as follows:

$$PROFIT = f(TAX; PROTECT; FOREIGN; TECH; WAGE; YEAR) \qquad (6.2)$$

PROFIT: Profit ratio
TAX: Ratio of profit and revenue tax over revenue
PROTECT: Domestic market protection policies
FOREIGN: Foreign share in legal capital
TECH: Technology transfer
WAGE: Average wage of local labour
YEAR: The time that the projects operate in Vietnam

Data

The regression analysis is also limited to FDI projects in manufacturing and primary sectors as those government policies and incentives have not provided significant impacts on FDI projects in the service sector. The determination of tax ratio (TAX), domestic protection (PROTECT), the share of foreign investors in projects' legal capital (FOREIGN) and transfer of technology (TECH) is similar as to the formula 6.1 and based on the MPI database. The data on average wages of local workers are based on reports of FIEs and also come from the MPI database. The number of years that FIEs operate in Vietnam has been based on the report of the time when the projects started operating in Vietnam[17]. The determination of profit ratio has been based on the data on profit and revenue recorded in the MPI database. However, such data have been available in sufficient numbers only from 1995 up to 1998 and hence the regression analysis is used only for the 1995-1998 period.

[17] This may not be the time when projects start producing products as it may take several years for several projects to complete the construction period.

Results

As there are no strong reasons to assume any functional forms other than linear relationship, a simple linear regression analysis is applied. Based on those data from the MPI database, the linear regression analysis has been tried for four years 1995, 1996, 1997 and 1998. However, the results of regression analysis for 1995, 1996 and 1997 are inconclusive as the values of adjusted R^2 are close to zero. Only in 1998, the regression analysis has provided conclusive result as the number of observation involved in the regression analysis is the largest and quality of reported data may be better than previous years. The full details of the regression analysis appear in Appendix 6 and the major result of 1998's regression analysis is as follows:

PROFIT = 0.102 + 0.14 PROTECT* - 0.139 FOREIGN** + 0.238 YEAR***
(0.19) (1.9) (- 2) (3.3)
- 0.544 TAX*** - 0.018 TECH – 0.012 WAGE
(- 7.9) (- 0.26) (- 0.18)

$\bar{R}^2 = 0.358$ D-W = 2.0 $F_{(6,132)} = 13.8$*** SE = 1.2 N = 139

***, ** and * indicates significant at the 1, 5 and 10 percent level respectively. The figures in brackets are t-statistics.

The 1998 regression analysis shows that the profit ratio of 139 FIEs where the data are available, depends on government tax incentives, on domestic market protection policies, on the share of foreign investors in projects' legal capital and on the number of years that projects have been operated in Vietnam. The protection of the domestic market has a statistically significant (at the 10 percent level) positive correlation with profit ratios and implies that the higher the protection, the higher the profit. The share of foreign investors in projects' legal capital also has a statistically significant (at the 5 percent level) though negative correlation with profit ratio and implies that the higher the share of local partners, the higher the profit ratio. Another implication is that joint ventures have performed better than 100 percent foreign-owned projects in terms of profit making.

The number of years that projects operate in Vietnam also has a statistically significant (at the 10 percent level) positive correlation with the profit ratio as expected. The longer the time FIEs operate in Vietnam, the better they understand local market and government policies and the higher the profit. This result also explains the poor performance of FIEs in the early stage of their operation. The tax incentives also have a statistically significant (at the 1 percent level) negative correlation with FIEs' profit ratio and this result implies that the higher the tax ratio, the lower the profit. This result also indicates that tax incentives still play an important role in attracting FDI flows, and in the performance of FIEs in Vietnam, at least in 1998. The technology transfer and average wage variables, however, do not have any statistically significant correlation with the profit ratio.

The correlation matrixes show no multi-collinearity problem between independent variables (Appendix 6) except between YEAR and PROTECT. However, the multi-collinearity test latter shows no multi-collinearity problem as condition indices and collinearity statistics are within the acceptable range. Especially, the values of the variance inflation factor (VIF) are low for all independent variables.

The interpretation of the result of this regression analysis, however, must take into consideration the low reliability level of the data, especially the profit data - as FIEs may deflate the profit to avoid paying taxes. Also, there are several macro-economic variables that have been omitted from the regression analysis such as economic growth rate, inflation rate, exchange rate etc..

Compared to the result of regression analysis 6.1, this result shows that while government tax incentives facilitate the export performance and profit making of FIEs, the domestic market protection policies attract FDI flows to import substitution industries but discourage the export performance of FIEs. These contradictory impacts will require the close attention of the government in the coming time.

Nevertheless, the regression analysis on FIEs' performance and profit ratio has proved, at least for 1998, the important role of government policies, especially tax incentives and policies to protect the domestic market in the performance of FIEs. By supporting

the performance of FIEs, government policies have contributed to attracting FDI flows to promote the infant import-substitution industries of Vietnam.

6.6. Conclusion.

This chapter has examined the contribution of FDI flows to the industrialisation process in Vietnam through transferring technology and management skills, and through promoting a dual industrialisation strategy. In terms of technology transfer, FDI flows have brought to Vietnam modern and better technology compared with technology that has been used previously in Vietnam. An examination of several indices showed that FIEs have been more capital-intensive, generating higher productivity compared to local firms. Several government policies have been designed to promote the technology transfer process. However, some accompanying problems such as transfer pricing have occurred during the technological transfer process, and require close government attention.

FDI flows have also promoted industrial growth and increased the share of the industrial sector in the total output. Though only half of FDI flows have been channelled toward export-oriented industries, such FDI has been the major force behind the rapid growth of Vietnam's exports by providing needed capital, modern technology and access to international markets.

About half of FDI flows in Vietnam have focused on promoting the development of infant import-substitution industries and FDI flows have contributed significantly in terms of increasing the capital stock of those industries, creating whole new industries or expanding and modernising the existing industries.

The significant contribution of FDI flows to the industrialisation process in Vietnam has been attributed to the role of government policies such as tax policies and domestic protection policies. Regression analyses found that government tax incentives and protection policies have played a decisive role in the exports and performance of FIEs.

In general, this chapter has shown that FDI flows may generate either positive or detrimental effects during the industrialisation process, and it has really depended on

government policies. In the case of Vietnam, the positive and significant contribution of FDI flows in the industrialisation process, in promoting the development of both export-oriented industries as well as infant import-substitution industries has been attributed to government policies of creating a favourable environment for the operation of FIEs, promoting the positive impacts and minimising the detrimental effects of FDI flows.

CHAPTER VII:
FOREIGN DIRECT INVESTMENT, REGIONAL DEVELOPMENT AND POVERTY ALLEVIATION*

The previous chapters examined the macro-economic impacts of FDI flows in Vietnam and found that FDI flows have had positive impacts on domestic investment, foreign exchange earnings and economic growth. FDI flows have also contributed significantly to the industrialisation process, and promoted the development of export-oriented industries as well as infant, import substitution industries. This chapter will examine the impacts of FDI flows on other aspects of socio-economic development in Vietnam, in particular, regional development and poverty alleviation. It will analyse factors influencing the regional allocation of FDI flows as well as the impacts of FDI flows on the economic growth of each region. In particular, the employment generation effects of FDI flows will be analysed to assess how FDI flows have contributed to Vietnam's success in poverty alleviation during the 1990s.

7.1. Overview of Regional Economic Development in Vietnam.

In general, Vietnam is divided into seven regions based on geographical and socio-economic conditions. Those regions are Red River Delta, Northern Uplands, North Central, Central Coast, Central Highlands, Southeast and the Mekong River Delta (See Map 7.1).

As shown in Table 7.1, Northern Uplands is the largest region and accounts for 31.2 percent of the country's total land area. The Central Highlands and Central Coast are the next largest and account for 16.8 percent and 15.4 percent of the country's total land area respectively. The Red River Delta and Southeast regions are the smallest regions, accounting for 3.8 percent and 7.1 percent of the country's land area respectively.

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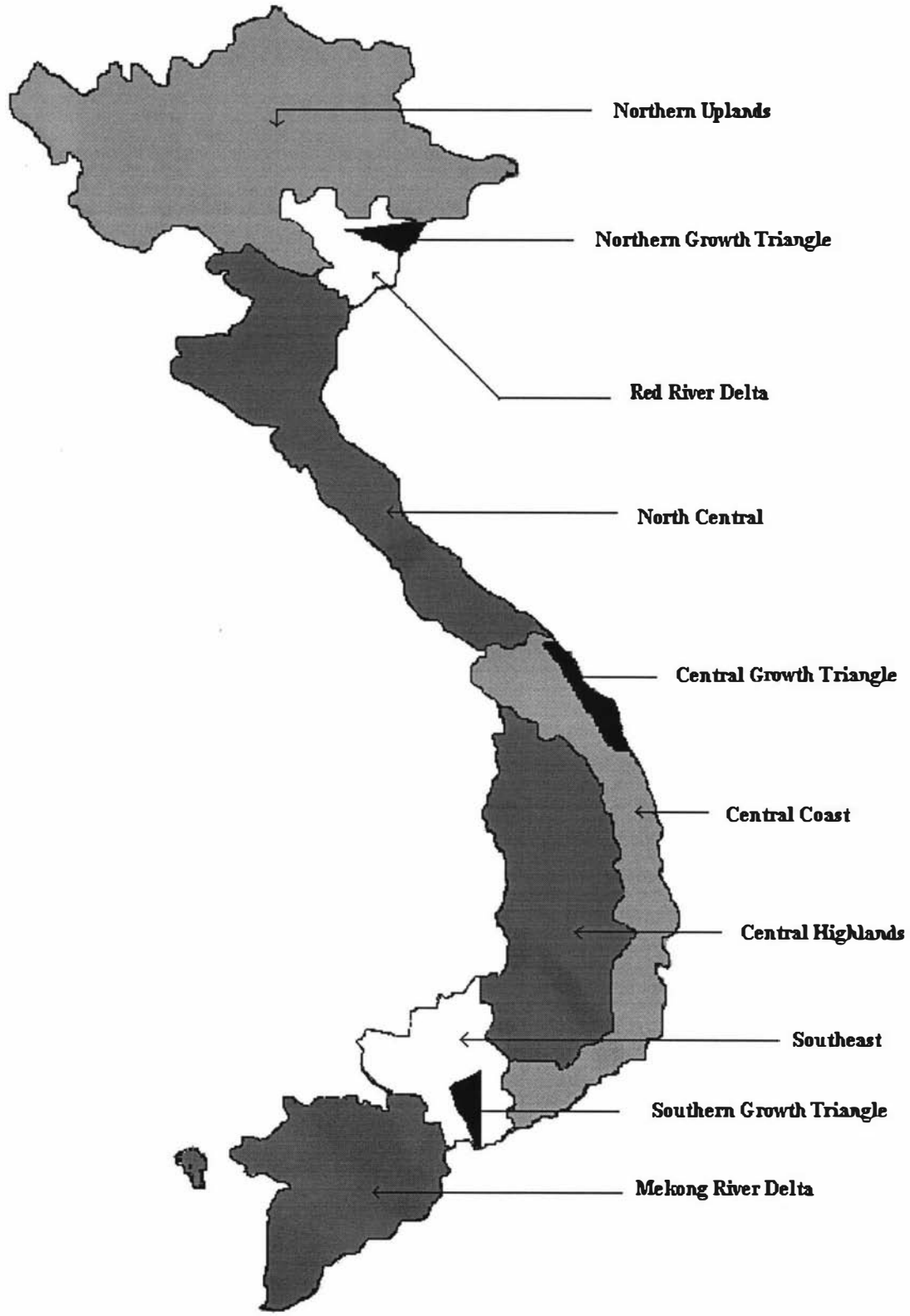
* An article "Regional economic development and foreign direct investment flows in Vietnam 1988-1998", that was written based on this Chapter, has been accepted for publication and will appear in the *Journal of the Asia Pacific Economy,* Vol. 7, No. 2 (forthcoming).

Map 7.1: Vietnam's Regions and Growth Triangles



Source: GOV and WB 1999, p. 15.

However, in terms of population allocation, those two smallest regions, especially the Red River Delta, are the most densely populated areas. Table 7.1 shows that while the Red River Delta and Southeast regions together account for less than 11 percent of the total country's land area, the population share of those regions was over 36 percent of the total population in 1999. In contrast, the Northern Uplands and Central Highlands are the least populated regions, accounting for only 21.1 percent of the country's population - but 48 percent of the country's land area. The Red River Delta region including Ha Noi city, and the Southeast region, including Ho Chi Minh City, are also the most developed regions in Vietnam with better infrastructure. Those regions are the major industrial centres of the country with 20.3 percent and 43 percent respectively of the country's industrial output in 1997. The Central Highlands, on the other hand, is the least industrialised region with industrial output less than 1 percent of the national total in 1997.

Table 7.1: Regions in Vietnam: General Indicators

Region	Industrial share 1997 (%)	Agriculture share 1997 (%)	Service share 1997 (%)	Population share 1999 (%)	Income per capita 1993 ($)	Income per capita 1997 ($)
Red River Delta	20.3	17.7	17.2	19.4	123.2	239.5
Northern Uplands	9.1	10.3	7.1	17.1	96.8	178.2
North Central	4.7	9.2	7.1	13.1	92.2	179.1
Central Coast	6.7	6.0	8.9	8.5	123.6	199.2
Central Highlands	0.9	5.4	2.1	4.0	108.1	195.9
Southeast	43.0	13.7	37.7	16.7	254.4	465.1
Mekong River Delta	15.2	37.8	20.1	21.1	141.6	219.0

Note: Income data are per capita income transferred into $ by using the exchange rates of VND 10,640 and VND 12,938 per $1 for 1993 and 1997 respectively.

Source: GSO 1996, 1999 b, c; GOV and WB 1999b.

Regarding agricultural production, the Mekong River Delta and Red River Delta regions are the two major rice producing areas in Vietnam. Data in Table 7.1 show that the agricultural share of the Mekong Delta region in 1997 was 37.8 percent, and together with the Red River Delta, accounted for 55.5 percent of the total country's agricultural output in 1997. The Southeast, Mekong River Delta and Red River Delta regions also

house the most important service centres in Vietnam as the three largest cities of Ha Noi, Hai Phong and Ho Chi Minh City are also located in those regions. Those regions also accounted for 75 percent of the total country's service output in 1997 (Table 7.1).

In general, the Southeast, Red River Delta and Mekong River Delta regions are the most developed regions in Vietnam, accounting for the largest share of industrial, agriculture and service output. As a result, the living standards in those regions are the highest in Vietnam as shown in Table 7.1. In particular, the annual per capita income of the Southeast region (including Ho Chi Minh City) was more than twice that of other regions.

Recognising the importance of regional development and the need to reduce of inequality between regions, the government of Vietnam has created three economic growth triangles with the aim that the economic growth in those triangles will boost the development in the rest of the country. The location of those growth triangles is depicted in Map 7.1 and those are the Ha Noi-Hai Phong-Quang Ninh growth triangle in the North, Quang Nam-Da Nang in the Centre and Ho Chi Minh City-Bien Hoa-Vung Tau in the South. With the concentration of public investment to improve the infrastructure system in those three growth triangles, the government expects that they will attract large amount of domestic and foreign investment, achieve rapid growth and hence generate significant trickle-down effects to promote economic development in surrounding areas (Mundle and Arkadie 1997, p.15).

7.2. Foreign Direct Investment Flows and Regional Development.

This following section examines the regional allocation of FDI flows over the 1988-1998 period, and the related government policies as well as other factors that influence the regional allocation of FDI flows, and the impacts of FDI flows on regional economic development.

7.2.1. Regional allocation of foreign direct investment flows and government policies.

The pattern of regional and provincial allocation of FDI flows in Vietnam depended very much on the differences in the level of development and geographical conditions

between regions and provinces over the 1988-1998 period. The more developed regions and provinces attracted very large amounts of both committed FDI and implemented FDI. The data[18] in Table 7.2 show that over the 1988-1998 period, the Southeast region and Red River Delta region accounted for 82.4 percent of total FDI commitment. Ha Noi, Hai Phong and Ho Chi Minh cities together accounted for 54.7 percent of committed FDI flows. The other five regions received less than 20 percent of total committed FDI flows. The Central Highlands, for example, received only 0.2 percent of total committed FDI flows. In terms of implemented FDI flows, Red River Delta and the Southeast regions, especially Ha Noi, Hai Phong and Ho Chi Minh cities, have also been major destinations of FDI flows, and accounted for 83.4 percent and 55.9 percent of total implemented FDI flows respectively. Ho Chi Minh City and four other surrounding provinces in the Southeast region accounted for almost half of the total committed and implemented FDI flows in Vietnam over the 1988-1998 period.

Table 7.2: Provincial Allocation of Foreign Direct Investment in Vietnam, 1988 - 1998

(percent)

	Committed FDI							Implemented FDI
	1988-98	1988- 93	1994	1995	1996	1997	1998	1991-98
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**
Red River Delta	**30.0**	**30.5**	**35.6**	**22.8**	**37.7**	**26.3**	**12.6**	**32.8**
Ha Noi	22.2	22.1	24.8	15.3	29.9	17.4	11.8	22.3
Hai Phong	4.3	7.3	7.8	2.1	1.7	7.2	0.2	6.8
Ha Tay	1.4	0.5	2.4	1.0	2.7	0.5	0.3	1.8
Hai Hung	1.7	0.3	0.2	3.3	3.4	0.8	0.3	1.5
Three other provinces	0.4	0.2	0.5	1.0	0.1	0.5	0.0	0.3
Northern Uplands	**4.7**	**0.8**	**2.5**	**4.6**	**6.4**	**8.2**	**0.6**	**3.8**
Quang Ninh	2.5	0.2	1.5	0.5	4.2	6.3	0.0	0.8
Vinh Phu	1.2	0.2	0.5	2.0	2.0	1.4	0.0	1.9
Ha Bac	0.4	0.0	0.4	1.8	0.0	0.1	0.0	0.9
Ten other provinces	0.5	0.4	0.2	0.3	0.2	0.4	0.6	0.2

Note: The data do not include FDI flows to the oil and gas industries.

Source: GSO 1995; 1996a; 1997; 1998a; 1999a and MPI database.

[18] The data on regional allocation of FDI flows over 1988-1998 period do not include FDI flows to the oil and gas industry.

Table 7.2: Provincial Allocation of Foreign Direct Investment in Vietnam 1988 – 1998 (continued) (percent)

	Committed FDI							Implemented FDI 1991-98
	1988-98	1988- 93	1994	1995	1996	1997	1998	
North Central	**2.5**	**0.9**	**3.2**	**5.2**	**1.0**	**3.4**	**0.4**	**3.4**
Thanh Hoa	1.2	0.1	1.7	5.2	0.0	0.0	0.0	1.9
Nghe An	0.6	0.1	0.0	0.0	0.9	2.7	0.0	0.3
Thua Thien-Hue	0.4	0.5	1.0	0.0	0.1	0.7	0.1	1.0
Three other provinces	0.2	0.2	0.4	0.0	0.0	0.0	0.3	0.2
Central Coast	**7.8**	**4.2**	**4.1**	**4.8**	**3.9**	**4.4**	**29.5**	**3.4**
Quang Nam-Da Nang	3.0	3.3	2.4	4.1	2.2	3.9	0.7	1.8
Quang Ngai	3.9	0.0	0.1	0.0	0.0	0.1	28.2	0.0
Three other provinces	1.0	0.9	1.5	0.7	1.7	0.4	0.5	1.6
Central Highlands	**0.2**	**0.1**	**0.1**	**0.2**	**0.0**	**0.6**	**0.2**	**0.3**
Kontum	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Gia Lai	0.1	0.0	0.1	0.0	0.0	0.6	0.0	0.2
Dac Lac	0.1	0.1	0.0	0.2	0.0	0.0	0.2	0.2
Southeast	**52.4**	**57.1**	**42.1**	**58.3**	**47.1**	**51.9**	**38.2**	**50.6**
Ho Chi Minh City	28.2	41.6	23.9	28.4	24.4	23.2	14.8	26.8
Song Be	4.1	1.1	6.3	1.9	5.5	5.7	4.4	5.5
Tay Ninh	0.6	0.1	0.1	2.2	0.3	0.1	0.1	0.8
Dong Nai	9.9	9.7	9.0	17.5	6.1	10.8	2.5	13.8
Ba Ria-Vung Tau	6.7	3.6	2.3	7.6	10.6	10.2	0.4	2.8
Three other provinces	2.9	1.1	0.6	0.6	0.2	1.8	15.9	0.9
Mekong River Delta	**2.5**	**2.5**	**8.0**	**1.0**	**1.1**	**2.0**	**1.2**	**5.6**
Can Tho	0.4	0.4	0.8	0.2	0.0	1.1	0.3	0.3
Long An	0.7	0.5	1.2	0.6	0.5	0.7	0.8	1.4
Kien Giang	0.7	0.6	4.7	0.0	0.0	0.1	0.0	3.2
Eight other provinces	0.6	1.1	1.3	0.3	0.6	0.1	0.0	0.8

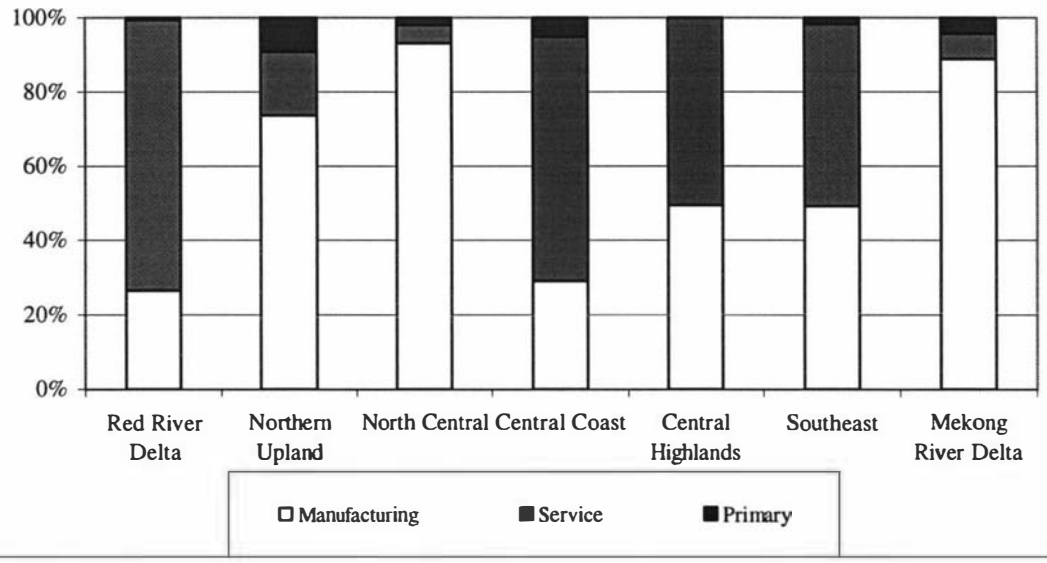
Note: The data do not include FDI flows to the oil and gas industries.
Source: GSO 1995; 1996a; 1997; 1998a; 1999a and MPI database.

Regarding the sectoral allocation of FDI flows, the Southeast and the Red River Delta regions have accounted for over 73 percent of committed and implemented FDI flows in the manufacturing sector, 89.1 percent of committed FDI flows and 96.4 percent of

implemented FDI flows in the service sector and over 50 percent of those in the primary sector (MPI database).

The structure of FDI flows within each region also reflects the development level of that region's economy. Figure 7.1 shows that, except for the Central Highlands, the FDI flows to the service sector have been relatively high in more developed regions. For the Red River Delta, Central Coast and Southeast regions (that include three economic growth triangles), the committed FDI flows into the service sector have been higher than those for the manufacturing and primary sectors (equal only to committed FDI flows in the manufacturing sector in the case of the Southeast region).

Figure 7.1: Structure of Committed Foreign Direct Investment 1988-1998



Note: The figure does not include FDI flows to oil and gas industries.

Source: MPI database

The large share of committed FDI flows in the service sector in three regions reflects the need to develop hotel and office building and the financial and banking services as well as other business and personal services of those regions. The high concentration of FDI flows into service sectors in those regions also shows the trend that the biggest cities of those regions such as Ha Noi, Ho Chi Minh City and Da Nang are on the way to becoming the country's key service centres.

Regarding the trend in regional allocation of FDI flows over the 1988-1998 period, the data in Table 7.2 and Table 7.3 show that in general, FDI flows have gradually diffused from the most developed regions of Red River Delta and Southeast regions to less developed regions, and from a few large cities to surrounding provinces.

Table 7.3: Regional Allocation of Foreign Direct Investment, 1988-1998

(percent)

	Red River Delta		Northern Uplands		North Central		Central Coast		Central Highlands		Southeast		Mekong River Delta	
	Com	Imp	Com	Imp	Com	Imp	Com	Imp	Com	Imp	Com	Imp	Com	Imp
1988-90	44.3	na	0.11	na	0.00	na	0.5	na	0.00	na	54.4	na	0.68	na
1991	14.5	21.1	1.81	0.3	0.5	0.0	1.3	0.8	0.00	0.0	79.1	73.0	2.8	4.8
1992	41.2	36.2	0.05	0.2	5.3	0.1	5.3	0.4	0.00	0.0	44.5	60.3	3.7	2.8
1993	28.0	32.7	1.73	2.5	0.5	1.2	1.7	1.3	0.00	0.0	66.4	58.6	1.7	3.7
1994	35.6	36.1	2.5	1.9	3.2	4.1	4.1	2.3	0.1	0.0	42.1	52.9	8.0	2.8
1995	22.8	41.1	4.6	3.3	5.2	2.9	4.8	2.9	0.2	0.3	58.3	44.5	1.0	5.0
1996	37.7	36.1	6.4	4.8	1.0	2.2	3.9	4.2	0.00	0.2	47.1	47.8	1.1	4.7
1997	26.3	28.0	8.2	3.7	3.4	2.9	4.4	2.7	0.6	0.7	51.9	52.1	2.0	9.9
1998	12.6	25.0	0.6	6.9	0.4	8.2	29.5	7.5	0.2	0.2	38.2	48.8	1.2	3.5

Note: - The data do not include FDI flows to oil and gas industries.

- Com and Imp are committed and implemented FDI flows respectively.

- The implementation data are for 1991-1998 period.

Source: MPI database

From 1988 to 1993, over 85 percent of committed FDI flows and over 90 percent of implemented FDI flows were concentrated in the Red River Delta and Southeast regions, especially the two largest cities of Ha Noi and Ho Chi Minh City. However, since 1994, the FDI flows have gradually moved to other regions, especially the Northern Uplands and Central Coast regions. In 1998, those two regions accounted for over 30 percent of committed FDI flows and 14.4 percent of implemented FDI flows. In contrast, the share of committed FDI in the Ha Noi, Hai Phong and Ho Chi Minh cities in the country's committed FDI also reduced from 71 percent for the 1988-1993 period to 26.8 percent in 1998. The large jump of FDI in the Central Coast region in 1998, however, is attributed to the approval of Vietnam's first oil refinery plant located in the Central Coast region with total investment capital of $1.3 billion. FDI flows also moved to other regions, though at a slower pace. The three other regions of North Central,

Central Highlands and Mekong River Delta accounted for just 1.8 percent of committed FDI flows and 11.9 percent of implemented FDI flows in 1998.

Such diffusion of FDI flows, especially from the Southeast region toward the Northern part of the country, has been attributed to the following reasons:

- Increasing costs in the South such as increasing labour costs and property prices.
- Energy shortage in the South and surplus in the North.
- Improvement of infrastructure in the North.

(Gates and Truong 1994, pp. 16-19; Nestor 1997, pp. 188-189).

In terms of countries of origin, Table 7.4 shows that each group of foreign investors has its own regional focus. In general, the Southeast region has been the most popular destination for investment from foreign investors from Asian NICs, North America, Japan and the EU. The Red River Delta region, on the other hand, has accounted for over 4.6 percent of FDI flows from Australia and New Zealand, and over 42.9 percent of FDI flows from the Association of Southeast Asian nations (ASEAN). While only 21.1 percent of FDI from Asian newly industrialising countries (NICs) has been allocated in the Red River Delta region, about 32 percent of FDI from South Korea has been channelled to this region as South Korean investors have shifted their focus toward Ha Noi and Hai Phong cities with the intention of getting closer to policy making authorities (Nestor 1997, p.192).

In short, FDI flows in Vietnam have first concentrated in the more developed Red River Delta and Southeast regions that also include the two biggest cities of Ha Noi and Ho Chi Minh City and later diffused to other regions in the North and Central parts of the country, though at a slow pace. The high concentration of FDI flows in those two regions also coincides with government regional development strategy of developing three economic growth triangles.

Recognising the inequality of FDI flows between regions in Vietnam, the government has provided tax incentives in order to attract FDI flows to remote, mountainous regions or regions with difficult natural, economic and social conditions. The Law on Foreign Direct Investment in Vietnam has provided two sets of tax incentives for FDI projects in

mountainous and remote areas or areas with difficult natural, economic and social conditions.

Table 7.4: Regional Allocation of Committed Foreign Direct Investment Flows Classified by Countries of Origin, 1988-1998

(percent)

	Red River Delta	Northern Uplands	North Central	Central Coast	Central Highlands	South -east	Mekong River Delta
TOTAL	100.0	100.0	100.0	100.0	100.0	100.0	100.0
ASEAN	42.9	20.0	0.0	4.8	4.5	22.6	9.6
Europe	12.8	0.8	49.2	3.2	71.6	14.2	45.4
Japan	9.6	25.1	0.5	1.4	0.0	9.6	1.6
North America	1.5	2.2	0.5	6.9	23.8	3.8	2.0
Asian NICs	21.1	47.6	11.5	15.0	0.0	39.2	33.6
Australia & New Zealand	4.6	2.2	0.0	2.6	0.0	0.6	4.9
Others	7.6	2.0	38.4	66.2	0.0	10.0	2.8

Note: The data do not include FDI flows to oil and gas industries.

Source: MPI database.

A profit tax rate of 10 percent will be given to FDI projects investing to establish infrastructure in areas with difficult natural, economic and social conditions or FDI projects located in mountainous and remote areas (NPPH 1999). Those projects will enjoy a profit tax exemption of four years and profit tax deduction of 50 percent for four years after the project starts making a profit. The list of mountainous and remote areas determined by the government includes almost all provinces of the Northern Uplands, North Central and Central Coast regions, and all provinces of the Central Highlands and Mekong River Delta regions. Moreover, the profit tax exemption of eight years will be given to FDI projects that are involved in infrastructure development and afforestation in mountainous and remote areas (NPPH 1999, pp. 47-50; pp. 289-293).

A profit tax rate of 15 percent will be given to FDI projects located in areas with difficult natural, economic and social conditions. In addition, these projects will enjoy two years of profit tax exemption and three years' profit tax deduction of 50 percent

after the project starts making a profit. The list of difficult areas determined by the government includes several areas that do not belong to the list of mountainous and remote areas mentioned above, and several difficult areas are located within the more developed Red River Delta and Southeast regions (NPPH 1999, pp. 47-50; pp. 289-293).

Despite government tax incentives, FDI flows have not rapidly diffused to less developed regions and provinces and by 1998, several provinces in less developed regions had recorded a very low or even zero share of committed and implemented FDI flows, especially the provinces in mountainous and remote areas. Quang Tri province in the Central Coast, Kon Tum province in the Central Highlands, and Bac Kan provinces in the Northern Uplands received no FDI project, while Ha Giang and Cao Bang provinces in Northern Uplands hosted only one FDI project each over the 1988-1998 period. In terms of implemented FDI, the number of provinces without FDI flows increased to 5. In general, FDI flows have mainly concentrated in more developed regions and large cities where the infrastructure conditions are better than in other regions. This conclusion is supported by a regression analysis below.

7.2.2. Factors influencing the provincial allocation of foreign direct investment flows in Vietnam.

The heavy concentration of FDI flows in more developed provinces and large cities is not unique to Vietnam but is also evident in several developing countries in Asia, Latin America and Eastern Europe. This section will use the regression analysis to analyse how those factors influenced the allocation of FDI flows between provinces in Vietnam over the 1988-1998 period.

The model

Several theories about the motivation for FDI flows have been discussed in chapter II and those theories also create the foundation for extensive research on factors that influence the regional allocation of FDI flows within and between countries (Scaperlanda and Mauer 1969; Glickman and Woodward 1988; Hill and Munday 1991; Balcet 1997; Lecraw 1991; Wheeler and Mody 1992; Hill and Munday 1992; Friedman et al. 1992; Lucas 1993; Hennart and Park 1994; Lorre and Guisinger 1995; Buckley 1997; Mayer and Mucchielli 1998; Billington 1999; Coughlin and Segev 2000). Those

researchers identify several factors that influence the regional allocation of FDI flows including market characteristics, government investment incentives, infrastructure and labour force.

Market characteristics, or market size and growth in market size, have been found to influence the FDI flows, especially inward-oriented FDI, in the sense that the larger the market size and the higher its growth rate, the larger the FDI flows. Several empirical studies have used income and income growth to represent market size and its growth and generally found income and income growth have statistically significant positive effects on FDI flows at both country and regional levels, for both developed and developing countries (Lecraw 1991; Wheeler and Mody 1992; Friedman et al. 1992; Hennart and Park 1994; Buckley 1997; Mayer and Mucchielli 1998; Billington 1999; Coughlin and Segev 2000). However, Lucas (1993, p.402) has found a "weak positive correlation" between size of domestic consumption spending and FDI flows in seven East and Southeast Asian countries - but FDI flows in those countries have been "somewhat responsive to incomes in major export markets". This reflects the domination of the outward-oriented nature of FDI flows in those countries.

Government investment incentives such as tax concessions, subsidies or tariff concessions are designed to attract FDI flows to host countries or focus FDI flows on targeted regions within a country. Several empirical studies have been carried out on investigating the influences of government incentives on regional allocation of FDI flows. Hill and Munday (1991, 1992) found that Regional Preferential Assistance had beneficial effects on FDI flows in the United Kingdom, while Friedman et al. (1992) also found that government promotion activities have influenced FDI flows to several states in the U.S.

A large number of empirical studies has focused on the effectiveness of tax rates, especially corporate tax rates, on FDI flows. In order to maximise the marginal risk-adjust after-tax return, foreign investors may choose to invest in countries or regions with the lowest tax rates (Lorre and Guisinger 1995). In the studies by Friedman, Gerlowski and Silberman (1992), Lorre and Guisinger (1995), Mayer and Mucchielli (1998) and Billington (1999), tax rates have been found to be an important determinant

of FDI flows in the US, United Kingdom, U.S. investment abroad or Japanese FDI in Europe.

Infrastructure is another factor that influences the allocation of FDI flows between and within countries. The general perception is that the better the infrastructure, the higher the level of FDI flows. However, the extent that infrastructure influences FDI flows depends on the special requirements of the industries in which inward-oriented FDI might be "more concerned" with infrastructure than outward-oriented FDI (Lorre and Guisinger 1995, pp. 296-298). Several factors have been used in empirical studies as a proxy of infrastructure to examine the influence of infrastructure on FDI flows, including kilometres of paved highways per capita, number of telephones and expenditure on road transport. Those studies have found that infrastructure plays a decisive role in attracting FDI flows in either developed or developing countries (Glickman and Woodward 1988; Leung 1990; Hill and Munday 1991, 1992; Wheeler and Mody 1992; Murphy 1992; Lorre and Guisinger 1995; Buckwalter 1995; Mucchielli 1998; Mayer and Billington 1999).

For developing countries, infrastructure is probably the most important determinant of FDI flows. As Wheeler and Mody (1992, p.71) found agglomeration benefits determine U.S. investors' location decisions and among "agglomeration-related factors, infrastructure quality clearly dominates for developing economies". Several studies have found that major cities in many developing countries in Asia, Latin America and Eastern Europe with better infrastructure receive very large shares of total FDI flows (Leung 1990; Murphy 1992; Buckwalter 1995).

Labour force is also a very important determinant that may sway the investment location decisions of foreign investors as one of the major motivations of foreign investors to invest abroad is to look for a cheap labour force, especially in developing countries. The costs and the availability and productivity of labour are the main factors that influence the pattern of regional allocation of FDI. Several empirical studies have found that the lower the labour costs, the higher the FDI flows in both developed and developing countries (Glickman and Woodward 1988; Lecraw 1991; Friedman et al. 1992; Mayer and Mucchielli 1998; Billington 1999; Coughlin and Segev 2000). Besides the costs of labour, productivity is another factor that may offset the high labour cost in

attracting inward FDI flows as foreign investors look for not only cheap but also skilled labour. Productivity has been found to have a statistically significant positive correlation with FDI flows in the empirical studies by Friedman, Gerlowski and Silberman (1992) and Coughlin and Segev (2000), while Hill and Munday (1991) found labour cost per unit of labour has been negatively correlated with FDI. The availability of the labour force also influences patterns of regional allocation of FDI flows in the sense that "the more labour available locally, the more attractive the area is to foreign investors" (Billington 1999, p.66). Friedman, Gerlowski and Silberman (1992) have found that unemployment rates (proxy of labour availability) have a positive correlation with FDI flows in the case of FDI in the U.S.

In short, government investment incentives, market characteristics, labour force and infrastructure have been identified as major factors influencing the regional allocation of FDI flows within and between developed and developing countries.

In the case of Vietnam, the heavy concentration of FDI flows in the cities and provinces of the more developed Red River Delta and Southeast regions may also be attributed to the factors mentioned above, especially differences between provinces in terms of infrastructure conditions, a cheap and relatively well-educated labour force, fast growing local market and local economy, and government investment incentives.

The following section will use regression analysis to analyse how the level of infrastructure of each province, the size of the provincial market, the quality of the labour force of each province and the government incentives policy, influenced the allocation of FDI flows between provinces in Vietnam over the 1988-1998 period.

In this regression analysis, the dependent variable will be the provincial allocation of committed FDI flows for the 1988-1998 period and the provincial allocation of implemented FDI flows for the 1991-1998 period (FDI) classified for 53 provinces[19].

[19] Since 1996, the number of provinces in Vietnam has been 61. However, as the statistical data for the 1988-1998 period have been collected based on the old administrative system of 53 provinces, the data for this regression analysis has been based on 53 provinces.

The first factor that influences the pattern of provincial allocation of FDI flows in Vietnam is the development of infrastructure. As far as infrastructure conditions are concerned, the level of infrastructure development has varied significantly between provinces in Vietnam. Transport conditions, energy and water supplies and telecommunications have been more developed in Ha Noi and Ho Chi Minh City as well as in provinces in the Red River Delta and Southeast regions compared to other regions and provinces, especially provinces in the Central Highlands and Mekong River Delta. The government policy of promoting the development of the three economic growth triangles has also led to a heavy concentration of public investment to improve infrastructure conditions in those already developed regions. Table 7.5 shows that during the 1996-1998 period, 62.5 percent of total public expenditure was directed to those regions while the Northern Uplands and Central Highlands regions together received only 13 percent of total public expenditure.

Table 7.5: Regional Distribution of Public Expenditure, 1996-1998

(percent)

Red River Delta	Northern Uplands	North Central	Central Coast	Central Highlands	Southeast	Mekong River Delta
24.6	8.0	9.5	11.5	5.1	26.3	15.0

Source: Table 4.2 in WB 1998, p.61.

In the present study, the independent variable that represents the development level of infrastructure in each province will be the average telephones per capita (TEL), as statistics on the level of transport, energy and water supplies for the 1988-1998 period by province are not available. As the FDI flows may depend on the development level of infrastructure, it has been argued that the higher the number of telephones per capita, the higher the level of infrastructure and hence the higher the level of FDI flows.

The second factor is the cheap but relatively well-educated, labour force of Vietnam. As mentioned in chapter IV, Vietnam's income per capita has been among the lowest level of developing countries in Asia, but Vietnam's literacy and other social indicators are similar to those of lower middle income countries. The local labour force will be represented by two independent variables: the income per capita (INC) and the number of middle secondary school pupils per capita (PUP).

The income per capita of each province (INC) has been considered as the proxy of level of wage rate in Vietnam as the use of the wage rate in a particular industry will not correctly represent the nature of the cost of the labour force in Vietnam. In this sense, the lower the income per capita, the higher the FDI flows.

The variable of the number of middle secondary school pupils per capita of each province (PUP) represents the quality of the labour force, as workers who completed the middle secondary school will more easily understand new technology and be able to better participate in industrial production. Moreover, the selection of the number of middle secondary school pupils instead of the literacy rate is due to the fact that Vietnam has attained a very high and equal literacy rate among regions and provinces. Only the number of middle secondary school pupils will clearly show the difference in the quality of the labour force among regions and provinces. It has been expected that FDI flows will be concentrated in provinces that have a higher quality labour force.

The third factor that may influence the regional allocation of FDI flows is the local market and its purchasing power. Chapter V has identified the fact that over the 1988-1998 period, large amounts of FDI flows were channelled to several projects producing consumer products to meet increasing domestic demands. The income per capita variable (INC) also represents, to some extent, the capacity of the local market. In this case, the per capita income variable (INC) may have positive impacts on FDI flows as large amounts of FDI flows have been channelled to several projects producing consumer products to meet increasing domestic demands over the 1988-1998 period.

The last factor is the government policies and in this case, the government tax incentives provided to FDI projects invested in mountainous and remote areas as well as in areas with difficult natural, economic and social conditions as mentioned in the previous section. Besides government tax incentives, the local government attitude towards FDI has also influenced the pattern of regional allocation of FDI flows. In fact, the local authorities of some provinces (such as Ha Noi and Ho Chi Minh cities, Dong Nai and Song Be provinces) have provided more favourable conditions to foreign investors in terms of project appraisal and approval etc. compared to other provinces. While such incentives provided by local authorities have contributed to attracting large

amounts of FDI flows to those provinces, they are very difficult to quantify and therefore this regression analysis will focus only on government tax incentives.

The independent variable representing government tax incentives (TAX) is the average tax ratio, calculated based on the ratio of turnover tax and profit tax over total turnover of FDI projects classified by 53 provinces. It is expected that FDI projects in mountainous and remote provinces will have a lower tax ratio than that of FDI projects in other provinces.

Based on the above argument, the provincial allocation of FDI flows will be the function of following independent variables:

$$FDI = f(TEL; INC; PUP; TAX) \quad (7.1)$$

FDI: provincial allocation of committed FDI flows for the 1988-1998 period (or implemented FDI flows for the 1991-1998 period).
INC: income per capita of each province
PUP: number of middle secondary school pupil of each province
TAX: tax ratio of total FDI projects of each province

Data

The data for the dependent variable of provincial FDI flows will include two sets of data, the data of total committed FDI flows to each province for the 1988-1998 period that come from the 1998 statistical yearbook (GSO 1999) and the data of total implemented FDI flows to each province for the 1991-1998 period that come from the database of the Ministry of Planning and Investment (MPI). The data for independent variables should ideally be the average data for the 1988-1998 period. However, due to the lack of data, the data for independent variables have been chosen for the year in the middle of the 1988-1998 period when the data were available in order to represent closely the impacts of those variables during the whole period. While those data may not reflect the true meaning of those independent variables, they still represent the impacts of those independent variables on FDI flows in Vietnam during the 1988-1998 period.

The data on the number of telephones per capita of each province are for 1995 when the data were first available. There may be a problem of inter-relation between FDI flows and the number of telephones per capita as FDI flows may contribute to improving the local telecommunication networks. However, the data on the number of telephone per capita of each province in 1995 have not been influenced by FDI flows, since FDI flows to Vietnam before 1995 focused mainly on developing the international communication networks (MPI database).

The data on the number of middle secondary school pupils per capita of each province are for 1998 when those data were first available. Those data come from 1998's statistical yearbooks. The data on income per capita of each province come from the 1993 Vietnam living standard survey and the data on average tax ratio have been calculated for the 1991-1998 period based on the MPI database.

The data on the provincial allocation of committed and implemented FDI flows as well as other data, show a very large gap between more developed provinces and provinces in remote and mountainous areas. The amount of committed and implemented FDI flows in Ha Noi and Ho Chi Minh cities are a thousand times higher than those for mountainous provinces. Due to these distributional properties, all variables in this regression analysis are logged. Under this logarithm form, formula 7.1 will be re-written as follow:

$$LnFDI = f(LnTEL; LnINC; LnPUP; LnTAX) \qquad (7.2)$$

However, as some provinces record zero for some variables such as committed and implemented FDI flows or TAX, those observations will be excluded when they are transferred into logarithm form and hence reduce the number of observations for the regression analysis. In order to avoid this problem, a small value of 0.01 will be added to each observation when it is being transformed into logarithm form[20].

[20] LnFDI = Ln(FDI + 0.01)
LnTEL = Ln(TEL + 0.01)
LnINC = Ln(INC + 0.01)
LnPUP = Ln(PUP + 0.01)
LnTAX = Ln(TAX + 0.01)

The original data and the data under the logarithm form of the regression analysis appear in Appendix 7.

Results

Based on those data, a simple linear regression analysis is applied as a linear relationship is assumed since there are no strong reasons to assume any other functional form. The full details of the regression analysis appear in Appendix 7 and the main results of regression analysis are as follows:

For committed FDI flows over the 1988-1998 period:

LnFDI = 10.55 + 0.44 LnTEL*** + 0.23 LnINC* + 0.32 LnPUP*** + 0.16 LnTAX
(1.53) (3.4) (1.74) (3.2) (1.4)

$\bar{R}^2 = 0.517$ D-W = 1.76 $F_{(4, 48)} = 14.9$*** SE = 1.26 N = 53

For implemented FDI flows over the 1991-1998 period:

LnFDI = 1.34 + 0.3 LnTEL** + 0.35 LnINC** + 0.25 LnPUP** + 0.23 LnTAX**
(0.22) (2.34) (2.63) (2.51) (2.07)

$\bar{R}^2 = 0.528$ D-W = 1.88 $F_{(4, 48)} = 15.5$*** SE = 1.1 N = 53

***, ** and * indicates significant at 1, 5 and 10 percent level respectively. The figures in brackets are the t-statistic.

In general, the results of the regression analysis support the above arguments on the factors which influence the provincial allocation of FDI flows in Vietnam. The results of both regression analyses for committed and implemented FDI flows show that the number of telephones per capita of each province is positively correlated with FDI flows, statistically significant at the 1 percent level in the case of committed FDI flows and at the 5 percent level in the case of implemented FDI flows. The results imply that the level of infrastructure of each province has decisive effects on the volume of FDI flows and that the better the infrastructure, the higher the FDI flows. This result explains the reasons why a large amount of FDI flows have been committed or channelled to the few largest cities that have better transport, telecommunication, energy and water supply conditions.

The positive correlation of income per capita to implemented FDI flows and committed FDI flows (statistically significant at the 5 percent and 10 percent levels respectively) may not mean the higher the wages, the larger the FDI flows. Such positive correlation of income per capita may, in fact, imply that the higher the income the more lucrative the local market and hence the more attractive it is to FDI flows.

The number of middle secondary school pupils also has a positive correlation with FDI flows though statistically significant at the 1 percent level in the case of committed FDI flows and at the 5 percent level in the case of implemented FDI flows. This result implies that the quality of the labour force of each province has played a decisive role in attracting FDI flows. The large cities and more developed provinces with a well-educated labour force have, therefore, attracted large amounts of FDI flows.

The tax ratio has a statistically significant (at the 5 percent level) positive correlation with implemented FDI flows, but it is not statistically significant in the case of committed FDI flows. This result may imply that the government tax incentives have not provided any significant effects on attracting committed FDI flows as well as implementing committed FDI projects in mountainous or remote provinces. This result coincides with the fact that remote and mountainous provinces have received very small amounts of FDI flows compared to more developed provinces and cities, even though the government has offered tax incentives for FDI projects in those provinces.

There may be a multi-collinearity problem between some independent variables, for example, high incomes may lead to a high number of telephones per capita or a larger local market. However, the multi-collinearity test later shows no multi-collinearity problem as the values of variance inflation factor (VIF) for all independent variables are low and within an acceptable range. The condition indices are high but they are not likely to indicate multi-collinearity between independent variables. In fact, the high value of condition indices indicates the low value of independent variables and their close relation with the constant (Appendix 7).

In short, the regression analysis on the provincial allocation of committed and implemented FDI flows has found that the infrastructure, the quality of labour force and

the size of the local market are the most important factors deciding the regional allocation of FDI flows.

7.2.3. The impacts of foreign direct investment flows on regional economic development.

This section examines the impacts of FDI flows on the economic development of seven regions in Vietnam. In general, FDI flows have promoted regional economic development, though such positive impacts were not equally distributed between regions as FDI flows have been concentrated in a few large cities and in the Red River Delta and Southeast regions.

The impacts of FDI flows on regional economic development have occurred mainly in the industrial sector because a major part of FDI flows has been engaged in industrial production, while FDI flows to the service sector have been concentrated in only sixteen provinces, and only small amount of FDI flows have gone to agriculture. Table 7.6 shows that by 1998, the capital of foreign invested enterprises (FIEs) accounted for a major share in several regions in Vietnam. In the Southeast region, which has received the largest share of FDI flows, the capital of FIEs accounted for 71.6 percent of the region's total industrial capital, almost four times SOEs' capital and more than eight times that of private enterprises. While the Red River Delta region ranks second in terms of receiving FDI flows, the FIEs' capital has made up only 28 percent of the region's industrial capital and less than half of SOEs' capital as many SOEs have concentrated in the Red River Delta for many years. Moreover, as shown in Figure 7.1, the large share of FDI flows to the Red River Delta region has actually been channelled toward the service sector and hence reduced the contribution of FDI flows to that region's industrial capital.

In contrast, the smaller amount of FDI flows in other regions has contributed significantly to the regions' industrial capital. As shown in Table 7.2 and 7.6, in the case of the Northern Uplands region, only 3.9 percent of total FDI actually flowed to the region and this has made FIEs the largest in terms of industrial capital. Similarly, the small amount of FDI flows to the North Central and the Central Coast has made up more than 30 percent of the regions' total industrial capital. This is due to the fact that the industrial sector in those regions has still been underdeveloped. Only in the case of

the Central Highlands and Mekong River Delta, have FIEs accounted for the smallest share of the regions' industrial capital.

As FDI flows have been unequally allocated among regions in Vietnam, the impacts of FDI flows on regional economic development have also varied between regions. Table 7.7 shows that in general, FDI projects have generated the largest turnover and foreign exchange earnings in the regions that also received the largest share of FDI flows. During the 1991-1998 period, almost 60 percent of the turnover and 74 percent of foreign exchange earnings of FDI projects were generated in the Southeast region while almost 30 percent and 14 percent of turnover and foreign exchange earnings of FDI projects have been generated in the Red River Delta region. Other regions have shared less than 15 percent of the turnover and foreign exchange earnings generated by FDI flows.

The contribution of FIEs to regional industrial output has also reflected such trends. Table 7.6 shows that, in general, the contribution of FIEs in the regions' industrial turnover increased over the 1995-1998 period. However, the unequal allocation of FDI flows between regions, and hence the unequal share of output generated by FIEs, led to the unequal contribution of FIEs to regional industrial output. As shown in Table 7.6, FIEs accounted for the largest share of industrial output in the Southeast region while ranking second in the Red River Delta and Northern Uplands regions. For other regions, FIEs accounted for less than 10 percent of the region's industrial output.

In terms of contribution to regional industrial output growth, FIEs in the Red River Delta region and the Southeast region contributed to between half to two-thirds of regional industrial output growth over the 1995-1998 period. In other regions, such contribution of FIEs remained low except in the Northern Uplands in 1998 (Table 7.6).

In short, the FDI flows have contributed to increasing a region's industrial capital stock, and hence a region's industrial output. However, as FDI flows have been unequally allocated among regions, such contributions have also varied between regions, in which the more FDI flows, the more they contributed to regional economic development.

Table 7. 6: Structure of Regional Industrial Capital and Output, 1995-1998

(percent)

	Northern Uplands				Red River Delta				North Central				Central Coast				Central Highlands				Southeast				Mekong River Delta			
	'95	'96	'97	'98	'95	'96	'97	'98	'95	'96	'97	'98	'95	'96	'97	'98	'95	'96	'97	'98	'95	'96	'97	'98	'95	'96	'97	'98
1. Capital																												
SOEs				44.8				66.2				51.3				54.8				43.5				19.8				39.1
Private sector				8.0				5.8				10.3				13.5				32.0				8.6				37.0
FIEs				47.2				28				38.4				31.7				24.5				71.6				23.9
2. Output																												
SOEs	75.9	75.6	74.0	66.4	57.7	54.5	51.7	50.2	64.0	62.5	62.0	59.7	56.3	58.3	58.3	57.6	33.4	32.4	30.2	28.5	38.8	37.4	35.7	33.5	45.7	48.0	48.6	50.1
Private sector	18.0	16.9	15.7	13.9	25.5	25.3	24.2	23.6	32.1	32.9	31.9	31.0	35.2	34.4	33.1	33.1	64.8	65.3	66.8	67.1	20.5	20.3	19.6	18.8	46.6	45.7	44.9	42.4
FIEs	6.0	7.5	10.3	19.7	16.7	20.2	24.0	26.3	3.9	4.6	6.1	9.3	8.5	7.3	8.6	9.3	1.9	2.3	3.0	4.4	40.7	42.3	44.7	47.7	7.7	6.4	6.5	7.5
3. Output Growth Rate																												
Total		13.6	14.9	17.9		13.3	18.2	12.0		7.6	10.4	8.9		12.3	16.1	11.1		12.5	10.4	7.6		16.4	13.3	12.3		7.5	8.7	8.5
Contribution of FIEs*		2.4	4.4	12.9		6.2	8.2	5.4		1.1	2.1	4.0		-0.3	2.7	1.8		0.7	1.0	1.5		8.6	8.3	8.9		-0.9	0.7	1.6

* Calculated based on the formula in Table 5.12.

Source: GSO 1998, 1999c.

Table 7. 7: Performance of Foreign Direct Investment Projects Classified by Regions, 1991 – 1998 (percent)

	Share in Total Turnover of FDI Projects									Share in Total Exports of FDI Projects								
	1991	1992	1993	1994	1995	1996	1997	1998	91-98	1991	1992	1993	1994	1995	1996	1997	1998	91-98
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Red River Delta	24	38.6	37.2	34.1	31.6	38.7	31.5	19.7	29.9	0	23.5	15.1	16.7	10.7	17.1	11.9	13.6	13.6
Northern Uplands	0	0	1.1	1.4	2.4	3.5	3.7	9.1	4.6	0	0	1.8	6.4	8.4	4.5	2.1	2.5	3.3
North Coast	0	0	0	0.6	0.9	0.9	0.8	0.7	0.8	0	0	1.6	0.2	0.3	0.2	0.1	0	0.2
Central Coast	0.1	0	0.8	1.4	2	2.2	2.1	2.1	2	0	0	3.6	5.1	5.6	4.6	4.5	3.9	4.4
Central Highlands	0	0	0	0	0.1	0	0.3	0.4	0.2	0	0	0.1	0	0.3	0.1	0.8	0.1	0.3
Southeast	71.6	57.4	59	58.2	59.5	52.2	58.3	64.4	59.2	100	76.5	72.2	59.8	67.4	69	77.6	76.4	73.8
Mekong Delta	4.3	4.1	1.9	4.3	3.6	2.6	3.2	3.8	3.4	0	0	5.6	11.8	7.4	4.5	3.1	3.5	4.4

Source: MPI database.

In conclusion, this section has examined the regional allocation of FDI flows in Vietnam during the 1988-1998 period and the impacts of FDI flows on regional economic development. In general, the better infrastructural conditions, higher quality of labour force and larger local market of some provinces and cities have attracted large amounts of FDI flows. Moreover, FDI flows have contributed significantly to provincial and regional development by increasing the capital stock and production output of the provinces and regions, though such impacts have varied between regions and provinces as FDI flows have been unequally allocated between regions and provinces.

7.3. Foreign Direct Investment Flows and Poverty Alleviation.

The previous chapters have looked at the role of FDI flows in promoting economic growth in Vietnam. Another important objective of the socio-economic development process is to tackle poverty. While FDI flows indirectly contribute to the poverty alleviation process by promoting economic growth, they may also directly reduce poverty by generating employment and increasing the income by paying higher wages and salaries. This section will first examine the poverty alleviation process in Vietnam and then analyse how FDI flows have directly contributed to the poverty alleviation process in Vietnam.

7.3.1. Poverty alleviation processes in Vietnam.

The results of two living standard surveys in 1993 and 1998 jointly conducted by the government of Vietnam and the donors (including the World Bank (WB), United Nations Development Program (UNDP) and Sweden's International Development Agency) showed a very "striking reduction in the incidence of poverty in Vietnam" (GOV and WB 1999, p.4). In general, the proportion of people classified as poor[21] declined from 58 percent in 1993 to 37 percent in 1998 while that figure for food poverty reduced from 25 percent in 1993 to 15 percent in 1998. Such decline of general

[21] The poverty line in Vietnam has been defined on the basis of per capita expenditure that covers the nutritional needs to provide 2100 calories per day and basic non-food needs. In money terms, the poverty line in Vietnam was VND 1.2 million ($83) in 1993 and VND 1.8 million ($128) in 1998 of per capita expenditure annually. Of the 1998 poverty line, VND 1.287 (or $92) has been set for expenditure on essential food (GOV and WB 1999, pp. 5-6).

poverty and food poverty in Vietnam within a very short period of five years has been considered as "very impressive" and "...no other country has recorded such sharp decline in poverty in such a short period of time" (GOV and WB 1999, p.4). Additionally, social indicators improved between 1993 and 1998. As shown in Table 7.8, all social indicators including primary and secondary enrolment, child nutrition, adult nutrition, access to infrastructure and ownership of consumer durables increased during the 1993-1998 period.

Table 7. 8: Social Indicators of Vietnam, 1993-1998

(percent)

		1993	1998
Human development			
Education			
Primary enrolment rate (net):	Female	87.1	90.7
	Male	86.3	92.1
Lower secondary enrolment rate (net):	Female	29.0	62.1
	Male	31.2	61.3
Upper enrolment rate (net):	Female	6.1	27.4
	Male	8.4	30.0
Child nutrition			
Incidence of stunting among children 0-59 months		51.0	34.0
Adult nutrition			
Incidence of moderate and severe malnutrition in adults		32.0	28.0
Access to infrastructure			
% of rural population with public health centre within the commune		93.0	97.0
Ownership rates of consumer durable		25.0	58.0
% of households owing a television			

Source: Modified from Table 1.2 in GOV and WB 1999, p.7.

Regarding poverty alleviation between sectors, Table 7.9 shows that agriculture, manufacturing and sale services recorded the highest reduction in poverty incidence. Such achievement in the agriculture sector has been very important as both living standard surveys, in 1993 and 1998, found that 90 percent of poor people were living in rural areas and nearly 80 percent of the poor people had worked mainly in agriculture. However, while the incidence of poverty was reduced significantly in the 1993-1998 period, income inequality in Vietnam (measured by the Gini coefficient) increased

slightly, from 0.33 in 1993 to 0.35 in 1998. Despite this, Vietnam is still a moderately equal society as its Gini coefficient is similar to those of South Asian countries (i.e. Bangladesh, India) and lower than those of Indonesia or Thailand (GOV and WB 1999, p.70).

Table 7.9: Principal Occupation of the Poor, 1993 and 1998

(percent)

	1993		1998	
	Poverty incidence	Share of total poverty	Poverty incidence	Share of total poverty
Agriculture	60.0	76.0	48.0	79.0
Manufacture	37.0	8.0	26.0	9.0
Sale services	26.0	4.0	13.0	3.0
White collar	19.0	2.0	10.0	2.0
Other	57.0	2.0	6.0	0.0
Retired	39.0	5.0	26.0	4.0
Other not working	44.0	4.0	30.0	3.0
Total		100.0		100.0

Source: WB 1995b, p.13; GOV and WB 1999, p.20.

As far as the poverty situation among regions is concerned, Table 7.10 shows that the reduction of poverty incidence has varied. The Red River Delta, the North Central and Southeast regions have achieved the highest reduction of poverty incidence, while the Mekong River Delta, the Central Coast, the Central Highlands have recorded the lowest reduction of poverty incidence. As a consequence of such uneven reduction, the contribution to the country's total poverty has reduced for the former regions but increased for the latter regions.

In terms of real per capita expenditure, Table 7.10 shows that between 1993 and 1998, the Red River Delta, Southeast and North Central Coast regions also achieved the highest increase of real per capita expenditure, while the Mekong Delta, the Central Highlands and the Central Coast are the regions with the lowest increase of real per capita expenditure.

Table 7.10: Regional Poverty Situation in Vietnam, 1993 and 1998

(percent)

	Incidence of poverty by region		Contribution to poverty by region		Growth in real per capita expenditure
	1993	1998	1993	1998	1993-1998
Red River Delta	79.0	59.0	21.0	28.0	31.0
Northern Uplands	63.0	29.0	23.0	15.0	55.0
North Central	75.0	48.0	16.0	18.0	46.0
Central Coast	50.0	35.0	10.0	10.0	29.0
Central Highlands	70.0	52.0	4.0	5.0	25.0
Southeast	33.0	8.0	7.0	3.0	78.0
Mekong River Delta	47.0	37.0	18.0	21.0	18.0

Source: Compiled based on data in Table 1.5, Figures 4.1; 4.2 and 4.3 in GOV and WB 1999, pp. 15-17 and pp. 71-72.

In conclusion, while Vietnam has achieved significant reduction in the incidence of poverty, such a result has been distributed unevenly between the regions, in which the more developed regions enjoyed a larger reduction of poverty incidence over the 1993-1998 period compared to other regions.

7.3.2. Foreign direct investment flows and poverty alleviation.

This section will examine the contribution of FDI flows to poverty alleviation by assessing the amount of employment that has been created by FDI flows during the 1988-1998 period. The large labour force of Vietnam has, on the one hand, generated the country's comparative advantages to attract FDI flows, but on the other hand has produced strong pressures on the government to create enough new job places to absorb the increasing labour force. As unemployment or underemployment is a principle reason for poverty, generating employment will contribute to the poverty alleviation process.

As mentioned in Chapter IV, Vietnam's labour force has increased at an annual growth rate of 3.5 percent, and every year, 1.2 million people have entered the labour market. Thanks to the government's reform programme, millions of new job places have been created and, as shown in Table 7.11, an annual real employment growth rate of 1.8 percent was achieved during the 1993-1998 period. Services and industry sectors remain the large job providers, accounting for over 80 percent of total newly-created employment. Table 7.12 reveals that the unemployment and under employment rates in

Vietnam actually decreased from 3.7 percent and 66 percent in 1993 to 2.2 percent and 57 percent in 1998. However, such achievement was threatened by the regional financial crisis that has slowed down the growth rate of the whole economy since 1997 (WB 1998, p.11).

Table 7.11: Growth Rates of Output and Employment in Vietnam, 1993-1998

(percent)

	Agriculture	Industry	Service	All sectors
Average annual real employment	0.4	4.0	5.7	1.8
Distribution of incremental employment	16.7	27.0	56.3	100.0

Source: GSO 1998 and Table 3.1 in GOV and WB 1999, p.44.

Table 7.12: Unemployment and Underemployment Rates in Vietnam, 1993-1998

(percent)

	1993			1998		
	All country	Of which Urban	Rural	All country	Of which Urban	Rural
Unemployment	3.7	7.7	2.6	2.2	5.4	1.4
Underemployment	66.0	35.0	57.0	57	40.0	61.0

Source: Complied from Tables 3.5 and 3.6 in GOV and WB 1999, pp. 49-50.

FDI flows since 1988 have contributed to the employment generation process in Vietnam by providing needed investment capital, training and modern technology. While public and domestic private savings and investment have been limited, FDI flows have played an important role in generating new employment - as creating one job place in a small or medium enterprise needs $800, while in SOEs this requires about $18,000 (WB 1998, p.29). By the end of 1998, FDI flows had generated directly 270,000 job places, accounting for under 1 percent of Vietnam's total labour force, and indirectly created thousands of other job places. Overall, it has been estimated that total employment, both direct and indirect, created by FDI flows was between 350,000 to 400,000 (MPI 1998).

The data on employment in FDI projects classified by regions and by sector for the whole 1988-1998 period, however, are not available. Table 7.13 shows the employment in FDI projects for the 1994-1996 period. In general, as a large share of FDI flows concentrated in the Red River Delta and Southeast regions, those regions also account

for over 85 percent of the total employment generated by FDI flows. In particular, the Southeast region alone accounted for over 70 percent of total employment during the 1994-1996 period. Regarding the forms of FDI flows, Table 7.13 shows that joint-venture and 100 percent foreign-owned are the most important forms of FDI flows in terms of employment generation. As 100 percent foreign-owned form becomes a more important form of FDI flows, the amount of employment generated by 100 percent foreign-owned has also increased, from 29.1 percent in 1994 to 47.1 percent in 1996.

As far as sectors are concerned, manufacturing is the dominant sector in terms of employment generation, accounting for over 75 percent of employment generated by FDI flows during the 1994-1996 period. On the other hand, the service sector accounted for just over 10 percent of total employment and agriculture, forestry and fishery accounted for just over 3 percent of total employment generation.

However, it has been very costly to generate each job place within FDI projects. Table 7.13 shows that mining is the most expensive sector in terms of capital investment needed to employ one person. Electricity, gas and water supply ranked second and other service activities (including banking and finance services) ranked third in terms of capital investment needed to create each job place. Employment generation in agriculture, forestry, the fishery sector and the manufacturing sector has been the cheapest, as those sectors are labour intensive and require less capital to create one job place. It is generally more expensive to create one job place within an FDI project compared with either the local private sector or SOEs.

The 1998 industrial survey provided more details about employment of FIEs in the industrial sector. Table 7.14 shows that industrial employment in FDI projects increased from 6.8 percent of total industrial employment in 1995 to 9.1 percent in 1998. Except in the case of Southeast regions, the share of FDI-generated employment in the regions' total industrial employment has been small and was less than 10 percent in 1998. In the North Central region, industrial employment in FDI projects accounted for only 0.7 percent of the region's total industrial labour force.

Table 7.13: Labour Working in Foreign Invested Projects

	31/12/1994		31/12/95		30/06/96		Capital per job 1996 ($)
	Labour (person)	Share in total (%)	Labour (person)	Share in total (%)	Labour (person)	Share in total (%)	
1. By regions	**88,054**	**100.0**	**139,678**	**100.0**	**172,925**	**100.0**	
Red River Delta	11,387	12.9	19,751	14.1	21,704	12.6	92,518
Northern Uplands	2,725	3.1	3,290	2.4	4,348	2.5	31,877
North Central	626	0.7	1,231	0.9	1,260	0.7	100,794
Central Coast	4,295	4.9	7,286	5.2	8,391	4.9	26,528
Central Highlands	1,239	1.4	2,783	2.0	2,898	1.7	28,433
Southeast	63,578	72.2	99,597	71.3	128,197	74.1	53,308
Mekong River Delta	4,204	4.8	5,740	4.1	6,127	3.5	46,581
2. By forms of FDI	**88,054**	**100.0**	**139,678**	**100.0**	**172,925**	**100.0**	
100 % foreign owned	25,649	29.1	56,115	40.2	81,497	47.1	
Joint-venture	60,327	68.5	81,121	58.1	88,658	51.3	
Business Co-operation Contract	2,078	2.4	2,442	1.7	2,770	1.6	
3. By sectors	**88,054**	**100.0**	**139,678**	**100.0**	**172,925**	**100.0**	
Agriculture & forestry	1,621	1.9	3,134	2.2	3,422	2.0	14,991
Fishery	1,140	1.3	1,246	0.9	1,196	0.7	17,642
Mining	5,517	6.3	5,712	4.1	6,202	3.6	550,000
Manufacturing	66,474	75.5	108,918	78.0	139,621	80.7	24,541
Electric., gas & water supply	72	0.1	192	0.1	297	0.2	391,582
Construction	846	1	2,011	1.4	2,558	1.5	76,466
Trade	343	0.4	508	0.4	726	0.4	51,240
Hotel & restaurant	5,673	6.4	8,227	5.9	8,212	4.7	117,328
Transport & communication	3,605	4.1	5,071	3.6	5,608	3.2	78,531
Others	2,727	3.1	4,659	3.3	5,083	2.9	203,561

Note: Vietnam labour forces were 34.6 million and 35.8 million in 1995 and 1996 respectively.

Source: GSO 1996, 1998.

Table 7.14: Labour Working in Foreign Invested Enterprises, 1995 and 1998

	Share of FDI labour in industrial labour (%)		Share of female labour in FDI labour (%)	Capital per job 1998		
	1995	1998	1998	SOEs	Private sector	FIEs
1. Classified by regions		**9.1**	**61.9**	**12,299**	**668**	**35,591**
Red River Delta		2.9	42.3	6,494	293	64,195
Northern Uplands		1.7	39.1	4,486	128	56,075
North Central		0.7	23.1	5,223	39	87,320
Central Coast		7.3	72.9	7,755	312	13,507
Central Highlands		1.6	12.2	7,278	767	46,640
Southeast		25.7	64.6	8,786	1,937	33,446
Mekong River Delta		2.6	60.9	8,282	717	21,874
2. Classified by sectors	**6.8**	**9.1**	**61.9**			
Manufacturing, total	**7.4**	**9.8**	**63.6**	**6,967**	**705**	**27,087**
Food, foodstuffs, drinks	6.2	3.9	34.2	9,817	587	65,504
Tobacco	0.7	3.7	51.5	13,823	2,973	37,309
Textile	6.5	10.1	69.0	5,264	608	23,253
Garment	8.1	11.6	79.9	1,779	995	5,812
Leather goods	22.7	37.6	82.1	1,478	1,608	6,634
Wooden, bamboo products	7.5	1.0	36.0	5,198	240	10,584
Paper products	8.9	7.4	44.5	10,091	2,675	17,356
Publishing and printing	1.0	0.7	33.6	12,188	514	10,074
Coke, oil products and nuclear fuel	7.4	42.9	24.4	44,350	15,474	132,713
Chemicals and chemical products	4.0	11.4	44.8	9,268	4,609	52,243
Rubber, plastic products	5.2	25.1	51.3	7,428	4,062	15,551
Non-metal products	1.4	2.7	25.5	12,567	428	120,590
Metal	9.0	4.9	13.7	6,436	1,500	103,189
Metal products	3.2	5.4	18.7	4,064	416	57,280
Machinery and equipment	1.9	7.0	30.2	4,324	2,971	51,210
Office machine, computer, calculator	34.6	99.4	62.2	0	0	59,502
Electric machines and equipment	5.5	30.2	63.7	6,689	4,841	27,670
Radio, TV & comm. equipment	17.7	51.0	47.2	22,970	3,466	75,550
Medical instrument, optics and clocks	14.8	44.6	55.6	2,871	3,020	38,542
Motor vehicles	12.3	20.4	30.5	6,166	732	101,060
Other transportation means	2.7	15.1	23.3	5,770	778	58,624
Furniture	15.6	12.8	73.1	4,288	339	4,863
Mineral industry	**3.8**	**3.0**	**9.6**	**4,684**	**211**	**299,197**
of which: oil and gas	64.7	91.1	9.3	114,781	0	335,385
Water, gas and electricity	**0.5**	**1.1**	**12.6**	**79,194**	**295**	**374,512**

Source: GSO 1998, 1999c.

As far as sub-sectors are concerned, FDI also accounted for a large share of employment in the sub-sectors such as the oil and gas industry, office machine, computer and calculator industry and leather goods industries. In terms of capital investment needed to create one job place, water, gas and electricity generation and supply as well as mining are the most costly sub-industries, requiring around $300,000 to employ one local worker. The cheapest industries are the garments, leather goods and furniture industries which require between $4,800 to $6,000 to create one job place. Though the capital investment needed to create one job place in FDI projects generally decreased between 1996 and 1998, it has been many times higher than that of either SOEs or private enterprises. In the case of the mineral industry, it is about over 60 times higher than SOEs and over 1,400 times higher than private enterprises. Such high capital investment needed to employ one local worker reflects the capital-intensive nature of FDI projects in Vietnam.

However, the FIEs that are export-oriented require less capital investment to create one job place than FIEs that focus on the local market. Among 452 FIEs in manufacturing and primary industries (excluding oil and gas industries) in 1998, the FIEs that exported more than 50 percent of their 1998 revenue required $10,227 to create one job place while FIEs that exported less than 50 percent of their 1998 revenue needed $74,585 to create one job place (MPI database)[22].

While FDI flows have actually created a number of jobs, especially in the manufacturing sector, such employment generation effects have been constrained recently by the regional financial crisis and shortages of qualified local workers. The regional financial crisis and the slow-down of economic growth in neighbouring countries have led to the reduction of demand on Vietnam's export products including products produced by FIEs. It has been estimated that the workers made redundant as a consequence of the regional financial crisis in FIEs such as garments, footwear and automobiles were 8 percent to 10 percent of total employees or between 20,000 to 25,000 workers (MPI 1998, p.19).

[22] A 50 percent mark was chosen because FIEs which export over 50 percent of their revenue will enjoy government tax incentives.

Another reason that may limit the employment generation effects of FDI flows is the shortage of local qualified workers. Table 7.15 reveals that qualified workers accounted for a large share of the total labour force employed by FDI projects in 1995. The share of workers with a tertiary degree or above in the total labour force employed by FDI projects is higher than that of SOEs and private enterprises. The share of qualified technicians (including technicians and workers with a college qualification) in the total labour force employed by FDI projects has also been higher than those of private enterprises. This situation reflects the fact that modern technology transferred through FDI flows and the capital intensive nature of FDI projects require large number of qualified local workers.

Table 7.15: Labour Force Classified by Qualification - 31 July 1995

	Tertiary level or above	College level	Technician
State owned enterprises	10.2	10.7	26.2
Private enterprises	6.0	4.2	8.3
FDI projects	13.5	5.7	11.2

Source: GSO 1998, p.353.

The number of qualified local workers, however, has been low and insufficient to meet the requirements of FDI projects. The survey conducted by the Development Strategy Institute of the Ministry of Planning and Investment in 1998 revealed that around 80 percent of the FIEs which responded complained that local labour did not have competent technical qualification, knowledge of English or discipline and they needed to be retrained (DSI 1998, p. 452).

Dong Nai province is the one of the largest recipients of FDI flows in Vietnam and the booming growth of the industrial zone in Dong Nai province, for example, has depleted provincial qualified labour. Up to 1999, 65,000 employees had been employed by 140 FDI projects and more qualified labour such as directors' assistants, supervisors, and engineers, as well as qualified operators of cranes, lifting machines etc. were still needed. As the provincial labour force had not sufficiently met the demand, workers from other provinces were needed to cover the gap and they made up one-third of the total workers working in the province (VIR 1999c).

In short, FDI flows in Vietnam have created many thousands of jobs but such numbers are still insignificant compared to the local labour force. Moreover, such effects have been constrained by the regional financial crisis and shortage of local skilled labour.

Besides creating jobs, FDI flows also contribute to poverty alleviation by paying higher salaries and wages. In general, the average wage of an employee working in FIEs is about 30 percent to 50 percent higher than those working in local enterprises (MPI 1998, pp. 13-14). Table 7.16 shows that the average wage of local labour working in FDI projects increased from $84 per month in 1994 and 1995 to $94 in 1996. The Southeast and Red River Delta regions have also recorded the highest average wages, while the regions with lower FDI flows have also recorded low average wages. However, the latter also recorded higher rates of average wage increases compared to other regions. Wage increases in the North Central region, increased by almost 2.7 times between 1994 and 1996.

Regarding the form of FDI flows, Business Co-operation Contracts offered the highest average wage followed by joint ventures while 100 percent foreign-owned firms offered the lowest average wage for FIE employees. As far as sectors are concerned, the average wages of the agriculture, forestry and fishery as well as manufacturing sectors have been the lowest, as those sectors are labour-intensive and require less highly-qualified labour than other capital modern technology-intensive sectors such mining, banking and finance. In the first six months of 1996, for example, the average wage of local workers in the mining sector was about ten times higher than that in the agriculture, fishery, forestry and manufacturing sectors. The average local wages, however, are many times lower than those of foreign labour, which increased from $1,164 in 1994 to $1,518 in 1996 (Table 7.16).

Table 7.16: Monthly Income of Labour Working in Foreign Invested Projects

	Vietnam labour ($)			Foreign labour ($)		
	1994	1995	First 6 months 1996	1994	1995	First 6 months 1996
1. By regions						
Red River Delta	62	76	99	740	1,047	1,256
Northern Uplands	37	52	71	263	555	1,157
North Central	33	75	89	438	626	796
Central Coast	39	48	53	391	644	977
Central Highlands	43	38	54	306	565	707
Southeast	96	92	99	1,355	1,365	1,671
Mekong River Delta	56	68	78	1,063	714	667
2. By forms of FDI						
100 % foreign owned	40	41	52	643	764	993
Joint-venture	101	111	131	885	1,050	1,367
Business Co-operation Contract	134	163	155	6,630	6,252	6,557
3. By sectors	**84**	**84**	**94**	**1,164**	**1,224**	**1,518**
Agriculture & forestry	51	42	59	668	616	1,008
Fishery	67	70	79	723	1,319	1,340
Mining	566	618	628	1,735	1,853	2,323
Manufacturing	46	54	66	728	790	1,023
Electric., gas & water supply	70	112	102	226	265	700
Construction	79	89	120	536	1,772	1,304
Trade	89	95	91	621	1,086	1,016
Hotel & restaurant	72	94	120	1,142	1,507	2,018
Transportation & communication	89	111	125	704	702	903
Banking & finance	257	325	297	1,842	2,701	3,420
Real estate and consulting services	95	113	161	805	1,186	1,741
Education & training	107	242	324	774	2,204	2,881
Health care	88	131	245	1,050	2,405	1,997
Culture and sport	39	74	80	216	435	870
Personal and public services	50	81	64	na	na	na

Source: GSO 1998.

In short, FDI flows have contributed to the poverty alleviation process in Vietnam by increasing the income of labour working in FDI projects. However, the general impacts of FDI flows on poverty alleviation in Vietnam, especially on employment generation, have depended very much on government policies. In general, the government encourages foreign investors to employ local labour. In the case where sufficiently well-qualified local labour cannot be found and foreign workers are employed, the foreign

investors are encouraged to train local labour to replace foreign labourers. The government has also issued several regulations to protect the rights of local workers such as the right to strike and the rights of female workers (NPPH 1999). In particular, the government has determined the minimum wage as the basis for labour contract negotiations[23]. Despite government efforts in issuing a number of regulations to protect local workers and at the same time promote FDI flows to make use of the cheap local labour force, there are still several disputes on the issues regarding wages and working conditions. In 1998, for example, there were 30 labour disputes and strikes amongst FDI projects (VIR 1999d).

Thus, although FDI flows in Vietnam since 1988 have contributed to the success of Vietnam in alleviating poverty incidence from 58 percent in 1993 to 37 percent in 1998 by creating numbers of employment opportunities and paying high wages, such contribution has not been significant.

The FDI flows have not created a significant number of jobs. As mentioned earlier, the amount of employment created by FDI flows has accounted for less than 1 percent of the total Vietnam labour force which stood at around 37 million in 1997 (GSO 1999, p.10). In the industrial sector, which received the major share of FDI flows, the percentage of the labour force working in FIEs was less than 10 percent of the total industrial labour force (GSO 1999c). In contrast, local private enterprises accounted for 64.3 percent and SOEs accounted for 24.2 percent (GOV and WB 1999, p.61). Compared to Vietnam's National Programme for job promotion[24], which started in 1996, the number of employment opportunities created by FDI flows has also been very small and insignificant.

The low effectiveness of FDI flows in terms of employment generation is partly attributable to the fact that a large proportion of FDI flows in Vietnam has been

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[23] The monthly minimum wage rates for unskilled labour working in FDI projects in the large cities of Ha Noi and Ho Chi Minh City is $45; $40 for other medium cities and $35 elsewhere (NHHP 1999, pp. 1383-1384).

[24] Vietnam's National Programme for job promotion intends to create employment for 6.5 million labours.

channelled to import substitution industries. Creating one job place in import substitution industries requires in excess of seven times the capital investment required in export-oriented industries. If all FDI flows over the 1988-1998 period had been channelled to export oriented industries, the number of job places created by FDI flows would have been many times higher.

Although employees working in FDI projects have been paid higher wages, this has not contributed significantly to the poverty alleviation process. Almost 100 percent of FDI flows focused on the industrial and service sectors, but 90 percent of poor people live in rural areas and nearly 80 percent of poor people work mainly in the agricultural sector. FDI flows thus have provided little direct impacts to improve the living standard of the majority of the poor people. The 1998 living standard survey revealed that in the rural areas, the improvement in living standard was attributed mainly to rising agricultural income, diversification of agricultural incomes on the farm and also diversification of off-farm activities (GOV and WB 1999, p.51).

While FDI flows have not provided significant impacts on the poverty alleviation process, they may have contributed also to widening the gap in living standards between the regions due to their unequal contribution to regional economic growth. The 1998 living standard survey found that the increase in inequality between regions explained 83 percent of the increase in total inequality in Vietnam between 1993 and 1998, while the increase in inequality within regions accounted for only 17 percent of the increase in total inequality (GOV and WB 1999, pp. 71-73).

While FDI flows were not a major factor contributing to poverty alleviation in Vietnam during the 1993-1998 period, the success of poverty alleviation in Vietnam has been attributed to the wider strategy of liberalisation:

> The *doi moi* policies initiated in the late 1980's have led to rapid growth in GDP....The opportunities for employment and income generation that such rapid growth has created explain much of Vietnam's achievements in poverty alleviation.
> (GOV and WB 1999, p.41).

Hence the significant contribution of FDI flows to the poverty alleviation process in Vietnam have not been in direct impacts of employment generation but rather in indirect impacts by promoting rapid economic growth.

In short, FDI flows have provided few, if any, significant impacts to directly tackle the problem of poverty in Vietnam. The contribution of FDI flows in generating new employment has been small compared to Vietnam's large labour force. The unequal allocation of FDI flows between regions in Vietnam has actually contributed to unequal economic growth and hence widened the standard of living gap between regions. However, the major contribution of FDI flows to poverty alleviation in Vietnam, seemingly has been indirect, through promoting overall rapid economic growth in the wider economy.

7.4. Conclusion.

This chapter has examined the regional allocation of FDI flows during the 1988-1998 period and the impacts of FDI flows on regional economic development and poverty alleviation. In general, FDI flows in Vietnam during the 1988-1998 period were unequally distributed between regions and provinces. FDI flows have been heavily concentrated in the Red River Delta and Southeast regions, especially in large cities such as Ha Noi, Hai Phong and Ho Chi Minh City. This situation has been improved in the later stage as FDI flows started to diffuse to other surrounding regions and provinces. The regression analysis on the factors influencing the provincial allocation of FDI flows found that the level of infrastructure, the quality of labour force and the local market are the major factors that have played a decisive role in attracting FDI flows between provinces. The regions and provinces with better infrastructure, a more highly-qualified labour force and larger local market have received larger amounts of FDI flows. Government policies, especially the tax incentive policy, to promote the diffusion of FDI flows to mountainous and remote provinces have not played such a decisive role as the development of infrastructure. Even FDI flows have been unequally allocated between provinces and regions, FDI flows have contributed positively to local development by increasing the industrial capital stock and output, though such contribution may have widen the gap between rich and poor provinces.

The direct impacts of FDI flows on poverty alleviation has not been significant. While Vietnam has achieved a very impressive reduction of poverty incidence, the contribution of FDI flows to the poverty alleviation process through employment generation has been considered small and insignificant. The capital-intensive nature of several FDI projects in import substitution industries, the regional financial crisis and the shortage of qualified local workers are other reasons that have prevented foreign investors from employing more local workers. Moreover, the heavy concentration of FDI flows in the industrial and service sectors has limited further the role of FDI flows as over 80 percent of the poor people have been living and working in rural areas and the agricultural sector. Furthermore, the unequal allocation of FDI flows between regions in Vietnam has contributed to unequal economic growth between regions and such unequal growth has been found to be the major reason for the increase in total regional inequality in Vietnam. The major contribution of FDI flows to poverty alleviation in Vietnam has been, therefore, indirect impacts through promoting rapid economic growth that, in turn, will create greater employment opportunities and income for poor people.

The examination of factors that influence the regional allocation of FDI flows and the contribution of FDI flows to the poverty alleviation process in Vietnam has revealed several issues, and government policies that need to be further improved in order to achieve more equal allocation of FDI flows between regions as well as better use of FDI flows to tackle the poverty problem in Vietnam. Those issues, and other issues raised in previous chapters, will be mentioned in the following chapter.

CHAPTER VIII:
POLICY IMPLICATIONS

The previous chapters have examined the impacts of FDI flows on socio-economic development in Vietnam during the 1988-1998 period as well as the necessary conditions, especially the government policies, that help to make use of FDI flows. Based on this analysis, this chapter suggests several policy implications that should be used to maximise the positive impacts and minimise the detrimental effects of FDI flows in Vietnam in the future. Those policy implications are very important in the circumstance that FDI flows to Vietnam began to reduce after 1997 as a consequence of the regional financial crisis.

8.1. Foreign Direct Investment Flows As an Important Supplementary Sources of Investment.

The first policy implication is the recognition of FDI flows as an important supplementary source of investment.

While the long-term socio-economic development in Vietnam has to rely on local savings and investment, the analyses in previous chapters show that FDI flows have contributed significantly to gross investment and economic growth. In general, FDI flows have directly contributed to around one-third of gross investment during the 1994-1998 period and between 1 percent to 1.5 percent of annual GDP growth. Besides that, FDI flows have also indirectly contributed to the socio-economic development process by generating foreign exchange earnings, contributing to government budgets, and transferring modern technology. On the other hand, the negative impacts of FDI flows have been kept under control thanks to appropriate government policies. Several analyses have shown the need for co-operation between foreign investors and state-owned enterprises and the private sector.

While FDI flows provided important impacts on socio-economic development in Vietnam over the 1988-1998 period, they have actually declined since the start of the regional financial crisis in 1997. In such circumstances, the government of Vietnam needs to improve the legal and operational environment, and remove all the obstacles to

the operation of foreign investment projects in order to attract more FDI flows in the coming years.

First, the government of Vietnam needs to provide a long-term strategy on foreign direct investment utilisation. Such a strategy will, on the one hand, serve the government in determining long-term strategy for socio-economic development, but on the other hand provide clear guidelines to foreign investors about government priorities given to FDI flows in the short, medium and long term. The lack of a long-term strategy on FDI flows may have generated unnecessary confusion for foreign investors in determining their long-term strategy for doing business in Vietnam. That may also be the reason why a considerable number of foreign investors have invested in Vietnam for short-term benefit and immediately withdrawn their investment when the situation has become less favourable.

Second, the government needs to improve the legal environment in order to attract more FDI flows. The regular review, and amendment when necessary, of laws and regulations that regulate the operation of FDI projects are very important to make Vietnam more attractive to foreign investors compared to other countries in the region. Since the regional crisis, several countries in the region have made significant changes (such as deregulating the economy, devaluation of national currencies etc.) in order to make their economies more competitive and more attractive to foreign investment. Only regular reviews of relevant laws and regulations, especially those relating to labour wages, exports, tax incentives and foreign exchange management etc. will help Vietnam to keep pace with similar changes in neighbouring countries.

Third, there is a need to improve the efficiency of bureaucratic systems. The implementation of many changes in laws and regulations regarding FDI flows in Vietnam has not been carried out effectively due to the inefficiency of the bureaucratic system. The improvement of bureaucratic systems would include making laws and regulations more transparent, reducing the numbers of government agencies involved in the management of FDI flows and the operation of FDI projects, and decentralising the management of FDI flows. In addition to the changes in related laws and regulations, such improvement will make Vietnam more attractive to foreign investors.

Fourth, improving the macro-economic environment is another measure to attract more FDI flows. While FDI flows contributed significantly to the economic growth of Vietnam during the 1988-1998 period, a high and stable economic growth, controllable inflation and appropriate exchange rate will increase the confidence among foreign investors to invest in Vietnam. Moreover, high and stable economic growth will create more business opportunities to attract FDI flows to Vietnam.

Fifth, there is a need to maintain the government policies that helped to maximise the positive impacts and minimise the detrimental effects of FDI flows during the 1988-1998 period. As mentioned in previous chapters, such policies are local content requirements, local resource development requirements, local partner requirements for some sectors, export requirement, and minimum wage requirement. While those requirements have been eased recently in accordance with the development of the local economy and the changes in the international market, they are still needed. However, the extent and the ways to implement those requirements should be adjusted in accordance with the existing socio-economic situation in Vietnam.

In short, the recognition of FDI flows as an important supplementary source of investment requires several changes and improvement in order to attract more FDI flows to Vietnam in the future.

8.2. Toward More Concentration of Foreign Direct Investment Flows into Export-Oriented Industries.

The second policy implication is to attract more FDI flows into export-oriented industries that will make use of Vietnam's comparative advantages of cheap and relatively well-educated labour.

As mentioned in chapter VI, only 36.2 percent of committed FDI flows and 51 percent of implemented FDI flows in the primary and manufacturing sectors have actually been channelled to the industries in which Vietnam has high comparative advantages, while the rest has been focused on capital-intensive industries. As analysed in chapters V, VI, and VII, this is the reason why FDI flows have provided insignificant impacts in generating employment and achieved low efficiency of performance. The significant

movement of FDI flows toward export-oriented industries to exploit Vietnam's comparative advantage of cheap labour will, therefore, generate more employment, improve the efficiency of FDI projects and hence contribute substantially to the poverty alleviation process.

On the other hand, there is large potential for FDI flows into export-oriented industries. A cross-country study by Wood and Mayer (1998) using the data from 1990 of 115 countries has found that the higher the skilled workers relative to land, the higher the share of manufacturing exports relative to primary exports[25] (Wood and Mayer 1998 in GOV and WB 1999, p.166). Based on this result, Belser (1999) has estimated that in 1997, for example, the manufacturing exports of Vietnam would have been 63 percent of total exports (or $9.88 billion) instead of actual figure of 37 percent (or $3.37 billion) (Belser 1999 in GOV and WB 1999, p.166). The potential of a $6.5 billion increase in manufacturing exports shows the huge potential for the development of export-oriented industries in Vietnam.

The examination of 535 FDI projects in the industries in which Vietnam possesses comparative advantage (such as food processing, textiles, garments, leather products, wood-furniture, electrics and electronics) shows that in 1998, those projects generated exports of $1.25 billion compared to the total investment of $2.5 billion (MPI database). In other words, $1 of FDI in those industries generated $0.5 of exports. Hence, if such ratio holds for the future, $13 billion of FDI flows will be needed to achieve the $6.5 billion increase in manufacturing exports.

In short, there is great potential for attracting FDI flows into export-oriented industries. However, the promotion of FDI flows into export-oriented industries requires several necessary measures to be implemented.

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[25] The result of a cross-country study is as follows:

Ln (manuf. exports/primary exports) = - 5.11 + 1.47 Ln (skilled workers/workers) – 0.6 Ln (land/workers)
(-14.1) (7.18) (- 6.59)

$R^2 = 0.56$
(Wood and Mayer 1998 in GOV and WB 1999, p.166).

First, the government needs to establish a long-term plan to develop export-oriented industries. The development of export-oriented industries may initially focus on developing downstream, simple assembly and labour-intensive industries and at the later stages to develop more technological, capital-intensive industries that produce middle and upstream products.

Second, providing tax preferences to FDI projects in export-oriented industries is necessary. Regression analysis 6.1 found that tax incentives play a very decisive role in the export performance of FIEs in the sense that the lower the tax rates, the higher the export ratio. The regular review of tax preferences for FDI projects in export-oriented industries will guarantee that the tax incentives provided by the government of Vietnam will not be less favourable than those of other countries in the region, and hence will attract more FDI flows to export-oriented industries.

Third, providing other supports for FDI projects in export-oriented industries will be beneficial. Such supports may range from deregulation of export and import activities, providing necessary information on the international market, improving the infrastructure such as roads, ports, and airports, and developing supporting industries. Those supports should aim to remove any obstacles and at the same time create more favourable conditions for FDI projects investing in export-oriented industries.

Finally, gradually reducing the protection of the domestic market is desirable. The result of regression analysis 6.1 shows that domestic protection negatively correlated with export performance of FDI projects as they may find that producing for the protected domestic market is easier than for the competitive international market. During the 1988-1998 period, Vietnam's local market was protected through several tariff and non-tariff barriers. However, the reduction of the domestic market requires careful consideration and will be mentioned in the following section.

8.3. Gradually Reducing the Protection for Domestic Market and Infant Industries.

The third policy implication is the need to determine a plan to gradually reduce the protection for local markets and infant industries, although infant capital-intensive

industries still play an important role in the industrialisation process in Vietnam. This would include the limiting of the protection to a few key industries and applying protection measures in conformity with the requirements of international trade organisations such as the World Trade Organisation (WTO).

As mentioned in chapter VI, 63.8 percent of committed FDI flows and 49 percent of implemented FDI flows in the primary and manufacturing sectors have been channelled to capital-intensive industries. Such heavy concentration of FDI flows in capital-intensive industries has been attributed to the government's dual industrialisation policy and intensive domestic protection. Such FDI flows have contributed to the establishment of several new industries or the modernisation of the existing ones (such as the oil and gas industry, automobile industry and telecommunications). However, the low efficiency of many FIEs, the need to concentrate FDI flows in export-oriented industries, and the economic integration process in Vietnam require the reduction of the protection for the domestic market and infant industries, and a limitation of protection to a few key industries.

However, such reduction should not be done within a short period. The result of regression analysis 6.2 shows that protection plays a decisive role in FIEs' performance and hence any immediate removal of protection will generate unnecessary detrimental effects on industrialisation in Vietnam.

On the other hand, the socio-economic conditions of Vietnam still require the development of some key infant supporting industries. The development strategy of Vietnam should not be based solely on low cost labour and abundant natural resources. The development experiences of several developing countries, including Asian NICs, have shown that in order to avoid the low cost labour trap or stagnation because of natural resource depletion and to create conditions for sustainable development, Vietnam has to combine the development based on export-led manufacturing with the need to move up the ladder of technology from simple labour-intensive manufacturing to skilled-labour intensive manufacturing and to advanced technology manufacturing (Ishikawa 1998a, p.15). Such a development strategy requires the development not only of industries that produce export products but also the basic support industries that will facilitate the development of direct support industries and at the same time generate new

comparative advantages and hence allow Vietnam to move up the ladder of technology. The implementation of this development strategy requires the government to implement several necessary measures.

First, the government needs to identify and classify essential infant industries, and focus its attention and resources to support the development of the infant industries that could be internationally competitive, with government protection for a certain period. As mentioned in chapter VI, such industries may include machinery, electronic, chemicals and petrochemicals.

Second, the protection of those infant industries should last for an appropriate period of time. The government should provide a schedule for tariff reduction for protected industries. This will give the producers of those industries enough time to prepare and at the same time expose those industries gradually to international competition. The year 2006 could be a suitable date for finishing protection as, by that time, Vietnam will fully integrate into the ASEAN Free Trade Area (AFTA) and complete all of its obligations of removing tariffs under AFTA's common effective preferential tariff scheme.

Third, the protection of those infant industries would be limited to a few measures in conformity with the requirements of international trade organisations such as WTO, AFTA or Asian Pacific Economic Co-operation (APEC). This process would include removing all the non-tariff barriers such as export and import quotas, and licences as well as other unnecessary customs requirements.

In short, the gradual removal of protection for the domestic market and infant industries and limiting the protection to only a few essential infant industries will lead to the restructuring of FDI flows toward concentrating on export-oriented industries, improving the performance of FIEs and facilitating the economic integration process.

8.4. Foreign Direct Investment Flows Should Be Linked Closely to the Economic Integration Process.

The government needs to consider FDI flows under the new circumstances when Vietnam joins several trading organisations such as AFTA, APEC and WTO. The

government policies relating to FDI promotion and co-ordination, therefore, need to be adjusted in accordance with the economic integration process in Vietnam, especially with Vietnam's commitment of removing tariffs under AFTA's common effective preferential tariff scheme. The content of AFTA's common effective preferential tariff scheme, and Vietnam's commitment appear in Appendix 1 and Appendix 8.

There is a close link between economic integration and FDI flows (as mentioned in chapter III). For the AFTA, its short-term purpose is to increase intra-ASEAN trade and the long-term purpose is to make ASEAN products more internationally competitive and to make ASEAN more attractive to foreign investors. In the case of Vietnam, FDI flows since 1988 have promoted the trade between Vietnam and ASEAN countries. Several foreign investors, including ASEAN investors, have invested in Vietnam, using cheap local labour to produce export products for the ASEAN market.

In 1998, the exports to the ASEAN market of FIEs ranked number one in total exports of FIEs. The cases of the Fujitsu joint venture producing personal computer accessories and Daewoo joint-venture producing television picture tubes for export to the international market, including ASEAN, are typical examples. In the automobile industry, three out of eleven joint-venture assembly cars and trucks in Vietnam have imported components from ASEAN countries, though such imports still accounted for a low share of total imports (UNIDO and DSI 1999, pp. 165-169). However, such contribution of FDI flows to promote trade between Vietnam and ASEAN is still insignificant.

While several studies have found that the integration of Vietnam into AFTA would provide from low to medium trade creation effects on exports and imports between Vietnam and ASEAN countries (Pham Hoang Mai and Forbes 1996; Fukase and Martin 1999), such integration and Vietnam's tariff reduction programme may provide significant effects on FDI flows.

In general, the formation of AFTA would lead to the restructuring of FDI flows between a number of countries in accordance with each country's comparative advantages. Especially for industries such as automobiles, and electronics that consist of multi-processes and multi-sectors, the restructuring process under AFTA would involve the

intra-regional division of labour among different production processes. As MNCs have been facing shortages of labour, and rising wages in Singapore, Malaysia and Thailand, they would reallocate their labour-intensive production processes to countries like Vietnam where labour is cheap and available. Mitsubishi Motor Corporation, for example, has decided to integrate Vietnam into its regional and local production and distribution network (Gates and Truong 1994, p.25).

While MNCs need to reallocate their production to Vietnam to make use of cheap labour and provide products for the whole ASEAN region, government policy to protect the infant industries up until the year 2006 will provide favourable conditions to support this restructuring process. Moreover, the government should provide preferential treatment (such as tax incentives) to promote FDI flows which create regional linkages.

8.5. Toward a More Equitable Regional Allocation of Foreign Direct Investment Flows.

The fifth policy implication is to adjust government incentives from providing tax incentives to improving the infrastructure in poor provinces in order to speed up the diffusion process of FDI flows toward poorer provinces located around big cities or more developed provinces and hence to achieve more equal regional distribution of FDI flows.

The result of the regression analysis 7.2 showed that the level of physical and social infrastructure (i.e. the number of telephones and the number of middle high school pupils per capita) has decisive effects on the volume of FDI flows to each province in the sense that the better the infrastructure, the higher the FDI flows. On the other hand, the result also shows that tax incentives generated no effects in attracting FDI flows to poor and remote provinces.

This result requires the government to shift its concentration of public expenditure toward poorer, densely populated provinces located around big cities or more developed provinces or mountainous provinces with large natural resources in order to improve the physical and social infrastructure of those provinces. Only with significant improvement in infrastructure such as transportation, energy and water supply as well as the quality of

the labour force, will those poor provinces be able to attract large amounts of FDI flows. Such improvement of infrastructure also helps to attract FDI flows into export-oriented industries that require better transport and telecommunication in order to respond effectively to the change in demand of the international market.

With the rapid diffusion of FDI flows toward poorer provinces as the result of infrastructure improvement, FDI flows will contribute better and more significantly to regional economic growth and reduce the gap between rich and poor regions in Vietnam.

8.6. Conclusion.

In conclusion, the examination of FDI flows in Vietnam over the 1988-1998 period has led to several policy implications including the recognition of FDI flows as an important supplementary source of investment, the need for more concentration of FDI flows into export-oriented industries, the necessity of gradual reduction of protection for infant industries, the perception of close relations between FDI flows and economic integration process and the need for more equal regional allocation of FDI flows. If such policy implications are implemented, they will make Vietnam more attractive and competitive to attract FDI flows and make FDI flows more useful for economic growth and poverty alleviation, and hence for socio-economic development in Vietnam.

CHAPTER IX:
CONCLUSION

The previous chapters have examined the impacts and analysed the contribution of FDI flows to the socio-economic development of Vietnam. Moreover, attention has been paid to the government policies that help to maximise the useful impacts and minimise the detrimental effects of FDI. In general, large amounts of FDI flow to developing countries every year to exploit their comparative advantages of cheap labour and abundant natural resources and hence, it is suggested, contribute to socio-economic development. However, the extent and the nature of the contribution of FDI, whether useful or detrimental, is still the topic for debates between several schools of thought, notably the mainstream and radical views.

The mainstream view argues that the developing countries on the way to take-off are likely to face the four constraints of: the savings-investment gap, foreign exchange gap, fiscal gap and skill and technology gap. It suggests FDI flows to developing countries will cover those gaps and hence promote economic growth (Rostow 1963; Chenery and Strout 1966; Chenery and Cater 1973; Papanek 1973; Kojima 1978, 1991; Dowling and Hiemenz 1983; Ozawa 1992; WB 1997a). According to the mainstream view, FDI contributes directly to gross national investment by providing supplementary investment sources and indirectly by promoting domestic savings through generating backward and forward effects. FDI flows also help to cover the foreign exchange gap by providing directly much-needed foreign exchange and more importantly, promoting export production through providing access to the international market. The mainstream view also argues that FDI flows have boosted government revenue by paying taxes or royalties on foreign invested projects. Moreover, FDI flows have also been considered as a major way of transferring modern technology to developing countries.

The mainstream view argues that, as FDI flows help cover those gaps, FDI flows will facilitate the industrialisation process in developing countries, promote economic growth and, in the long run, contribute to the alleviation of poverty in developing countries by generating employment and increasing incomes. There are several examples and empirical evidence, especially in the cases of Asian newly industrialising

countries (NICs), to support the positive role of FDI flows on socio-economic development.

The radical view takes the opposite view in arguing that FDI flows are detrimental to socio-economic development, that FDI flows are the means by which developed countries extract profit from developing countries and keep poor countries in a state of underdevelopment (Baran 1957; Frank 1966 and 1969; Cardoso 1972; Amin 1977; Bornschier et al. 1978; London 1987, 1988; Korten 1995; Lall and Streeten 1997). In particular, the radical view argues that FDI flows have contributed little to gross national investment and FDI flows have not stimulated, but decreased domestic savings by crowding out local entrepreneurs. Moreover, FDI flows also lead to deterioration of the balance of payments as a consequence of substantial importation of intermediate products and capital goods as well as repatriation of profits, interests, royalties and management fees. On the other hand, the contribution of MNCs to government budgets has been considerably less than it should have been as result of tax concessions, subsidies and transfer pricing. Technology transfer under FDI flows, according to the radical view, is capital-intensive and not suitable for developing countries. Such detrimental effects of FDI flows have been argued to be intensified during the globalisation process.

Based on those arguments, the radical view concludes that FDI flows have not only failed to promote economic growth but have in fact, lowered economic growth. Moreover, the radical view also argues that FDI flows have not reduced but have actually exacerbated the poverty problem in developing countries by negatively impacting on income distribution, failing to address the unemployment problems and creating undesirable consumption patterns. The arguments of the radical view on the detrimental effects of FDI flows have also been supported by several examples, but little in the way of firm empirical evidence.

While the theoretical debates between mainstream views and radical views on the role of FDI flows in the socio-economic development are inconclusive, the examples and empirical evidence are also mixed. FDI flows have provided positive impacts in socio-economic development in some developing countries, especially Asian NICs, but generated many detrimental effects in other developing countries. The answer to such

inconclusive debates and mixed evidence may well line in the role of government. Where the government follows a strategy of less direct intervention in the operation of foreign investors, minimising such requirements as operation requirements, ownership requirement or providing inappropriate investment incentives, but rather makes them appropriate to the country's real conditions and focuses on creating a favourable environment for FDI through implementing export-oriented industrialisation strategy, FDI flows tend to be useful and have fewer detrimental effects. In contrast, where the government follows a strategy of direct excessive intervention on the flows and operation of foreign investors, and implements import-substitution industrialisation strategies, FDI tends to produce detrimental effects that outweigh its positive contribution to the socio-economic development process.

The experience of Central and Eastern European countries and the former Soviet Union in the transition towards a market economy shows that during the transition period when the market institutions have not been fully established, government intervention is needed to guarantee successful attraction and utilisation of FDI flows. This statement seems to be appropriate in the case of FDI flows in Vietnam, where the socio-economic reform towards a market-oriented economy in general and the government policies in particular, successfully attracted large amounts of committed and implemented FDI during the 1988-1998 period. Moreover, the government policies have also created the necessary conditions to maximise the useful contribution and minimise the detrimental effects of FDI flows on socio-economic development in Vietnam.

Over the 1988-1998 period, about $35.3 billion of FDI was committed, of which $14.2 billion was implemented. Such large amounts of FDI commitment and implementation made Vietnam second in the world in terms of FDI as a percentage of GNP in 1996 (WB 1997a, p.17). The large amount of FDI flows to Vietnam during the 1988-1998 period was mainly attributed to Vietnam's locational advantages of natural and human resources, large local market and positive government attitude toward FDI flows. On the other hand, other factors such as the increase in labour cost in developed countries and the internalisation factors also contributed to the large amount of FDI flows to Vietnam.

In general, FDI flows have created significant impacts on domestic savings and gross national investment, foreign exchange earnings and government budget, and hence

economic growth. FDI flows have contributed directly to gross national investment by bringing in supplementary investment capital and indirectly by contributing to improvement in the infrastructure system, by generating backward effects. The analysis found no evidence that FDI flows have competed with state-owned enterprises (SOEs) or private enterprises and in fact there are several factors that promote the co-operation between them. FDI flows also contributed to generate foreign exchange earnings by having access to concessional credit sources, promoting export-oriented production through the provision of modern technology, capital and access to the international market. In 1998, exports generated by FDI flows accounted for over 21 percent of Vietnam's exports.

Such contributions of FDI flows in Vietnam, and the contribution to government budget, over the 1988-1998 period helped to cover the saving-investment gap, foreign exchange gap, fiscal gap and hence provided significant impacts on GDP growth. The average contribution of FDI to GDP growth was between 1 percent to 1.5 percent over the 1993-1998 period. FDI flows also contributed to economic growth in Vietnam by creating whole new industries or by increasing significantly the output of existing industries such as the oil and gas industries, automobiles, electronics, garments, and steel.

Regarding technology transfer, FDI flows in Vietnam over the 1988-1998 period brought with them modern technology, contributed to the production of new products and improvement in the quality of existing products and, in general, generated higher productivity. Moreover, FDI flows have also supported the industrialisation process by promoting industrial growth, facilitating the dual industrialisation strategy of development of both export-oriented industries and import-substitution industries. FDI flows contributed significantly to industrial growth by providing additional industrial capital and the average contribution of FIEs was about half of total Vietnam's industrial growth in the 1995-1998 period.

The contribution of FDI flows to support export-oriented industries has been very significant. While only half of actual FDI flows has been channelled to industries in which Vietnam has comparative advantages, FDI flows have contributed significantly to

promote the development of export-oriented industries as FIEs are the major factors behind the increase in output of export-oriented industries in Vietnam.

On the other hand, half of actual FDI flows has been channelled to import substitution industries and such FDI flows have played an important role in promoting the development of key infant import-substitution industries by creating whole new industries or extending the existing industries. Between 1994 and 1998, FDI flows contributed to over 70 percent of the increasing capital of those industries but only 14 percent of the increasing output of those industries.

As far as regional development is concerned, FDI flows have concentrated in the Red River Delta and Southeast regions, especially in large cities like Ha Noi, Hai Phong and Ho Chi Minh cities, though this imbalance has been improved in recent years as FDI flows started to diffuse to other surrounding regions. The regression analysis on the factors influencing the provincial allocation of FDI flows between regions and provinces found that the level of infrastructure, the quality of labour force and the size of local industry played the decisive role in attracting FDI flows between the regions and provinces. Though FDI flows have been unequally allocated between provinces and regions, they have contributed significantly to regional economies by providing additional capital and increasing each region's output.

Regarding poverty alleviation, while Vietnam achieved an impressive reduction of poverty incidence over the 1993-1998 period, the direct contribution of FDI flows to poverty alleviation has not been significant. The number of job places created by FDI flows accounted for under 1 percent of Vietnam's labour force and concentrated mainly in industrial areas, while nearly 80 percent of poor people work mainly in the agricultural sector. The main contribution of FDI flows to poverty alleviation in Vietnam has been indirect impacts through promoting rapid economic growth that, in turn, will create higher employment opportunity and income for poor people.

The significant contribution of FDI flows in Vietnam over the 1988-1998 period has been attributed to the role of government policies that maximised their positive impacts and minimised their detrimental effects. The government's policies on the one hand generated a relatively favourable environment to attract FDI flows, but on the other

hand made sure that FDI flows generated positive impacts on the local economy through backward effects, technology transfer and making use of Vietnam's comparative advantages of cheap and well-educated labour. Several regression analyses have shown the importance of government policies such as tax preference policies, domestic protection policies etc. on the performance of FIEs as well as the FIEs' export performance.

The importance of government policies in attracting FDI flows and guaranteeing the positive contribution of FDI flows in Vietnam over the 1988-1998 period also calls for several changes or adjustments in government policies in order to make Vietnam more attractive to FDI flows compared other countries in the region. Such changes and adjustments include the improvement of the legal and operational environment, moving toward more concentration of FDI flows into export-oriented industries, gradually reducing the protection for the domestic market and infant import-substitution industries under the circumstance of economic integration progress, and changes in government policies to achieve more equal regional allocation of FDI flows. Those changes and amendments, if implemented, will remove several obstacles that contributed to the slow-down of FDI flows in Vietnam which has occurred since the late 1990s.

The examination of FDI flows in Vietnam over the 1988-1998 period has illustrated the arguments put forward by both the mainstream and radical views as the operation of FDI in Vietnam during the 1988-1998 period has shown the positive impacts, the limitations and the potential detrimental effects of FDI flows.

The contribution of FDI flows to Vietnam's economic growth has supported the arguments of the mainstream theorists such as Rostow (1963), Chenery and Strout (1966), Papanek (1973), Dowling and Hiemenz (1983) or the view of the World Bank (1997a) that FDI flows bring in the supplementary capital and necessary modern technology and management skills. As a result, FDI flows promote economic growth and industrialisation in Vietnam.

On the other hand, the radical theorists such as Frank (1969), Bornschier et al. (1978), London (1987, 1988), Boswell and Dixon (1990), Wimberley (1991) and Lewellen (1995) are right when criticising FDI flows for failing to tackle the poverty problem

directly. The FDI flows in Vietnam over the 1988-1998 period did not generate a significant number of employment places compared to SOEs or the private sector. Moreover, the disparity of allocation of FDI flows between provinces, between sectors and between rural and urban areas also worsens the income inequality problem in Vietnam. The radical theorists such as Frank (1969), Lall and Streeten (1997) are also right when pointing out several potential problems accompanying FDI flows, such as crowding out local entrepreneurs, outflows of foreign exchanges, transfer of inappropriate technology or transfer pricing. Those problems either have happened, or threaten to happen in Vietnam.

While the practice of FDI flows in Vietnam supports the arguments of both the mainstream and radical views, in general the positive contribution of FDI flows over the 1988-1998 period has very much outweighed the detrimental effects. The previous chapters have shown the important role of FDI flows in socio-economic development in Vietnam. It has been widely accepted that the successful attraction and effective utilisation of FDI flows over the 1988-1998 period is one of the most important achievements of Vietnam's reform towards a market economy.

Such achievement has been attributed to the role of Vietnam' government policies and intervention. In the case of Vietnam in the transition period towards a market economy, government policies and intervention have been designed to promote the positive impacts and minimise the limitations and potential detrimental effects of FDI flows. The findings of this thesis support the arguments of Deyo (1987), Amsden (1989) and Wade (1991) that governments have played a central and significant role in the socio-economic development process in developing countries. This thesis, however, disagrees with the arguments of the mainstream writers and practitioners, especially the World Bank (1997a), who suggest that government's role should be kept to a minimum in order to facilitate the operation of foreign investors.

This thesis shows a positive picture of FDI flows in Vietnam and argues that the government intervention was fairly successful in making use of FDI flows in Vietnam over the 1988-1998 period. This may contradict many arguments of western researchers who have focused on the difficulties of getting foreign invested projects operating in Vietnam or on the decline of FDI flows as a consequence of the regional financial crisis

(Fforde and deVylder 1996; WB 1999b; IMF 1999, Dixon 2000). Those researchers have not paid much attention to the contribution of FDI flows to Vietnam's economy, the profit that foreign investors have received through investing in Vietnam as well as the impacts of government intervention on FDI flows. Those researchers argued that the government of Vietnam needs to liberalise further the economy and limit the government intervention, that Vietnam has forgone many advantages that FDI flows may bring to Vietnam if the economy was liberalised further. However, they forget to add that the detrimental effects of FDI flows as mentioned by the radical view may also have been larger without government intervention.

As Vietnam is in the transition period towards a market economy, government intervention is needed to attract and utilise FDI flows effectively and at the same time to maintain socio-economic stabilisation, promote the development of local entrepreneurs, and tackle the poverty problem effectively.

The findings of this thesis about the role of FDI flows in socio-economic development in Vietnam during the transition period prove that there is no single development theory: either the mainstream view or radical view can be applied in totality to explain the development of each countries as well as the contribution of FDI flows. To understand the development and the contribution of FDI in developing countries requires the combination of several development theories. Moreover, the role of the government and the appropriateness of its intervention in the socio-economic development process need to be taken into account. There is no fixed format for government intervention. Laissez-faire or centrally-planned system may work for one country but not for the others. The practice of attracting and utilising FDI flows in Asian NICs and in Vietnam reveals that only the appropriate government intervention in accordance with the real development conditions of each country will guarantee the successful attraction and utilisation of FDI flows. The findings of this thesis support the important role of government intervention in attracting and utilising FDI flows in Vietnam. Government policies, especially tax incentives and trade policies, have played a decisive role in the performance of FIEs. As mentioned in chapter III, the implementation of the export-oriented industrialisation (EOI) and infant industry protection strategies is very important in attracting and making use of FDI. The findings of this thesis prove that while the implementation of an infant industry protection

strategy will attract large amounts of FDI flows and create an essential foundation for sustainable development, the protection should be limited to a few key industries and only for certain period of time. The implementation of EOI strategy, however, will help to maximise the positive impacts and minimise the negative effects of FDI flows. In addition, government intervention to develop social and economic infrastructure in remote provinces will contribute to the attraction of FDI to remote and mountainous provinces.

While this thesis has examined several aspects of FDI flows in Vietnam, there are still several questions left unanswered which require further research. The regional financial crisis that has led to the reduction of FDI flows in Vietnam since 1997, and the strong reforms in neighbouring countries have raised many questions for a government such as that of Vietnam as to what reforms need to be implemented in the future, and what kind of government policies need to be changed in order to improve the investment environment of Vietnam. Moreover, further research is also needed in order to improve the disparity of FDI allocation between regions and provinces, and between export-oriented industries and import substitution industries. The operation of each individual FDI project, its impacts and problems are other aspects that lie beyond the scope of this thesis. Answering those questions in combination with the findings of this thesis will provide better lessons on how to make use of FDI flows in countries in the transition.

APPENDIX 1
ASEAN FREE TRADE AREA

The Association of Southeast Asian Nations (ASEAN), which originally included Malaysia, Indonesia, the Philippines, Singapore and Thailand, was established in 1967 and expanded its membership to Brunei in 1984, Vietnam in July 1995, Laos and Myanmar in July 1997 and Cambodia in April 1999.

In 1992 ASEAN countries created an ASEAN Free Trade Area (AFTA) with the major goal to reduce the tariff on intra-ASEAN trade to 0-5 percent in 15 years. This timeframe later reduced to 10 years in 1994 in an attempt to speed up the implementation of AFTA.

The AFTA is carried out through the Common Effective Preferential Tariff (CEPT) Scheme that includes following categories:

- *Fast track tariff reduction*: products with tariff rates above 20 percent will be reduced to 0-5 percent by 2000 and tariff rates at or below 20 percent will be reduced to 0-5 percent by 1 January 1998.
- *Normal track*: tariff rates above 20 percent must be reduced to 20 percent by 1 January 1998 and 0-5 percent by 1 January 2003 while tariff rates at or below 20 percent must be reduced to 0-5 percent by 1 January 2000.
- *Temporary exclusions*: tariff reductions for products belong to "sensitive list" may be postponed till January 2000. However, these products will be phased in to the inclusion list in equal instalments beginning 1 January 1996 to 1 January 2000.
- *General exceptions and sensitive agricultural products*: includes products that considered important for national security, public morals, health and environment and some agricultural products.

Moreover, it was agreed that quantitative restrictions and non-tariff barriers would be removed on a gradual basis in the five years from 1992. In order to qualify for tariff preference under CEPT, the products had to have ASEAN content of at least 40 percent (Pelkmans and Balaoing 1998 pp. 206-207).

In the ASEAN summit in 1998, it was agreed that CEPT tariff rates are to be reduced to 0-5 percent by 2000. For the new members, the timeframe for reducing tariff to 0-5 percent was delayed to 2003 for Vietnam and 2005 for Laos, Cambodia and Myanmar (VIR 1998a p.12). In general, the CEPT covers over 90 percent of total products traded between ASEAN countries (Pelkmans and Balaoing 1998, p.207).

APPENDIX 2

SECTORS THAT ARE NOT ALLOWED TO ESTABLISH 100 PERCENT FOREIGN-OWNED ENTERPRISES

- Establishment and operation of international and domestic telecommunication system (only allow for Business Cooperation Contract)
- Exploitation and processing of oil and gas and precious mineral resources
- Building and operation of infrastructure in Industrial Zones, Export Processing Zones and high-tech zones
- Construction business
- Air-borne, railway and sea-borne transportation, passenger transportation, building of ports and airports (there are different regulations for Build-Operation-Transfer, Build-Transfer-Operation and Build-Transfer projects)
- Cement and Steel production
- Industrial explosive production
- Plantation, including long-term industrial crops
- Back packer tourism
- Cultural, sport and leisure activities

(NPPH 1999 p.288)

APPENDIX 3

THE LIST OF INDUSTRIAL PRODUCTS THAT NEED TO BE EXPORTED BY AT LEAST 80 PERCENT OF THE OUTPUT

- Two-wheel motorbike
- Car, small truck of less than 10 tons
- Irrigation pump with capacity of less than 30 000 cubic meter per hour, ordinary pump of less than 540 cubic meter per hour
- Medium and low voltage electrical cable
- Ordinary telecommunication cable
- Vessel with capacity of less than 30 000 tons, fishing ships of less than 1000 c.v. and other inland water transport means.
- Audio-video products
- Aluminum bar
- Construction steel with diameter of less than 40 mm
- Bath tiles and toilet ceramics
- NPK fertiliser
- Detergent
- Ordinary and construction paint
- Battery (lead and acid)
- PVC
- Bicycle and motorbike tube and tire
- Soda (NaOH) and Acid (H_2SO_4, HCL)
- Electrical fan
- Bicycle and accessories
- Transformer of less than 35 KV
- Diesel engine of less than 15 c.v.
- Garment
- Footwear
- Ordinary plastic products

(NPPH 1999 p.335)

APPENDIX 4

REGRESSION ANALYSIS ON EXPORT PERFORMANCE OF FOREIGN INVESTED ENTERPRISES, 1995-1998

1. Data

1996

	ER96	PROTECT	FOREIGN	TAX	TECH	COUNTRY
Project 1	0.9759	1	1	0.02	0	4
Project 2	0.7779	0	0.6	0	1	7
Project 3	0.0087	0	0.75	0.0386	0	4
Project 4	1	0	0.6	0.0327	0	7
Project 5	0.0137	1	0.65	0.1354	0	7
project 6	0.8638	0	0.7	0.0345	0	7
project 7	0.2676	0	1	0.0491	0	7
project 8	0	0	0.7	0.0154	1	1
project 9	0.0485	1	1	0.0359	0	4
project 10	1	1	0.7	0.0037	0	4
project 11	0	0	0.57	0.1083	0	5
project 12	0	1	0.5	0	1	2
project 13	0.9764	0	1	0.003	0	7
project 14	0.017	0	0.7	0.0474	1	7
project 15	0	0	0.65	0.0464	0	3
project 16	0	0	0.45	0.0594	0	7
project 17	1	0	1	0.009	0	7
project 18	1	0	0.7	0.0533	0	4
project 19	0	1	0.6	0.0086	0	7
project 20	1	0	0.5	0.0057	0	7
project 21	0	1	0.51	0.0215	0	7
project 22	0.7428	0	0.5	0.0049	0	7
project 23	0.1154	1	0.61	0.0299	0	7
project 24	0	0	1	0.0316	0	7
project 25	0.931	1	1	0.0029	1	7
project 26	1	0	1	0.0061	0	4
project 27	0	0	0.64	0.0229	0	3
project 28	1	0	0.75	0	0	6
project 29	0	1	0.67	0.0075	0	2
project 30	1	0	0.7	0	0	4
project 31	1	1	1	0	0	7
project 32	1	0	0.5	0	0	7
project 33	0	0	1	0	0	7
project 34	0.9921	0	0.93	0.0001	0	7

	ER96	PROTECT	FOREIGN	TAX	TECH	COUNTRY
project 35	0.2431	1	0.51	0	0	7
project 36	0.7499	1	0.7	0.01	0	7
project 37	0	1	0.8	0	0	4
project 38	0	1	0.555	0.0072	0	6
project 39	0	1	0.6	0	0	4
project 40	1	0	1	0	0	7
project 41	0	0	0.53	0.0061	0	3
project 42	0	1	1	0	0	5
project 43	0	1	0.6	0.0599	0	6
project 44	1	0	0.49	0	0	7
project 45	1	0	0.65	0	0	7
project 46	0.6325	1	0.654	0.0025	0	3
project 47	0	0	0.7	0	0	4

Source: MPI database

1997

	ER97	PROTECT	FOREIGN	TAX	TECH	COUNTRY
project 1	1	1	1	0	0	4
project 2	0.0848	0	0.6	0.01	1	7
project 3	0.0067	0	0.75	0.0134	0	4
project 4	0	1	0.7	0.0011	0	6
project 5	0	1	1	0.0901	0	5
project 6	0.9732	0	0.7	0.0086	0	7
project 7	0.85	0	0.6	0.012	0	6
project 8	0	1	1	0.0096	0	5
project 9	0.9065	0	0.5	0.006	0	2
project 10	1	0	0.7	0	0	7
project 11	0	0	0.787	0.0599	0	6
project 12	0.3482	0	1	0.0432	0	7
project 13	0	0	0.7	0	1	1
project 14	1	0	0.7	0.19	0	7
project 15	0.0472	1	1	0.0436	0	4
project 16	0.5266	0	0.75	0.0735	0	3
project 17	0.0011	1	1	0.0028	1	3
project 18	1	1	0.6	0.0512	1	7
project 19	0.0818	1	0.7	0	0	4
project 20	0	0	0.57	0.0496	0	5
project 21	0.0075	1	0.5	0.0652	1	2
project 22	0.0221	0	0.778	0.0319	0	3
project 23	0.8982	0	0.7	0.0144	0	4
project 24	0.0027	0	0.845	0.0414	0	5
project 25	0.184	0	0.73	0.029	0	7

	ER97	PROTECT	FOREIGN	TAX	TECH	COUNTRY
project 26	0.7779	1	1	0.0182	0	5
project 27	0.9848	0	1	0.0889	0	7
project 28	1	0	1	0	1	3
project 29	0	0	1	0	1	4
project 30	0.0019	1	0	0.0256	0	4
project 31	0.047	0	0.65	0.0479	0	7
project 32	0	0	0.65	0.006	0	3
project 33	0.1964	0	0.45	0	0	7
project 34	0	0	0.5	0.0628	0	6
project 35	0	1	0.71	0.0874	1	7
project 36	0.6524	1	0.7	0.0133	0	7
project 37	1	0	1	0	0	7
project 38	0.176	0	0.6	0.0133	0	4
project 39	1	0	0.7	0	0	4
project 40	0.0032	1	0.6	0.0037	0	4
project 41	0.0544	1	0.6	0.0799	0	7
project 42	1	0	0.7	0.0066	0	4
project 43	0	0	1	0.0235	0	3
project 44	1	0	1	0	0	7
project 45	0	1	1	0	0	3
project 46	0.0067	1	0.6	0.0058	0	7
project 47	1	0	0.5	0	0	7
project 48	1	1	0.5	0.0092	0	6
project 49	0.0296	1	0.6	0.0724	0	7
project 50	1	0	0.5	0	0	7
project 51	0.7077	0	1	0.0239	0	5
project 52	0	0	0.5	0.0098	0	3
project 53	0.2101	1	0.51	0.0378	0	7
project 54	0.5204	1	0.8	0.0045	0	7
project 55	0.6974	0	0.5	0	0	7
project 56	0.0334	1	0.811	0.0287	0	4
project 57	0	1	0.61	0.0386	0	7
project 58	0.1102	1	1	0.0026	0	7
project 59	0	0	0.7	0.005	0	7
project 60	0.0905	1	0.7	0.025	0	4
project 61	0	1	0.6	0.0026	0	7
project 62	0.6047	1	1	0.0158	0	3
project 63	1	0	0.7	0.0559	0	7
project 64	0.9397	1	1	0.0012	1	7
project 65	0	1	0.7	0.02	0	7
project 66	0.9544	0	0.7	0.0029	0	5
project 67	1	0	1	0.0036	0	4

	ER97	PROTECT	FOREIGN	TAX	TECH	COUNTRY
project 68	0.9371	0	1	0.0001	0	7
project 69	0.012	0	0.64	0	0	3
project 70	0.9989	0	1	0.0314	0	6
project 71	0.1545	1	0.7	0.07	0	6
project 72	0.9978	0	0.75	8E-05	0	6
project 73	0	1	0.5	0.0065	0	5
project 74	0	1	0.67	0.0156	0	2
project 75	0.6458	1	0.7	0.0098	0	7
project 76	0.1015	1	0.55	0.0103	0	7
project 77	0	1	0.65	0.0269	0	3
project 78	0.7907	0	1	0.0073	0	7
project 79	0	0	0.7	0	1	7
project 80	1	0	0.7	0	0	4
project 81	0.0029	1	1	0.011	0	6
project 82	0	1	1	0.0344	0	7
project 83	0	0	1	0.1164	0	7
project 84	0	1	0.75	0.0114	0	7
project 85	1	1	0.7	0.0001	0	7
project 86	0.1295	1	1	0.0346	0	7
project 87	0.9129	1	1	0	0	7
project 88	1	0	0.5	0	0	7
project 89	0	1	1	0.1855	1	5
project 90	0.1605	1	1	0.0361	0	3
project 91	1	0	0.93	0.0552	0	7
project 92	0.8225	1	0.51	0.007	0	7
project 93	0	1	1	0.017	0	7
project 94	0.3888	1	1	0	1	7
project 95	0	1	1	0	1	7
project 96	0	1	1	0.02	0	5
project 97	0.2069	1	0.7	0.0235	0	7
project 98	0.007	1	0.8	0.0357	0	4
project 99	0	0	1	0.039	1	3
project 100	1	1	0.75	0	0	6
project 101	0	0	1	0.0043	1	7
project 102	0	1	0.677	0.0209	0	7
project 103	1	0	0.6	0	0	7
project 104	0	1	0.4	0.04	0	3
project 105	0.0005	1	0.555	0.0187	0	6
project 106	1	1	0.6	0	0	4
project 107	0	1	0.664	0.0301	1	1
project 108	0.5091	0	1	0.0203	0	6
project 109	0.2	1	0.7	0.0014	0	6

	ER97	PROTECT	FOREIGN	TAX	TECH	COUNTRY
project 110	0	1	0.7	0.0113	0	4
project 111	0.9724	0	1	0.001	0	6
project 112	0	0	0.6	0	0	4
project 113	0	1	0.7	0.0144	0	1
project 114	0	1	0.75	0.0347	0	6
project 115	1	0	1	0	0	7
project 116	0	1	1	0.0108	0	6
project 117	0	0	0.7	0.08	0	3
project 118	0	0	0.53	0.0167	0	3
project 119	0.7796	0	1	0.0088	0	7
project 120	0	1	1	0.02	0	7
project 121	0	0	0.7	0.0677	0	3
project 122	0.8306	1	0.5	0.0071	0	7
project 123	1	1	1	0	0	6
project 124	1	0	1	0.0087	0	6
project 125	0.5369	1	0.543	0.0172	0	6
project 126	1	0	0.7	0	0	7
project 127	0	1	0.7	0	0	6
project 128	0	1	0.7	0	0	4
project 129	0.9997	0	1	0	0	6
project 130	0.3174	1	1	0.0156	0	5
project 131	1	0	1	0	0	7
project 132	0.0743	1	1	0.04	0	4
project 133	0	1	1	0	0	2
project 134	0	1	0.6	0.0364	0	6
project 135	1	0	0.49	0	0	7
project 136	1	0	0.65	0	0	7
project 137	0.9644	1	1	0	0	6
project 138	0.7583	1	0.7	0.0047	0	3
project 139	0	1	0.7	0.0049	0	6
project 140	0.0619	1	1	0.071	0	6
project 141	0	0	1	0	1	3
project 142	0	1	0.6	0.0183	0	6
project 143	0	1	0.68	0.0384	0	6
project 144	0.0795	0	1	0.0329	0	7
project 145	0	1	0.64	0.007	0	7
project 146	0	0	1	0.04	0	6
project 147	1	1	1	0.04	0	7
project 148	0.2069	1	0.7	0.0494	0	3
project 149	0.8868	0	0.7	0.04	0	3
project 150	0	1	0.7	0.02	0	6
project 151	0	0	0.7	0.0389	0	7

	ER97	PROTECT	FOREIGN	TAX	TECH	COUNTRY
project 152	1	0	0.7	0	0	7
project 153	0.0118	0	0.6	0.0158	0	3
project 154	0	1	1	0.015	0	3
project 155	0.998	1	0.7	0.005	0	4
project 156	0.2111	0	1	0.0096	0	7
project 157	1	0	0.7	0.1	0	7
project 158	0	0	0.7	0	0	7
project 159	0	0	0.5	0.0196	0	4
project 160	0.8403	1	0.654	0.003	0	3
project 161	0.9572	1	0.65	0.0004	0	7
project 162	0	1	0.7	0.0184	0	7
project 163	1	0	1	0	1	3
project 164	0	0	0.7	0	0	4

Source: MPI database

1998

	ER98	PROTECT	FOREIGN	TAX	TECH	COUNTRY
project 1	0.0304	0	0.7	0.0393	0	5
project 2	0.005	1	0.6	0.0373	0	4
project 3	0	0	0.6	0.0094	0	7
project 4	0.728	0	0.55	0.0004	0	4
project 5	0	0	0.7	0.0206	0	3
project 6	0.6125	1	0.67	0.0057	0	5
project 7	0	1	1	0	1	5
project 8	0.012	1	0.65	0.0253	0	4
project 9	0.0333	1	0.7	0.0077	0	2
project 10	0	1	0.6	0.0103	0	5
project 11	0.0024	1	0.7	0.021	0	7
project 12	0	1	0.6	0.0053	0	2
project 13	0.1194	1	0.664	0.0102	0	4
project 14	1	0	0.7	0	0	7
project 15	0	0	0.543	0.0083	0	6
project 16	0.0986	0	0.75	0.0304	0	4
project 17	0.0064	1	0.65	0.0103	0	7
project 18	0	1	0.49	0.225	0	6
project 19	0.036	0	0.7	0.0098	0	4
project 20	0.0043	1	0.5	0.038	0	7
project 21	0	1	0.7	0.0401	0	3
project 22	1	0	0.6	0.0007	0	7
project 23	0	1	0.5	0.0199	0	5
project 24	0.073	1	0.5	0	0	7

	ER98	PROTECT	FOREIGN	TAX	TECH	COUNTRY
project 25	0	1	0.67	0.01	0	6
project 26	0	0	0.49	0	0	3
project 27	0.0098	1	0.667	0	0	4
project 28	1	0	0.6	0	0	6
project 29	0.0023	0	0.5	0.0268	0	3
project 30	0.9987	1	0.6	0.0153	0	4
project 31	0.0128	1	0.7	0.0233	0	7
project 32	0.0069	1	0.7	0.0099	0	3
project 33	1	0	0.65	0	0	7
project 34	0.4534	1	0.7	0.0032	0	7
project 35	0	1	0.7	0	0	2
project 36	0	1	0.7	0.04	0	3
project 37	0.7433	0	0.5	0.0243	0	5
project 38	0	0	0.677	0.0051	1	7
project 39	1	0	0.7	0	0	4
project 40	0	1	0.656	0.0099	1	6
project 41	0.7975	0	0.7	0.0286	0	7
project 42	0	1	0.7	0.04	0	7
project 43	0	1	0.6	0.0194	0	6
project 44	0.8197	1	0.7	0.0064	0	6
project 45	0.3024	1	0.3	0.0416	0	7
project 46	0	1	0.62	0.0109	0	6
project 47	1	0	0.51	0	0	7
project 48	0	0	0.6	0	0	4
project 49	0.0021	1	0.7	0.0196	0	6
project 50	0.0476	1	0.7	0.0078	0	6
project 51	0	1	0.8	0.0387	0	6
project 52	0	1	0.7	0.0179	0	6
project 53	0.007	1	0.5	0	0	7
project 54	0.1523	1	0.8	0.0364	0	7
project 55	0.619	1	0.7	0.0083	0	7
project 56	0.3385	1	1	0.0229	0	6
project 57	0.0008	1	0.7	0.0201	0	6
project 58	0	0	0.787	0.0599	0	6
project 59	0.2823	0	1	0.0053	0	7
project 60	0.0185	1	1	0.0098	0	7
project 61	0.411	0	1	0.0324	0	7
project 62	0.9324	0	1	0.0169	0	7
project 63	0.9974	0	0.5	0.0124	0	6
project 64	0.6185	1	0.55	0.0125	0	7
project 65	0.2412	1	0.7	0.0166	0	3
project 66	0.218	0	0.7	0.0291	0	7

	ER98	PROTECT	FOREIGN	TAX	TECH	COUNTRY
project 67	0.4697	0	1	0.0552	0	3
project 68	0	0	0.6	0.0397	0	7
project 69	1	1	1	0	0	7
project 70	0	1	0.68	0.0241	0	3
project 71	0	1	0.7	0.0107	0	3
project 72	0.9689	1	1	0.0469	0	7
project 73	0	1	0.778	0.1111	0	5
project 74	0	1	1	0.02	1	7
project 75	0.5144	1	1	0.0173	0	7
project 76	0.0567	1	1	0.0193	0	7
project 77	0	1	1	0.02	1	7
project 78	0.2126	0	0.5	0.121	0	7
project 79	0	1	0.7	0.0027	0	6
project 80	0	0	0.6	0	1	3
project 81	0.1314	1	0.7	0.0153	0	3
project 82	0.7356	1	1	0.0146	0	6
project 83	0	1	0.7	0.0208	0	7
project 84	0	0	0.7	0.0281	0	3
project 85	0.7176	1	1	0.0113	0	7
project 86	0.9206	1	1	0.0027	0	7
project 87	0.1701	0	1	0.2322	0	3
project 88	0.7315	1	0.6	0.0759	0	6
project 89	0	0	1	0.0392	0	7
project 90	0	1	1	0.0152	0	5
project 91	0	1	0.7	0.0073	0	6
project 92	0	1	0.7	0.0097	0	6
project 93	0.0663	1	0.6	0.0345	0	4
project 94	1	0	1	0.0145	0	4
project 95	1	1	1	0	0	6
project 96	0.833	1	0.7	0.0048	0	3
project 97	0.3996	0	1	0.1253	0	7
project 98	1	0	1	0	0	7
project 99	0	0	1	0	0	3
project 100	0	1	0.5	0	0	7
project 101	0	1	1	0.027	0	5
project 102	0	1	0.5	0.0438	0	4
project 103	1	0	1	0	0	7
project 104	0.8343	1	1	0.0066	0	7
project 105	0.7854	1	1	0	0	6
project 106	0	0	0.7	0.0272	0	1
project 107	0	1	0.75	0.0274	0	7
project 108	1	1	0.7	0	0	7

	ER98	PROTECT	FOREIGN	TAX	TECH	COUNTRY
project 109	0.0494	1	0.55	0.0387	0	7
project 110	0	1	1	0.04	0	7
project 111	0.8357	0	1	0.0005	0	6
project 112	0	1	0.7	0.0051	0	6
project 113	0.1918	0	1	0.3732	0	3
project 114	0.1071	1	0.7	0.0266	0	3
project 115	0	1	0.8	0.04	1	7
project 116	0	1	1	0.015	0	1
project 117	1	0	1	0	0	6
project 118	0.9546	0	1	0	0	7
project 119	0	0	1	0.0298	0	1
project 120	1	0	1	0.0007	1	6
project 121	0.9537	0	1	0.002	0	5
project 122	0	1	1	0.01	0	6
project 123	0	1	1	0	0	7
project 124	0	1	0.75	0.0203	0	1
project 125	0.9206	1	1	0	1	7
project 126	0.0084	1	1	0.0297	1	2
project 127	1	0	1	0	0	7
project 128	0	0	1	0.08	0	5
project 129	1	1	1	0	0	6
project 130	0.1458	1	0.65	0.0153	0	7
project 131	0.9164	1	0.7	0.0027	0	6
project 132	0	1	0.7	0.0132	0	7
project 133	1	0	1	0	0	7
project 134	0.2486	1	1	0.0115	0	7
project 135	0	0	0.7	0	1	7
project 136	0.97	0	1	0.0008	0	6
project 137	0	1	1	0.0126	0	5
project 138	0	0	0.6	0.0396	0	7
project 139	0	1	1	0.0385	0	6
project 140	0	1	0.7	0	0	6
project 141	0	0	1	0.0807	0	3
project 142	0.0156	0	1	0.1104	0	3
project 143	0	0	1	0.04	0	6
project 144	0	1	1	0	1	1
project 145	1	1	1	0.0003	0	6
project 146	0.7387	1	1	0.0066	0	7
project 147	0	1	0.7	0.0204	0	6
project 148	1.0002	0	1	0	0	7
project 149	0.9057	0	0.73	0	0	7
project 150	1	0	1	0	0	4

	ER98	PROTECT	FOREIGN	TAX	TECH	COUNTRY
project 151	0	1	1	0.0388	0	4
project 152	0.0137	1	0.64	0.0425	0	3
project 153	0	0	1	0.0371	1	3
project 154	1	0	0.7	0	0	6
project 155	0	1	1	0.0398	0	7
project 156	0.6109	0	1	0	0	3
project 157	0	1	0.7	0.0184	0	6
project 158	0	1	1	0.0052	0	1
project 159	0	1	1	0.0279	1	3
project 160	1	1	1	0	0	3
project 161	0.8585	1	1	0	0	4
project 162	0.0341	1	1	0.0099	0	3
project 163	0.037	1	1	0.0187	0	7
project 164	0.7726	1	1	0.0091	0	7
project 165	0.0072	0	1	0.0202	0	3
project 166	1	0	0.6	0.0005	0	7
project 167	0	1	0.7	0.0528	0	7
project 168	0.9473	0	1	0	0	7
project 169	0	1	0.51	0.0115	0	7
project 170	0	1	0.7	0.0537	1	7
project 171	1	1	1	0.0009	0	6
project 172	1	0	0.5	0.0113	0	7
project 173	0	0	0.45	0.0436	0	5
project 174	0	0	0.6	0.021	0	3
project 175	0	0	0.7	0.0349	0	6
project 176	0	0	0.7	0	1	1
project 177	0.4246	0	0.6	0.0223	1	7
project 178	0.0538	1	0.75	0.0372	0	6
project 179	6E-05	1	0.6	0.0032	1	3
project 180	1	0	1	0	0	7
project 181	1	1	1	0	0	4
project 182	0.7013	0	0.7	0.0134	0	7
project 183	0	0	1	0.0485	1	3
project 184	0	1	0.5	0	0	3
project 185	0.9956	1	1	0	0	7
project 186	1	0	1	0	0	7
project 187	1	1	1	0	0	7
project 188	0	1	1	0	0	5
project 189	0	0	0.654	0	0	4
project 190	0.9953	0	0.845	0.0104	0	4
project 191	0.4452	0	0.64	0.0071	0	7
project 192	0	1	1	0	0	5

	ER98	PROTECT	FOREIGN	TAX	TECH	COUNTRY
project 193	0	1	1	0.0202	0	4
project 194	0.0031	0	0.73	0.0417	0	5
project 195	0.807	0	0.6	0.0215	0	6

Source: MPI database

2. Regression Analysis

2.1. Correlation Matrix

For 1996

Correlations

		ER96	PROTECT	FOREIGN	TAX	TECH	COUNTRY
ER96	Pearson Correlation	1.000	-.274	.219	-.353*	-.081	.328*
	Sig. (2-tailed)	.	.062	.139	.015	.586	.024
	N	47	47	47	47	47	47
PROTECT	Pearson Correlation	-.274	1.000	-.017	-.041	-.003	-.124
	Sig. (2-tailed)	.062	.	.909	.786	.984	.406
	N	47	47	47	47	47	47
FOREIGN	Pearson Correlation	.219	-.017	1.000	-.132	-.043	.066
	Sig. (2-tailed)	.139	.909	.	.377	.777	.657
	N	47	47	47	47	47	47
TAX	Pearson Correlation	-.353*	-.041	-.132	1.000	-.078	.064
	Sig. (2-tailed)	.015	.786	.377	.	.602	.670
	N	47	47	47	47	47	47
TECH	Pearson Correlation	-.081	-.003	-.043	-.078	1.000	-.141
	Sig. (2-tailed)	.586	.984	.777	.602	.	.343
	N	47	47	47	47	47	47
COUNTRY	Pearson Correlation	.328*	-.124	.066	.064	-.141	1.000
	Sig. (2-tailed)	.024	.406	.657	.670	.343	.
	N	47	47	47	47	47	47

*. Correlation is significant at the 0.05 level (2-tailed).

For 1997

Correlations

		ER97	PROTECT	FOREIGN	TAX	TECH	COUNTRY
ER97	Pearson Correlation	1.000	-.297**	.083	-.193*	-.112	.242**
	Sig. (2-tailed)	.	.000	.290	.013	.154	.002
	N	164	164	164	164	164	164
PROTECT	Pearson Correlation	-.297**	1.000	-.021	.013	-.017	-.015
	Sig. (2-tailed)	.000	.	.789	.873	.827	.847
	N	164	164	164	164	164	164
FOREIGN	Pearson Correlation	.083	-.021	1.000	.034	.167*	.043
	Sig. (2-tailed)	.290	.789	.	.669	.032	.583
	N	164	164	164	164	164	164
TAX	Pearson Correlation	-.193*	.013	.034	1.000	.052	.031
	Sig. (2-tailed)	.013	.873	.669	.	.512	.695
	N	164	164	164	164	164	164
TECH	Pearson Correlation	-.112	-.017	.167*	.052	1.000	-.152
	Sig. (2-tailed)	.154	.827	.032	.512	.	.052
	N	164	164	164	164	164	164
COUNTRY	Pearson Correlation	.242**	-.015	.043	.031	-.152	1.000
	Sig. (2-tailed)	.002	.847	.583	.695	.052	.
	N	164	164	164	164	164	164

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

For 1998

Correlations

		ER98	PROTECT	FOREIGN	TAX	TECH	COUNTRY
ER98	Pearson Correlation	1.000	-.268**	.249**	-.245**	-.161*	.312**
	Sig. (2-tailed)	.	.000	.000	.001	.025	.000
	N	195	195	195	195	195	195
PROTECT	Pearson Correlation	-.268**	1.000	-.009	-.103	-.014	.030
	Sig. (2-tailed)	.000	.	.898	.151	.845	.681
	N	195	195	195	195	195	195
FOREIGN	Pearson Correlation	.249**	-.009	1.000	.014	.092	-.013
	Sig. (2-tailed)	.000	.898	.	.849	.201	.853
	N	195	195	195	195	195	195
TAX	Pearson Correlation	-.245**	-.103	.014	1.000	-.046	-.112
	Sig. (2-tailed)	.001	.151	.849	.	.520	.121
	N	195	195	195	195	195	195
TECH	Pearson Correlation	-.161*	-.014	.092	-.046	1.000	-.096
	Sig. (2-tailed)	.025	.845	.201	.520	.	.181
	N	195	195	195	195	195	195
COUNTRY	Pearson Correlation	.312**	.030	-.013	-.112	-.096	1.000
	Sig. (2-tailed)	.000	.681	.853	.121	.181	.
	N	195	195	195	195	195	195

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

2.2. Regression Analysis

Regression Analysis for 1996

Variables Entered/Removed[b]

Model	Variables Entered	Variables Removed	Method
1	COUNTRY, TAX, PROTECT, FOREIGN, TECH[a]		Enter

a. All requested variables entered.

b. Dependent Variable: ER96

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.578[a]	.334	.253	.404368	2.102

a. Predictors: (Constant), COUNTRY, TAX, PROTECT, FOREIGN, TECH

b. Dependent Variable: ER96

ANOVA[b]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	3.361	5	.672	4.111	.004[a]
	Residual	6.704	41	.164		
	Total	10.065	46			

a. Predictors: (Constant), COUNTRY, TAX, PROTECT, FOREIGN, TECH

b. Dependent Variable: ER96

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Correlations			Collinearity Statistics	
		B	Std. Error	Beta			Zero-order	Partial	Part	Tolerance	VIF
1	(Constant)	-1.67E-02	.313		-.053	.958					
	PROTECT	-.235	.121	-.249	-1.938	.060	-.274	-.290	-.247	.983	1.018
	FOREIGN	.360	.324	.144	1.112	.272	.219	.171	.142	.975	1.026
	TAX	-6.003	2.108	-.369	-2.848	.007	-.353	-.406	-.363	.971	1.030
	TECH	-9.32E-02	.194	-.062	-.480	.634	-.081	-.075	-.061	.973	1.028
	COUNTRY	7.832E-02	.034	.302	2.319	.025	.328	.341	.296	.958	1.044

a. Dependent Variable: ER96

Collinearity Diagnostics[a]

Model	Dimension	Eigenvalue	Condition Index	Variance Proportions					
				(Constant)	PROTECT	FOREIGN	TAX	TECH	COUNTRY
1	1	3.850	1.000	.00	.02	.00	.02	.01	.01
	2	.909	2.058	.00	.00	.00	.07	.85	.00
	3	.660	2.415	.00	.33	.00	.57	.07	.00
	4	.486	2.815	.00	.59	.01	.30	.03	.02
	5	7.179E-02	7.323	.01	.02	.32	.01	.01	.73
	6	2.410E-02	12.639	.98	.04	.66	.04	.03	.24

a. Dependent Variable: ER96

Residuals Statistics[a]

	Minimum	Maximum	Mean	Std. Deviation	N
Predicted Value	-.282254	.891515	.454389	.270306	47
Residual	-.891515	.771404	9.68E-17	.381759	47
Std. Predicted Value	-2.725	1.617	.000	1.000	47
Std. Residual	-2.205	1.908	.000	.944	47

a. Dependent Variable: ER96

Regression Analysis for 1997

Variables Entered/Removed[b]

Model	Variables Entered	Variables Removed	Method
1	COUNTRY, PROTECT, TAX, FOREIGN, TECH[a]	.	Enter

a. All requested variables entered.

b. Dependent Variable: ER97

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.443[a]	.196	.171	.40	2.092

a. Predictors: (Constant), COUNTRY, PROTECT, TAX, FOREIGN, TECH

b. Dependent Variable: ER97

ANOVA[b]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	6.195	5	1.239	7.710	.000[a]
	Residual	25.391	158	.161		
	Total	31.586	163			

a. Predictors: (Constant), COUNTRY, PROTECT, TAX, FOREIGN, TECH

b. Dependent Variable: ER97

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Correlations			Collinearity Statistics	
		B	Std. Error	Beta			Zero-order	Partial	Part	Tolerance	VIF
1	(Constant)	.126	.164		.765	.445					
	PROTECT	-.256	.063	-.291	-4.080	.000	-.297	-.309	-.291	.999	1.001
	FOREIGN	.202	.166	.088	1.217	.225	.083	.096	.087	.966	1.035
	TAX	-2.815	1.034	-.195	-2.722	.007	-.193	-.212	-.194	.995	1.005
	TECH	-.122	.103	-.087	-1.186	.237	-.112	-.094	-.085	.944	1.060
	COUNTRY	5.806E-02	.019	.227	3.131	.002	.242	.242	.223	.970	1.031

a. Dependent Variable: ER97

Collinearity Diagnostics[a]

Model	Dimension	Eigenvalue	Condition Index	Variance Proportions					
				(Constant)	PROTECT	FOREIGN	TAX	TECH	COUNTRY
1	1	4.041	1.000	.00	.02	.00	.02	.01	.00
	2	.871	2.154	.00	.01	.00	.00	.91	.00
	3	.602	2.590	.00	.09	.00	.91	.00	.00
	4	.393	3.207	.01	.84	.01	.07	.01	.02
	5	6.919E-02	7.642	.02	.00	.32	.00	.07	.74
	6	2.422E-02	12.915	.97	.03	.66	.00	.00	.23

a. Dependent Variable: ER97

Residuals Statistics[a]

	Minimum	Maximum	Mean	Std. Deviation	N
Predicted Value	-.28	.73	.39	.19	164
Residual	-.67	.87	1.10E-16	.39	164
Std. Predicted Value	-3.425	1.789	.000	1.000	164
Std. Residual	-1.680	2.167	.000	.985	164

a. Dependent Variable: ER97

Regression Analysis for 1998

Variables Entered/Removed[b]

Model	Variables Entered	Variables Removed	Method
1	COUNTRY, FOREIGN, PROTECT, TECH, TAX[a]	.	Enter

a. All requested variables entered.

b. Dependent Variable: ER98

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.571[a]	.326	.308	.348648	1.983

a. Predictors: (Constant), COUNTRY, FOREIGN, PROTECT, TECH, TAX

b. Dependent Variable: ER98

ANOVA[b]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	11.120	5	2.224	18.297	.000[a]
	Residual	22.974	189	.122		
	Total	34.094	194			

a. Predictors: (Constant), COUNTRY, FOREIGN, PROTECT, TECH, TAX

b. Dependent Variable: ER98

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Correlations			Collinearity Statistics	
		B	Std. Error	Beta			Zero-order	Partial	Part	Tolerance	VIF
1	(Constant)	-.263	.139		-1.894	.060					
	PROTECT	-.258	.051	-.303	-5.037	.000	-.268	-.344	-.301	.989	1.011
	FOREIGN	.602	.134	.269	4.487	.000	.249	.310	.268	.991	1.009
	TAX	-2.711	.638	-.257	-4.248	.000	-.245	-.295	-.254	.974	1.027
	TECH	-.246	.085	-.175	-2.894	.004	-.161	-.206	-.173	.979	1.022
	COUNTRY	6.610E-02	.014	.279	4.624	.000	.312	.319	.276	.977	1.024

a. Dependent Variable: ER98

Collinearity Diagnostics[a]

Model	Dimension	Eigenvalue	Condition Index	Variance Proportions					
				(Constant)	PROTECT	FOREIGN	TAX	TECH	COUNTRY
1	1	3.948	1.000	.00	.02	.00	.02	.01	.01
	2	.906	2.088	.00	.00	.00	.10	.85	.00
	3	.733	2.321	.00	.06	.00	.77	.10	.00
	4	.316	3.535	.01	.89	.01	.07	.01	.04
	5	7.613E-02	7.201	.02	.00	.26	.03	.03	.72
	6	2.155E-02	13.534	.97	.03	.72	.02	.00	.23

a. Dependent Variable: ER98

Residuals Statistics[a]

	Minimum	Maximum	Mean	Std. Deviation	N
Predicted Value	-.474504	.801622	.328266	.239419	195
Residual	-.695352	.935719	-3.1E-16	.344126	195
Std. Predicted Value	-3.353	1.977	.000	1.000	195
Std. Residual	-1.994	2.684	.000	.987	195

a. Dependent Variable: ER98

APPENDIX 5
LIST OF PRIORITY INDUSTRIAL INVESTMENT PROJECTS

- Exploration, exploitation and down-stream processing of minerals;
- Development of petrochemical industry;
- Production of high quality steel, alloy, non-ferrous metal, special metal, billet and sponge iron for industries;
- Manufacture of machine tools for metal machining;
- Manufacture of spare parts for automobile and motorbike; manufacture and assembly of equipment, vehicle and machinery for construction;
- Manufacture of diesel engines with advanced technique and technology; manufacture of machinery and spare parts for engines and hydraulic and compressing machine
- Building of ships; and manufacture of equipment and spare parts for cargo ships and fishing boats;
- Manufacture of equipment and component's pack for oil and gas exploitation and energy mines; manufacture of large-size lifting equipment;
- Manufacture of precision mechanical equipment; and jig and dies manufacturing;
- Manufacture of equipment for treatment of waste water;
- Manufacture of electrical middle and high voltage devices;
- Production of special cement, composite materials, sound-insulating materials, electrical-insulating materials, heat-insulating materials and wood-substitute synthetic materials;
- Production of silk; fibbers of various kinds, textile products for exports, and special fabric used in industries;

- Production of high quality materials for production of foot-wear and garment for export;
- Production of high quality package for export;
- Production of medicines meeting the GMP international standards; and production of new pharmaceutical products by biotechnology.

(NPPH 1999).

APPENDIX 6

REGRESSION ANALYSIS ON FOREIGN INVESTED ENTERPRISES PERFORMANCE, 1998

1. Data

	PROFIT	PROTECT	FOREIGN	YEAR	TAX	TECH	WAGE
project 1	-0.342	0	0.7	2	0.0393	0	39.342
project 2	0.0663	1	0.6	5	0.0373	0	140.7
project 3	-0.105	0	0.6	5	0.0094	0	53.648
project 4	0.0335	0	0.55	3	0.0004	0	60.801
project 5	-0.336	0	0.7	4	0.0206	0	57.225
project 6	-0.163	1	0.67	2	0.0057	0	486.05
project 7	-0.865	1	1	3	0	1	50.072
project 8	0.0253	1	0.65	6	0.0253	0	165.99
project 9	-1.382	1	0.6	1	0.0103	0	128.76
project 10	-0.042	0	0.7	7	0	0	32.189
project 11	-0.073	0	0.543	2	0.0083	0	57.225
project 12	0.0793	0	0.75	10	0.0304	0	35.765
project 13	-0.282	1	0.65	4	0.0103	0	127.68
project 14	-0.601	1	0.49	2	0.225	0	96.567
project 15	-0.243	0	0.7	6	0.0098	0	247.07
project 16	-0.059	1	0.7	3	0.0401	0	90.958
project 17	0.0112	0	0.6	5	0.0007	0	33.619
project 18	0.0445	1	0.5	3	0.0199	0	35.765
project 19	-0.416	1	0.5	1	0	0	143.06
project 20	-0.182	0	0.49	3	0	0	143.35
project 21	0.0143	1	0.667	3	0	0	35.765
project 22	0.0251	0	0.6	3	0	0	75.322
project 23	0.062	0	0.5	5	0.0268	0	80.365
project 24	0.1264	1	0.6	3	0.0153	0	35.765
project 25	-0.15	1	0.7	1	0.0099	0	140.34
project 26	-0.247	0	0.65	2	0	0	35.765
project 27	0.0788	1	0.7	4	0.0032	0	1795.3
project 28	0.0579	1	0.7	3	0	0	70.601
project 29	0.0092	1	0.7	3	0.04	0	30.794
project 30	0.2717	0	0.5	5	0.0243	0	102.82
project 31	-0.212	1	0.7	2	0.04	0	35.765
project 32	0.0339	1	0.6	3	0.0194	0	71.531
project 33	-0.387	1	0.7	2	0.0064	0	35.765
project 34	0.2023	1	0.3	5	0.0416	0	50.072
project 35	0.336	0	0.51	4	0	0	50.072
project 36	-0.096	0	0.6	6	0	0	55.079

	PROFIT	PROTECT	FOREIGN	YEAR	TAX	TECH	WAGE
project 37	0.0928	1	0.7	2	0.0196	0	117.24
project 38	-0.921	1	0.7	2	0.0078	0	110.87
project 39	0.1155	1	0.8	2	0.0387	0	110.87
project 40	-0.55	1	0.7	9	0.0179	0	107.3
project 41	0.018	1	0.5	4	0	0	62.16
project 42	0.0547	1	0.8	3	0.0364	0	78.684
project 43	0.0175	1	0.7	4	0.0083	0	61.373
project 44	-0.06	1	1	2	0.0229	0	50.072
project 45	-0.078	1	0.7	1	0.0201	0	60.801
project 46	-0.081	0	0.787	7	0.0599	0	103.72
project 47	-0.056	1	1	2	0.0098	0	35.765
project 48	0.0034	0	1	4	0.0324	0	47.887
project 49	-0.364	0	1	2	0.0169	0	35.765
project 50	-0.119	0	0.5	4	0.0124	0	59.152
project 51	-0.001	1	0.55	2	0.0125	0	53.648
project 52	0.0227	0	0.7	6	0.0291	0	46.897
project 53	0.1638	0	1	6	0.0552	0	42.918
project 54	-0.152	0	0.6	3	0.0397	0	39.342
project 55	0.3176	1	1	4	0.0469	0	70.092
project 56	0.1634	1	1	2	0.02	1	46.495
project 57	-0.564	1	1	2	0.0173	0	26.559
project 58	0.0995	1	1	3	0.02	1	50.072
project 59	0.0125	0	0.5	5	0.121	0	321.89
project 60	0.2827	0	0.6	3	0	1	57.225
project 61	-1.602	1	1	2	0.0146	0	35.765
project 62	-0.423	1	0.7	2	0.0208	0	50.072
project 63	0.2612	0	0.7	4	0.0281	0	113.82
project 64	-0.429	1	1	1	0.0113	0	107.3
project 65	0.0006	1	1	3	0.0027	0	50.072
project 66	0.1047	1	0.6	2	0.0759	0	154.94
project 67	-0.052	0	1	6	0.0392	0	40.853
project 68	0.1483	1	1	7	0.0152	0	45.78
project 69	-0.063	1	0.7	1	0.0073	0	214.59
project 70	0.0407	1	0.6	5	0.0345	0	185.34
project 71	-0.819	0	1	5	0.0145	0	57.225
project 72	0.0051	1	1	2	0	0	28.612
project 73	0.0986	1	0.7	1	0.0048	0	35.765
project 74	1.8823	0	1	5	0.1253	0	31.865
project 75	-0.081	0	1	5	0	0	28.612
project 76	-0.044	0	1	4	0	0	35.765
project 77	0.029	1	0.5	3	0	0	51.717
project 78	0.0195	1	1	4	0.027	0	190.06

	PROFIT	PROTECT	FOREIGN	YEAR	TAX	TECH	WAGE
project 79	-0.002	1	0.5	2	0.0438	0	257.51
project 80	-0.186	1	1	2	0.0066	0	30.186
project 81	-0.051	1	0.75	2	0.0274	0	81.445
project 82	-0.004	1	0.7	3	0	0	182.69
project 83	0.0841	1	0.55	3	0.0387	0	42.918
project 84	-0.211	1	1	1	0.04	0	214.59
project 85	-0.147	0	1	3	0.0005	0	35.765
project 86	-14.38	0	1	2	0.3732	0	50.072
project 87	-0.589	1	0.7	1	0.0266	0	35.765
project 88	-3.353	1	0.8	1	0.04	1	79.957
project 89	-0.107	1	1	2	0.015	0	71.531
project 90	-0.01	0	1	2	0	0	35.765
project 91	-0.051	0	1	1	0	0	35.765
project 92	-1.786	0	1	1	0.0298	0	35.765
project 93	-0.701	0	1	1	0.0007	1	35.765
project 94	-0.06	0	1	4	0.002	0	33.722
project 95	-0.042	1	1	4	0.01	0	70.672
project 96	0.0022	1	1	4	0	0	50.072
project 97	-0.804	1	0.75	2	0.0203	0	143.06
project 98	-0.249	1	1	3	0	1	33.262
project 99	-9.085	0	1	1	0	0	40.701
project 100	0.0445	1	0.7	2	0.0027	0	64.378
project 101	0.0008	1	1	2	0.0115	0	50.072
project 102	-0.001	0	0.7	3	0	1	50.858
project 103	0.22	0	1	3	0.0008	0	35.765
project 104	-0.996	1	1	1	0.0126	0	35.765
project 105	-0.886	1	0.7	1	0	0	57.225
project 106	-0.84	0	1	4	0.1104	0	74.881
project 107	0.0405	1	1	5	0.0003	0	801.74
project 108	-0.179	1	1	2	0.0066	0	50.072
project 109	0.0951	1	0.7	1	0.0204	0	0.0378
project 110	0.0808	0	0.73	5	0	0	40.773
project 111	0.1125	0	1	4	0	0	47.21
project 112	-0.639	1	0.7	2	0.0184	0	35.765
project 113	-0.175	1	1	1	0.0052	0	107.3
project 114	-0.064	1	1	6	0	0	64.092
project 115	0.0395	1	1	4	0.0099	0	62.947
project 116	-0.042	1	1	1	0.0187	0	32.189
project 117	0.0278	1	1	3	0.0091	0	41.917
project 118	-0.026	0	1	4	0.0202	0	42.918
project 119	0.103	1	0.7	5	0.0528	0	44.141
project 120	-0.429	0	1	1	0	0	35.765

	PROFIT	PROTECT	FOREIGN	YEAR	TAX	TECH	WAGE
project 121	0.0912	1	0.7	2	0.0537	1	92.99
project 122	-0.387	1	1	3	0.0009	0	71.479
project 123	0.0492	0	0.45	6	0.0436	0	50.072
project 124	0.0403	0	0.7	6	0	1	50.072
project 125	0.0028	1	0.75	3	0.0372	0	110.53
project 126	0.0024	1	0.6	6	0.0032	1	90.129
project 127	0.0186	0	1	3	0	0	35.765
project 128	0.2125	1	1	8	0	0	71.531
project 129	0.0955	0	0.7	7	0.0134	0	103.15
project 130	-0.63	0	1	2	0.0485	1	50.072
project 131	0.1292	1	0.5	5	0	0	114.45
project 132	-0.102	1	1	3	0	0	28.612
project 133	0.3018	1	1	6	0	0	35.765
project 134	0.4049	0	0.654	2	0	0	35.765
project 135	0.053	0	0.845	7	0.0104	0	51.116
project 136	-2.138	0	0.64	3	0.0071	0	114.95
project 137	-0.254	1	1	2	0	0	35.765
project 138	0.3368	0	0.73	6	0.0417	0	147.78
project 139	0.0794	0	0.6	8	0.0215	0	48.784

Source: MPI database

2. Regression Analysis

2.1. Correlation Matrix

Correlations

		PROFIT	PROTECT	FOREIGN	YEAR	TAX	TECH	WAGE
PROFIT	Pearson Correlation	1.000	.107	-.150	.214*	-.551**	-.022	.042
	Sig. (2-tailed)	.	.211	.078	.011	.000	.794	.622
	N	139	139	139	139	139	139	139
PROTECT	Pearson Correlation	.107	1.000	.016	-.315**	-.084	-.009	.143
	Sig. (2-tailed)	.211	.	.852	.000	.328	.920	.092
	N	139	139	139	139	139	139	139
FOREIGN	Pearson Correlation	-.150	.016	1.000	-.126	-.032	.089	-.104
	Sig. (2-tailed)	.078	.852	.	.138	.711	.297	.223
	N	139	139	139	139	139	139	139
YEAR	Pearson Correlation	.214*	-.315**	-.126	1.000	-.003	-.076	.054
	Sig. (2-tailed)	.011	.000	.138	.	.975	.377	.532
	N	139	139	139	139	139	139	139
TAX	Pearson Correlation	-.551**	-.084	-.032	-.003	1.000	-.049	-.011
	Sig. (2-tailed)	.000	.328	.711	.975	.	.569	.895
	N	139	139	139	139	139	139	139
TECH	Pearson Correlation	-.022	-.009	.089	-.076	-.049	1.000	-.065
	Sig. (2-tailed)	.794	.920	.297	.377	.569	.	.450
	N	139	139	139	139	139	139	139
WAGE	Pearson Correlation	.042	.143	-.104	.054	-.011	-.065	1.000
	Sig. (2-tailed)	.622	.092	.223	.532	.895	.450	.
	N	139	139	139	139	139	139	139

*. Correlation is significant at the 0.05 level (2-tailed).

**. Correlation is significant at the 0.01 level (2-tailed).

2.2. Regression Analysis

Variables Entered/Removed[b]

Model	Variables Entered	Variables Removed	Method
1	WAGE, TAX, YEAR, TECH, FOREIGN, PROTECT[a]	.	Enter

a. All requested variables entered.

b. Dependent Variable: PROFIT

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.621[a]	.386	.358	1.20785	2.007

a. Predictors: (Constant), WAGE, TAX, YEAR, TECH, FOREIGN, PROTECT

b. Dependent Variable: PROFIT

ANOVA[b]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	121.127	6	20.188	13.838	.000[a]
	Residual	192.577	132	1.459		
	Total	313.704	138			

a. Predictors: (Constant), WAGE, TAX, YEAR, TECH, FOREIGN, PROTECT

b. Dependent Variable: PROFIT

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Correlations			Collinearity Statistics	
		B	Std. Error	Beta			Zero-order	Partial	Part	Tolerance	VIF
1	(Constant)	.102	.546		.187	.852					
	PROTECT	.430	.224	.140	1.918	.057	.107	.165	.131	.867	1.153
	FOREIGN	-1.095	.545	-.139	-2.008	.047	-.150	-.172	-.137	.968	1.033
	YEAR	.190	.058	.238	3.267	.001	.214	.274	.223	.873	1.146
	TAX	-19.859	2.506	-.544	-7.926	.000	-.551	-.568	-.540	.988	1.012
	TECH	-9.61E-02	.368	-.018	-.261	.795	-.022	-.023	-.018	.982	1.018
	WAGE	-1.11E-04	.001	-.012	-.179	.858	.042	-.016	-.012	.958	1.044

a. Dependent Variable: PROFIT

Collinearity Diagnostics[a]

Model	Dimension	Eigenvalue	Condition Index	Variance Proportions						
				(Constant)	PROTECT	FOREIGN	YEAR	TAX	TECH	WAGE
1	1	4.051	1.000	.00	.01	.00	.01	.01	.01	.02
	2	.943	2.073	.00	.00	.00	.00	.03	.82	.07
	3	.800	2.250	.00	.02	.00	.00	.62	.00	.29
	4	.628	2.540	.00	.02	.00	.02	.26	.15	.59
	5	.423	3.096	.00	.51	.00	.17	.04	.00	.02
	6	.132	5.545	.03	.37	.15	.62	.02	.03	.02
	7	2.255E-02	13.405	.97	.07	.84	.18	.01	.00	.01

a. Dependent Variable: PROFIT

Casewise Diagnostics[a]

Case Number	Std. Residual	PROFIT
74	3.659	1.882
86	-5.256	-14.380
99	-6.852	-9.085

a. Dependent Variable: PROFIT

Residuals Statistics[a]

	Minimum	Maximum	Mean	Std. Deviation	N
Predicted Value	-8.03111	1.10360	-.31761	.93688	139
Residual	-8.27669	4.41991	-1.3E-16	1.18131	139
Std. Predicted Value	-8.233	1.517	.000	1.000	139
Std. Residual	-6.852	3.659	.000	.978	139

a. Dependent Variable: PROFIT

APPENDIX 7

REGRESSION ANALYSIS ON PROVINCIAL ALLOCATION OF FOREIGN DIRECT INVESTMENT, 1988-1998

1. Data

	FDI Commit. ($ bil.)	FDI Imp. ($ bil.)	INC ($/month)	TEL (No. of tel. per person)	PUP	TAX ($)
Ha noi	7.5165	2.6048	163.41	0.0605	0.0677	0.0317
Hai phong	1.4674	0.7932	116.58	0.0111	0.0848	0.0268
Ha tay	0.4648	0.2120	94.92	0.0044	0.0871	0.0333
Hai hung	0.5905	0.1758	100.19	0.0044	0.0933	0.0167
Nam ha	0.0375	0.0079	91.93	0.0037	0.0927	0.0546
Thai binh	0.0049	0.0029	104.33	0.0039	0.0835	0.0086
Ninh binh	0.0890	0.0301	87.16	0.0031	0.1010	0.0000
Ha giang	0.0005	0.0000	84.68	0.0039	0.0405	0.0000
Cao bang	0.0015	0.0000	92.37	0.0032	0.0612	0.0000
Lao cai	0.0182	0.0020	78.32	0.0051	0.0481	0.0000
Bac thai	0.0602	0.0134	88.9	0.0056	0.0857	0.0193
Yen bai	0.0151	0.0052	85.07	0.0045	0.0717	0.0000
Lang son	0.0066	0.0013	97.93	0.0063	0.0751	0.0245
Tuyen quang	0.0082	0.0001	74.07	0.0034	0.0892	0.0000
Vinh phu	0.4151	0.2161	82.05	0.0032	0.0868	0.0189
Ha bac	0.1395	0.1113	134.95	0.0040	0.0849	0.0130
Quang ninh	0.8566	0.0944	82.71	0.0154	0.0762	0.0175
Lai chau	0.0142	0.0000	65.65	0.0040	0.0359	0.0000
Son la	0.0206	0.0021	73.47	0.0034	0.0514	0.0000
Hoa binh	0.0173	0.0038	84.15	0.0036	0.0882	0.0009
Thanh hoa	0.4228	0.2221	79.26	0.0021	0.0930	0.0225
Nghe an	0.2123	0.0416	79.91	0.0053	0.0924	0.0249
Ha tinh	0.0478	0.0172	74.41	0.0030	0.0935	0.0132
Quang binh	0.0176	0.0016	85.77	0.0049	0.0827	0.0000
Quang tri	0.0000	0.0000	92.52	0.0092	0.0777	0.0000
Thua thien-Hue	0.1294	0.1205	95.99	0.0093	0.0691	0.0159
Quang nam-Da nang	1.0121	0.2084	114.22	0.0110	0.0791	0.0335
Quang ngai	1.3124	0.0005	89.75	0.0069	0.0765	0.0003
Binh dinh	0.0305	0.0110	104.17	0.0071	0.0698	0.0065
Phu yen	0.0231	0.0044	96.71	0.0063	0.0707	0.0422

	FDI Commit. ($ bil.)	FDI Imp. ($ bil.)	INC ($/month)	TEL (No. of tel. per person)	PUP	TAX ($)
Khanh hoa	0.2799	0.1802	128.19	0.0135	0.0625	0.0362
Kontum	0.0000	0.0000	71.12	0.0079	0.0609	0.0000
Gia lai	0.0299	0.0191	91.33	0.0067	0.0570	0.0161
Dac lac	0.0279	0.0152	87.28	0.0076	0.0642	0.0062
Ho Chi Minh City	9.5407	3.1154	315.6	0.0373	0.0596	0.0309
Lam dong	0.8629	0.0804	122.19	0.0175	0.0673	0.0250
Ninh thuan	0.0271	0.0203	102.38	0.0080	0.0523	0.0551
Song be	1.3931	0.6406	117.94	0.0026	0.0663	0.0187
Tay ninh	0.1953	0.0935	118.73	0.0095	0.0611	0.0123
Dong nai	3.3746	1.6059	144.08	0.0093	0.0765	0.0157
Binh thuan	0.0828	0.0060	129.07	0.0097	0.0581	0.0476
Ba ria-Vung tau	2.2679	0.3260	170.01	0.0160	0.0733	0.0304
Long an	0.2354	0.1562	128.03	0.0075	0.0638	0.0258
Dong thap	0.0104	0.0013	109.73	0.0055	0.0547	0.0125
An giang	0.0189	0.0122	133.89	0.0067	0.0493	0.0016
Tien giang	0.0655	0.0641	125.16	0.0054	0.0666	0.0126
Vinh long	0.0108	0.0074	117.91	0.0053	0.0745	0.0140
Ben tre	0.0293	0.0011	116.1	0.0046	0.0656	0.0000
Kien giang	0.2304	0.3739	149.05	0.0087	0.0555	0.0265
Can tho	0.1497	0.0326	131.39	0.0079	0.0571	0.0103
Tra vinh	0.0369	0.0009	101.31	0.0057	0.0662	0.0000
Soc trang	0.0008	0.0005	123.36	0.0054	0.0570	0.0329
Minh hai	0.0312	0.0141	130.47	0.0069	0.0572	0.0085

Source: GSO 1996, 1998 and 1999c, WB 1995.

Data Converted into Logarithm Form

	LnFDIcom	LnFDIimp	LnINC	LnTEL	LnPUP	LnTAX
Ha noi	2.02	0.96	5.1	-2.65	-2.55	-3.18
Hai phong	0.39	-0.22	4.76	-3.86	-2.36	-3.3
Ha tay	-0.74	-1.51	4.55	-4.24	-2.33	-3.14
Hai hung	-0.51	-1.68	4.61	-4.24	-2.27	-3.62
Nam ha	-3.05	-4.02	4.52	-4.29	-2.28	-2.74
Thai binh	-4.21	-4.35	4.65	-4.28	-2.37	-3.98
Ninh binh	-2.31	-3.22	4.47	-4.34	-2.2	-4.61
Ha giang	-4.56	-4.61	4.44	-4.28	-2.99	-4.61
Cao bang	-4.47	-4.61	4.53	-4.33	-2.64	-4.61
Lao cai	-3.57	-4.42	4.36	-4.19	-2.85	-4.61
Bac thai	-2.66	-3.76	4.49	-4.16	-2.35	-3.53
Yen bai	-3.68	-4.19	4.44	-4.23	-2.5	-4.61
Lang son	-4.1	-4.48	4.58	-4.12	-2.46	-3.37
Tuyen quang	-4.01	-4.6	4.31	-4.31	-2.31	-4.61
Vinh phu	-0.86	-1.49	4.41	-4.33	-2.34	-3.54
Ha bac	-1.9	-2.11	4.9	-4.27	-2.35	-3.77
Quang ninh	-0.14	-2.26	4.42	-3.67	-2.45	-3.59
Lai chau	-3.72	-4.61	4.18	-4.27	-3.08	-4.61
Son la	-3.49	-4.41	4.3	-4.31	-2.79	-4.61
Hoa binh	-3.6	-4.28	4.43	-4.3	-2.32	-4.52
Thanh hoa	-0.84	-1.46	4.37	-4.41	-2.27	-3.43
Nghe an	-1.5	-2.96	4.38	-4.18	-2.28	-3.36
Ha tinh	-2.85	-3.6	4.31	-4.34	-2.27	-3.76
Quang binh	-3.59	-4.46	4.45	-4.21	-2.38	-4.61
Quang tri	-4.61	-4.61	4.53	-3.95	-2.43	-4.61
Thua thien-Hue	-1.97	-2.04	4.56	-3.95	-2.54	-3.65
Quang nam-Da nang	0.02	-1.52	4.74	-3.86	-2.42	-3.13
Quang ngai	0.28	-4.56	4.5	-4.08	-2.45	-4.58
Binh dinh	-3.21	-3.86	4.65	-4.07	-2.53	-4.1
Phu yen	-3.41	-4.24	4.57	-4.12	-2.52	-2.95
Khanh hoa	-1.24	-1.66	4.85	-3.75	-2.62	-3.07
Kontum	-4.61	-4.61	4.26	-4.02	-2.65	-4.61
Gia lai	-3.22	-3.54	4.51	-4.09	-2.7	-3.65
Dac lac	-3.27	-3.68	4.47	-4.04	-2.6	-4.12
Ho Chi Minh City	2.26	1.14	5.75	-3.05	-2.66	-3.2
Lam dong	-0.14	-2.4	4.81	-3.59	-2.56	-3.35
Ninh thuan	-3.29	-3.5	4.63	-4.02	-2.78	-2.73
Song be	0.34	-0.43	4.77	-4.37	-2.57	-3.55
Tay ninh	-1.58	-2.27	4.78	-3.94	-2.64	-3.8
Dong nai	1.22	0.48	4.97	-3.95	-2.45	-3.66
Binh thuan	-2.38	-4.14	4.86	-3.93	-2.69	-2.85
Ba ria-Vung tau	0.82	-1.09	5.14	-3.65	-2.49	-3.21

	LnFDIcom	LnFDIimp	LnINC	LnTEL	LnPUP	LnTAX
Long an	-1.4	-1.79	4.85	-4.05	-2.61	-3.33
Dong thap	-3.89	-4.48	4.7	-4.17	-2.74	-3.79
An giang	-3.54	-3.81	4.9	-4.09	-2.83	-4.46
Tien giang	-2.58	-2.6	4.83	-4.17	-2.57	-3.79
Vinh long	-3.87	-4.05	4.77	-4.18	-2.47	-3.73
Ben tre	-3.24	-4.5	4.75	-4.23	-2.58	-4.61
Kien giang	-1.43	-0.96	5	-3.98	-2.73	-3.31
Can tho	-1.83	-3.16	4.88	-4.02	-2.7	-3.9
Tra vinh	-3.06	-4.52	4.62	-4.15	-2.57	-4.61
Soc trang	-4.53	-4.56	4.82	-4.17	-2.7	-3.15
Minh hai	-3.19	-3.73	4.87	-4.08	-2.7	-3.99

2. Regression Analysis

2.1. Committed FDI flows 1988-1998

Variables Entered/Removed[b]

Model	Variables Entered	Variables Removed	Method
1	LNTAX, LNPUP, LNTEL, LNINC[a]	.	Enter

a. All requested variables entered.

b. Dependent Variable: LNFDICOM

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.744[a]	.554	.517	1.2612	1.759

a. Predictors: (Constant), LNTAX, LNPUP, LNTEL, LNINC

b. Dependent Variable: LNFDICOM

ANOVA[b]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	94.907	4	23.727	14.916	.000[a]
	Residual	76.354	48	1.591		
	Total	171.261	52			

a. Predictors: (Constant), LNTAX, LNPUP, LNTEL, LNINC

b. Dependent Variable: LNFDICOM

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Correlations			Collinearity Statistics	
		B	Std. Error	Beta			Zero-order	Partial	Part	Tolerance	VIF
1	(Constant)	10.551	6.906		1.528	.133					
	LNINC	1.556	.897	.233	1.735	.089	.546	.243	.167	.513	1.949
	LNTEL	2.572	.756	.439	3.404	.001	.606	.441	.328	.559	1.789
	LNPUP	3.045	.955	.324	3.188	.003	.256	.418	.307	.900	1.112
	LNTAX	.481	.342	.160	1.407	.166	.487	.199	.136	.722	1.384

a. Dependent Variable: LNFDICOM

Collinearity Diagnostics[a]

Model	Dimension	Eigenvalue	Condition Index	Variance Proportions				
				(Constant)	LNINC	LNTEL	LNPUP	LNTAX
1	1	4.969	1.000	.00	.00	.00	.00	.00
	2	2.073E-02	15.482	.00	.02	.00	.01	.58
	3	6.579E-03	27.481	.00	.01	.31	.17	.17
	4	3.449E-03	37.958	.01	.16	.05	.79	.21
	5	4.444E-04	105.742	.99	.81	.64	.03	.04

a. Dependent Variable: LNFDICOM

Residuals Statistics[a]

	Minimum	Maximum	Mean	Std. Deviation	N
Predicted Value	-5.5149	2.3509	-2.2356	1.3510	53
Residual	-2.4076	3.1590	-2.24E-15	1.2118	53
Std. Predicted Value	-2.427	3.395	.000	1.000	53
Std. Residual	-1.909	2.505	.000	.961	53

a. Dependent Variable: LNFDICOM

2.2. Implemented FDI flows 1988-1998

Variables Entered/Removed[b]

Model	Variables Entered	Variables Removed	Method
1	LNTAX, LNPUP, LNTEL, LNINC[a]	.	Enter

a. All requested variables entered.

b. Dependent Variable: LNFDIIMP

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.751[a]	.564	.528	1.1016	1.879

a. Predictors: (Constant), LNTAX, LNPUP, LNTEL, LNINC

b. Dependent Variable: LNFDIIMP

ANOVA[b]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	75.315	4	18.829	15.515	.000[a]
	Residual	58.252	48	1.214		
	Total	133.567	52			

a. Predictors: (Constant), LNTAX, LNPUP, LNTEL, LNINC

b. Dependent Variable: LNFDIIMP

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Correlations			Collinearity Statistics	
		B	Std. Error	Beta			Zero-order	Partial	Part	Tolerance	VIF
1	(Constant)	1.336	6.032		.221	.826					
	LNINC	2.057	.783	.349	2.626	.012	.613	.354	.250	.513	1.949
	LNTEL	1.541	.660	.298	2.335	.024	.578	.319	.223	.559	1.789
	LNPUP	2.094	.834	.252	2.511	.015	.201	.341	.239	.900	1.112
	LNTAX	.619	.299	.232	2.071	.044	.547	.286	.197	.722	1.384

a. Dependent Variable: LNFDIIMP

Collinearity Diagnostics[a]

Model	Dimension	Eigenvalue	Condition Index	Variance Proportions				
				(Constant)	LNINC	LNTEL	LNPUP	LNTAX
1	1	4.969	1.000	.00	.00	.00	.00	.00
	2	2.073E-02	15.482	.00	.02	.00	.01	.58
	3	6.579E-03	27.481	.00	.01	.31	.17	.17
	4	3.449E-03	37.958	.01	.16	.05	.79	.21
	5	4.444E-04	105.742	.99	.81	.64	.03	.04

a. Dependent Variable: LNFDIIMP

Residuals Statistics[a]

	Minimum	Maximum	Mean	Std. Deviation	N
Predicted Value	-5.9332	.9150	-3.0377	1.2035	53
Residual	-2.0277	2.7444	-5.56E-15	1.0584	53
Std. Predicted Value	-2.406	3.284	.000	1.000	53
Std. Residual	-1.841	2.491	.000	.961	53

a. Dependent Variable: LNFDIIMP

APPENDIX 8
VIETNAM COMMITMENT UNDER AFTA COMMON EFFECTIVE PREFERENTIAL TARIFF SCHEME

Under the AFTA common effective preferential tariff scheme (CEPT), Vietnam has set out the tariff reduction schedule with General Exception List includes 213 commodity groups, accounting for 6.6 percent of total commodity groups in its import tax list; Temporary Exclusion List includes 1317 commodity groups accounting for 40.9 percent of total commodity groups in import tax list while the Sensitive List includes 26 commodity groups accounting for 0.8 percent of total commodity groups in import tax list and the Inclusion List includes 1661 commodity groups accounting for 51.6 percent of total commodity groups in import tax list (MOF 1999).

The determinant of those lists as well as the tariff reduction schedule reflect the government strategy of rapid tariff reduction for commodities that have high competitiveness (such as rice, coffee, tea, fishery products, textiles and garments, rubbers) while delaying the tariff reduction in conformity with CEPT regulation for other industries. This strategy will provide protection for certain periods of time at a different extent for infant industries in order to help them to achieve certain level of development before exposing them to international competition. Such infant industries include food processing industries, electrical and electronic industries, mechanical industries, ship building industries, chemical industries, cement industries, metallurgy industries, mineral industries, paper industries and sugar industries. However, the tariff for those products would eventually reach 5 percent by 2006 (MOF 1999).

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