

“DISADVANTAGE CYCLE” IN THE LESS DEVELOPED STATES: EVIDENCE FROM MALAYSIA

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ABSTRACT

The current regional policy has developed two ‘industrial dispersion’ tools to spearhead the restructuring of economic activities across regions. Although the less developed states have comparative advantages in terms of cheap labour and industrial land, and additional investment incentive, most firms were still located in the more developed states mainly due to the high comparative advantages and economies of scale such as the establishment of manufacturing activities in those areas with easy access to infrastructure, service industries, and large labour and consumer markets. This caused slow TFP growth and the convergence process in the less developed states remain problematic. This is generally due to the economic and demographic ‘disadvantages cycle’ that clearly occurs in the less developed regions. In the long term, policy makers need to think of ways and means to distribute these limited resources and increase the comparative advantage of the less developed states. The discussion in this paper will attempt to explore the degree to which differences in regional manufacturing distribution and concentration have contributed to regional inequality. This study has provided a series of recommendation about how this might be done in order to overcome the problem of long-standing regional inequality in Peninsular Malaysia.

ABSTRAK

Polisi pembangunan ‘kawasan pembangunan, skim insentif lokasi dan koridor pembangunan pantai timur’, melalui Investment Incentive Act 1968, 1971 dan 1986 telah diperkenalkan untuk mengalakkan proses penyerakan industri antara wilayah. Walau bagaimanapun pencapaian polisi penyerakan ini agak perlahan. Secara relatif, walaupun negeri kurang maju mempunyai faedah berbanding dari segi upah buruh dan harga tanah yang murah serta insentif-insentif tambahan oleh kerajaan, namun kebanyakan firma masih memilih

untuk beroperasi di negeri maju. Keadaan ini ada kaitannya dengan jenis industri di negeri kurang maju yang lebih berorientasikan buruh, pelabur dan produk keperluan tempatan, saiz firma yang kecil, kurangnya keanjalan output terhadap buruh dan modal serta nilai ditambah yang rendah. Seakan-akan wujud satu 'kitaran penghalang' dari segi demografi dan ekonomi di negeri kurang maju, ini melambatkan proses untuk mengurangkan jurang pembangunan di antara negeri maju dan negeri kurang maju. Artikel ini membincangkan bagaimana tumpuan industri antara wilayah membawa kepada masalah ketidakseimbangan pembangunan dan mencadangkan beberapa polisi pembangunan untuk mengurangkan masalah ketidakseimbangan pembangunan yang berlaku.

INTRODUCTION

Since the Independence and especially after 1970, the Malaysian government has tried to promote a balance of economic activities through major efforts to expand modern sector activities, particularly in the less developed states, shifting the emphasis from the agricultural sector to the manufacturing sector. It is hoped that the manufacturing sector will increase economic opportunity as well as monthly income, decrease poverty and unemployment in the less developed areas through diversification of economic activities in the less-developed states to generate higher economic growth, and by dispersing new development and growth especially to less developed regions. Besides this, the manufacturing sector was seen as the main tool to spearhead the restructuring of economic activities and society. The regional strategy that has a direct role to redistribute manufacturing activities is '*industrial dispersal strategy*'.

The discussion in this paper will attempt to explore the degree to which differences in regional manufacturing distribution and concentration have contributed to regional inequality. The first part of this paper will clarify the use of the term '*region*' in this study. The second part of this paper will discuss the incentives provided under the Investment Incentive Act and developing the industrial estates to promote the manufacturing sector and its effect on the output and labour contributed by state and region. The third part of this paper will focus on the distribution and concentration of export-oriented industries. Following this, part four of this paper will discuss the investors' distribution and its concentration in Peninsular Malaysia. Part five will explore the regional convergence factors and finally, in part six, some conclusions and policy recommendations are drawn.

The Regional Malaysian Context

Since 1981, all states in Peninsular Malaysia have been aggregated into six regions (Malaysia, 1981). Each region consists of a contiguous landmass, which is in a more or less uniform stage of development and may encompass an entire state or group of states. In general, these regions share similarities in resources and in terms of economic activities, and have been dominated by a single metropolitan area (growth centre). Peninsular Malaysia consists of four regions while East Malaysia consists of two regions.

Regions in Peninsular Malaysia (West Malaysia):

1. *Northern region*: consists of four states – Perlis, Kedah, Pulau Pinang, and Perak with Georgetown as the growth centre.
2. *Central region*: consists of four states – Selangor, Federal Territory of Kuala Lumpur, Negeri Sembilan, and Melaka with Kuala Lumpur as the growth centre.
3. *Eastern region*: consists of three states – Kelantan, Terengganu, and Pahang with Kuantan as the growth centre.
4. *Southern region*: consists of a single state, Johor with Johor Baharu as the growth centre.

Starting in 2001, the composite development index has been used and states in Malaysia have been divided into two categories based on level of development (Malaysia, 2001a:116).

1. *More developed states*; Johor, Melaka, Negeri Sembilan, Perak, Pulau Pinang, Selangor, and Federal Territory of Kuala Lumpur.
2. *Less developed states*; Kedah, Kelantan, Pahang, Perlis, Sabah, Sarawak, and Terengganu.

Intensive and Manufacturing Dispersal

The levels of regional income have strong linkages with the establishment of the manufacturing sector. Since the Independence and subsequently after the implementation of the New Economic Policy (NEP) (1971), the government has made serious efforts to decentralise the manufacturing activities. This is because industrial imbalance has an important relation to the imbalance of household monthly income, poverty, and unemployment.

Under British colonialism, Peninsular Malaysia was the main supplier of tin and rubber to the world. Economic activities focused more on the primary sector. However, since the Independence in 1957, the government has started to promote the secondary sector (manufacturing and construction) as a source of growth besides export commodities (tin, rubber and oil palm). In 1958, the Pioneer Industries Ordinance was introduced to increase private sector investment.

In order to promote industrial activities in the less developed states (or districts), the government introduced the concept of a '*development area*' under the Investment Incentive Act, 1968. Industries that were located in these areas would be granted with additional incentives. The development areas covered the entire states of Perlis, Terengganu, Melaka, Sabah, Sarawak, and the relatively less developed districts of Kedah (excluding Kuala Muda district), Pahang (excluding Kuantan district) and southeast of Johor (Figure 1). It also included two industrial estates, which were Kemunting Industrial Estate (in the state of Perak) and Senawang Industrial Estate (in the state of Negeri Sembilan) and two Free Trade Zones (FTZ) or industrial areas, which were Bayan Lepas FTZ (in the state of Pulau Pinang) and Sungei Way FTZ (in the state of Selangor). These two industrial areas were the pioneer industrial areas and were isolated from the concentrated industrial areas in the state of Selangor and Pulau Pinang, while the FTZ status made them the pioneer FTZs in Malaysia.¹

After the implementation of the NEP, the government introduced the Location Incentive Scheme (under the Investment Incentive Act of 1972). More incentives were given to local and foreign investors to locate their activities in the less developed states (or districts)² mainly to redistribute the industrial activities from more concentrated areas in the more developed states. Compared with the development area under the Investment Incentive Act of 1968, the Location Incentive Act of 1972, only covered the entire states of Perlis, Terengganu, Melaka, Sabah, Sarawak and the relatively less developed districts of Kedah (excluding Kuala Muda district), Pahang (excluding Kuantan district), and southeast of Johor. It did not include Kemunting Industrial Estate, Senawang Industrial Estate, Bayan Lepas FTZ and Sungei Way FTZ because it referred only to the less developed states (or districts).

Further incentive was given under the Promotion of Investments Act of 1986, which was introduced as a replacement for the Investment Incentive Act of 1972. Although industrial development focused more on the west-coast corridor, additional incentives were given to the industries located in the east-coast corridor of Peninsular Malaysia. It

covered Kelantan, Terengganu, Pahang and the district of Mersing in southeast of Johor.

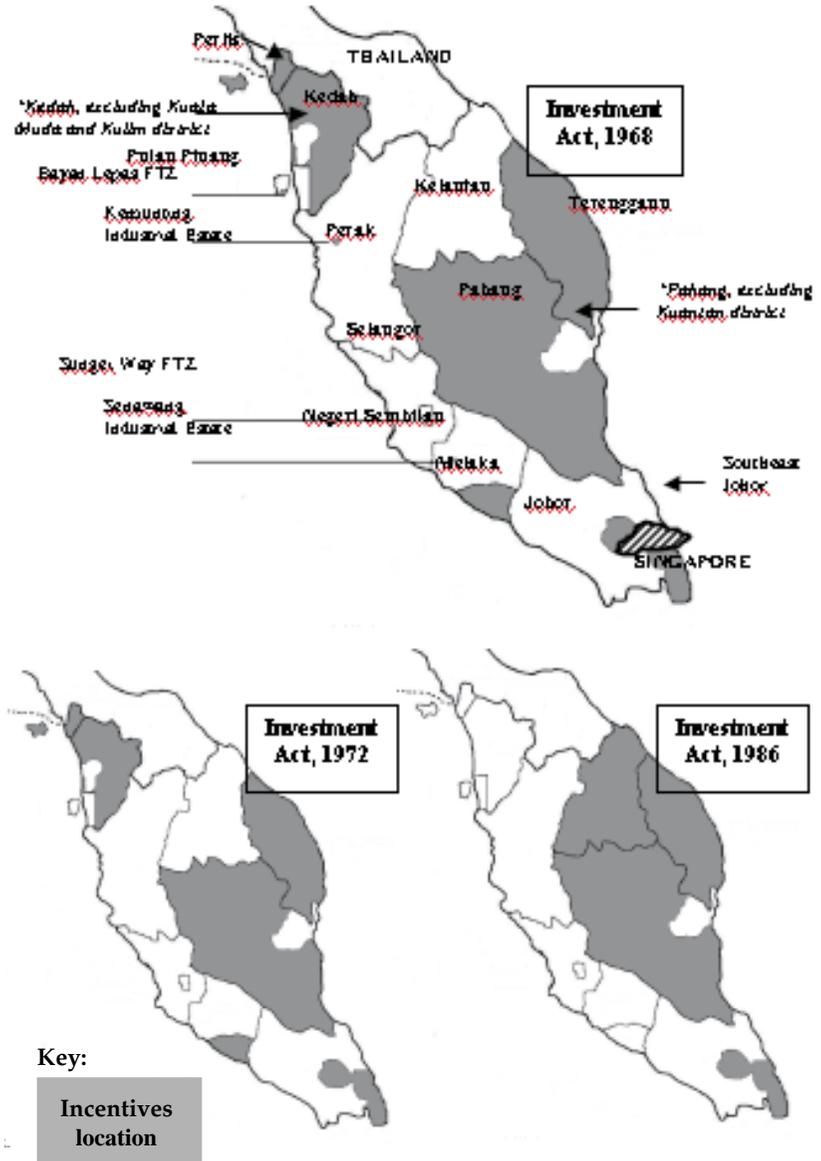


Figure 1
 Investment incentives location under Act 1968, Act 1972, and 1986.

Compared with the Location Incentive Scheme (under the Investment Incentive Act of 1972), additional incentives under the Promotion of Investments Act of 1986, did not cover the states of Melaka, Kedah, and Perlis (located in the west-coast of Peninsular Malaysia) because the additional incentives were only given to the industries located in the east-coast corridor of Peninsular Malaysia mainly to give it more of a comparative advantage.³ The manufacturing activities in these states were relatively less and the economic sector still depended on the agricultural sector, which recorded lower monthly incomes, higher levels of poverty and unemployment, as well as out-migration.

The Investment Incentive Act was replaced for two reasons, firstly to make investment in Malaysia more attractive and to have extra competitive advantage compared with other countries in the ASEAN region. This is because other countries also have their investment incentives and Malaysia has to compete to attract the FDI, especially from multinational companies. Secondly, regarding the additional incentives given to the selective states or districts, the number of states that receive incentives was decreased from six states under the Investment Act of 1972 to only three states under the Investment Act of 1986. Kedah, Perlis, and Melaka that were given additional incentives under the Investment Act of 1972 no longer received additional incentives under the Investment Act of 1986. Manufacturing activities in these states increased rapidly and focus had to be given only to the states located in the east-coast corridor (Kelantan, Terengganu, and Pahang) where the manufacturing activities were relatively less.

Besides incentives under the Investment Incentive Act, since 1971, the State Economic Development Council (SEDC) also provided some incentives to promote investors, especially FDIs to set-up factories in those particular states. All these incentives provided under the Investment Incentive Act (Federal government) and under the State Economic Development Council (State government) is summarised in Table 1.

Besides the huge incentives in manufacturing industries especially in the less developed states, the government also took further steps to promote manufacturing industries by developing industrial estates. The strategy sought to encourage new manufacturing industries to move to the less developed parts of the country, especially in the east-coast states from the congested areas in state of Selangor (Klang Valley) and other major urban centres in the west coast.

Table 1
Incentives Provided Under the Investment Incentive Act and Under
State Economic Development Council

| State/ REGION | Incentive under Investment Incentive Act | | | Incentive under State Economic Development Council | | | | |
|------------------|--|---|---|--|------------------------|---------------------------------|---|---|
| | Act, 1968, under Development Area | Act, 1972, under Location Incentive Scheme | Act, 1986, under east coast corridor | Reduction in land price instalment payments | Reduction in quit rent | Reduction in assessment rate | Discounts on purchase of industrial land | Discount in rentals of ready built factory |
| - Perlis | * | * | | | | | | |
| - Kedah | *1 | *1 | | | | | *a | *a |
| - P.Pinang | | | | | | | | |
| - Perak | *2 | | | | | *b | | |
| NORTHERN | | | | | | | | |
| - Pahang | *3 | *3 | * | *f | *f | *f | | |
| - Kelantan | | | * | *d | | | | *d |
| - Terengganu | * | * | * | *e | | *e | | |
| EASTERN | | | | | | | | |
| - Selangor | | | | | | | | |
| - N.Sembilan | *4 | | | | | | | |
| - Melaka | * | * | | *c | *c | | *c | |
| - K.Lumpur | | | | | | | | |
| CENTRAL | | | | | | | | |
| -Johor*/ | | | | | | | | |
| SOUTHERN | | | | | | | | |
| | *5 | *5 | *5 | | | | | |

¹ excluding Kuala Muda and Kulim Districts;

² industrial estates of Kamunting only;

³ excluding Kuantan district (other than Gobeng Industries Area and Bentong Districts);

⁴ industrial estates of Senawang only;

⁵ southeast (Mersing district) of Johor only.

^a Bumiputera investors in the state of Kedah are provided a discount of 5% on purchases of industrial land and ready built workshops / factories.

^b The Perak State Economic Development Council (SEDC) has lowered the assessment rates for factory sites within Ipoh City from 16% to 10% and provides a 30% reduction in the land premium.

^c Investors in Melaka are allowed to purchase industrial land through an extended payment scheme over a period of 5 to 10 years. Industrial land in industrial estates in Melaka enjoy concessionary quit rent and water rates. Melaka also gives a discount of 7% on all payments made within 6 months from the date of offer; a further 3% is given on completion of factories within 12 months from the same date.

^d Kelantan's instalment plan is 10% payable on signing of agreement, 10% one month later, 30% two months later 50% payable within three months of signing of agreement.

Kelantan's rental rate for ready built factories allow discount based on number of workers and floor space.

- ^e Terengganu SEDC operates a Special Incentives Scheme. Under this scheme, investors creating total employment for more than 200 staff obtain industrial land prices at M\$0.50 per square metre to a maximum of 4 hectares and a 50% lowering in the annual assessment rate. Quit rent is also negotiable.
- ^f Pahang SEDC operates a progressive payment scheme with the 20% down payment into two instalments of 10% each with a grace period of 6 months. Investors are given a grace period of 6 and 9 months after the first and second down payment respectively and the balance is paid in 4 instalments equally distributed over the next 9 month period. Quit rent for industrial land lowered by 50% to 15% per 100 metres for the first two hectares.

Sources: Malaysia, Ministry of International Trade and Industry office Malaysian; Economic Planning Unit (1990: 4-9) Young (1988: 4)

Although the number of existing industrial estates in the less developed states had increased (Table 2), the size (in hectare units) of the industrial estates was rather small. This is because most of the industries located in the less developed states were Small Medium Industry (SMI) and labour intensive. About 41% of the industrial estates in less developed states were less than 25 hectares compared with 26% in more developed states. Only 3% of industrial estates in less developed states were more than 200 hectares, while 11% industrial estates in more developed states were more than 200 hectares.

Furthermore, all of the industrial estates in the less developed states were developed by the public or government sector, while in the more developed states, some of the industrial estates were developed by the private sector. For example, until 2002, from 28 industrial estates in Perak, 10 of them were developed by the private sector, while in Kelantan and Terengganu, all the industrial estates were developed by the public sector. Although the industrial areas developed by the private sector was generally 30% higher than the industrial areas developed by the public sector (depending on location), the demand for the industrial areas in the more developed states was relatively high and the private sector (property sector) took this opportunity to create a marginal profit.

Although the manufacturing sector in Peninsular Malaysia, as a whole, experienced rapid average annual output growth rate, its distribution was still more towards developed states. In fact, although the Federal and State governments have made serious efforts to increase manufacturing activities in less developed states by introducing several incentives, the distribution of manufacturing activities in Peninsula Malaysia did not change much by the end of the NEP from 1970 to 1990.

Table 2
Number of Existing Industrial Estates, 1970, 1990, and 2002

| | 1970 | 1990 | 2002 | Expansion 1990-2002 |
|------------------------|------|------|------|------------------------|
| - Perlis* | 0 | 2 | 7 | 5 |
| - Kedah* | 0 | 15 | 28 | 13 |
| - Pulau Pinang | 3 | 9 | 18 | 9 |
| - Perak | 1 | 19 | 34 | 15 |
| Northern Region | 4 | 45 | 87 | 42 |
| - Pahang* | 0 | 11 | 34 | 23 |
| - Kelantan* | 0 | 6 | 15 | 9 |
| - Terengganu* | 0 | 12 | 21 | 9 |
| Eastern Region | 0 | 29 | 70 | 41 |
| - Selangor | 2 | 25 | 37 | 12 |
| - N.Sembilan | 1 | 8 | 18 | 10 |
| - Melaka | 0 | 7 | 27 | 20 |
| - K.Lumpur | 0 | 4 | 19 | 15 |
| Centre Region | 3 | 44 | 101 | 57 |
| Johor/ Southern Region | 1 | 20 | 31 | 11 |
| Less Developed States* | 0 | 46 | 105 | 59 |
| More Developed States | 8 | 92 | 188 | 96 |
| Peninsular Malaysia | 8 | 138 | 289 | 151 |

Sources: Malaysia, Malaysian Industrial Development Authority office Lee (1978: 505).

Under the redistribution policy of the manufacturing activities, it was hoped that the manufacturing activities would increase in the less developed states. Although in overall percentage terms, the contribution of output by less developed states had increased, it was only by less than 1%.

States that recorded a huge decrease in their output and labour contribution to the Malaysian total were Selangor and Perak, while states that recorded a big increase in output and labour contribution to the Malaysian total were Pulau Pinang (7.4%) and Johor (5.1). This situation showed that several incentives under the Federal and State government were not successful in their goal to increase manufacturing activities in the less developed states. Pulau Pinang and Johor were not placed under any status of *Development Area* or under *Location Incentive Scheme* as well as *East-Coast corridor* or any other incentives under SEDC, but the manufacturing output and labour contribution was increasing and still relatively high. Although the district of Mersing (in southeast Johor) was placed under the status *Development Area* and under *Location Incentive Scheme* and currently under *East-Coast*

corridor, the Mersing industrial area only contributed less than 2% to the total manufacturing output and labour⁴.

Investment incentives play an important role in increasing manufacturing activities in Malaysia. Investment incentives in Malaysia started with the Investment Incentive Act of 1968 which was replaced by the Investment Incentive Act of 1972. Further incentives were given under the promotion of the Investments Incentive Act of 1986, which was introduced as a replacement for the Investment Incentive Act of 1972. The most apparent effect from the government industrial incentive is in terms of the Investment Incentive Act of 1986. Before the 1986 Act, about 37% to 47% of approved projects were the result of investment incentives given by the government. This amount increased rapidly after the 1986 Act, for instance, in 1990, the amount increased to about 58%. However, it decreased in 1997 due to the economic downturn. Most of the industries that received this incentive were the export-oriented industries located in the more developed states, especially in Selangor, Pulau Pinang,, and Johor. Location incentives were less effective since projects approved under this incentive were small compared to other incentives æ they only account for less than 3% of the approved manufacturing projects with incentives.

Export-Oriented and Concentration (3-Digit Classification)

The imbalanced distribution of industrial concentration between states was the other main factor that created imbalanced growth between states in Peninsular Malaysia. There are two groups of industries distributed in the regions. The first group is the modern technology industry, especially for exported products, which can be seen in the well-developed regions, and the second group is the small industries for domestic goods in the less developed regions. Inequality in this industry distribution will create problems as it affects the population as well as the income of the regions.

Industrialisation in Malaysia gradually shifted from an import-substitution industry in the 1960s to an export-orientation in the 1970s, then to heavy industry since early 1980s. Exports of commodities as a main source of growth for both the economy and the agricultural sector were no longer important. Agricultural exports declined in share from 52.1% in 1970 to only 35.8% in 1980, mainly due to the slow growth in the production of rubber and the emergence of crude oil and manufactured goods as important export commodities. After 1980 (the start of the Fourth Malaysia Plan), the manufacturing sector was projected to grow at a rapid rate of 10.9% per annum (Malaysia, 1981).

The final aim of the industrialisation strategy since 1970 was to meet the NEP objectives, growth, and equity. This is because manufacturing was seen as the engine of growth to spearhead the restructuring of economic activity and society besides absorbing the surplus labour from the agricultural sector (Rajah & Ishak, 2001). Emphasis was given to the creation of employment, development of small and medium-scale and heavy industries, and participation of Malays in the manufacturing sector especially in the less developed states.

The manufacturing sector contribution to total GDP increased rapidly from only 17.7% in year 1970 to 30.5% in 1990, (leading to a declining share of primary commodity exports) and continuously increased to 33.4% in year 2000. It is expected to increase to 35.8% in year 2005. In terms of exported manufacturing goods, it has increased from 58.8% in 1990 to 85.2% in 2000 (Malaysia, 2001b).

Since the 1970s, the source of growth for the manufacturing sector came from the export expansion of labour-intensive industries such as textiles and especially the electronics industry, in which the electronics industry recorded a remarkable rate of growth in exports of about 69% per annum. The later part of the 1980s saw a shift towards the development of heavy industry (capital-intensive). Table 4 shows the 10 most important export sectors of manufacturing goods for the year 1985 and 1995. In 1995, the increasing importance of electrical electronics and machinery goods; wood products; iron and steel and metal products; and rubber products to the total export of manufacturing goods can be observed. Non-resource based products were the important export of the manufacturing sector. It increased from 75.9% in 1985 to 81.5% in 1995.

Electrical, electronic, and machinery products remained the most important export goods and its share increased from 52.1% in 1985 to 65.6% in 1995 (an increase of 13.5%). Textiles, apparel, and footwear products were the second most important export goods, however its share decreased from 5.7% to 4.6% in year 1995. This industry is a more labour-intensive industry. One reason why the export of this industry decreased was because of decreasing share of foreign direct investment (FDI) in this industry. This industry became less competitive when the labour wage continuously increased and the FDI moved to cheaper countries. The textiles and especially the electronics industries were more concentrated in Selangor, Pulau Pinang, and Melaka (the more developed states).

Table 3
Export of Manufacturing Goods, 1985 and 1995 (RM Million).

| | 1985 | | 1995 | |
|---|------------------|------------|-------------------|------------|
| | RM Million | % Share | RM Million | % Share |
| Electrical, electronics & machinery (382, 383) ^a (NRB)* | 6,493 | 52.1 | 96,748 | 65.6 |
| Textiles, apparel and footwear (321, 322, 323, 324) (NRB) | 1,289 | 10.3 | 6,712 | 4.6 |
| Chemicals and plastic products (351, 352, 356) (NRB) | 610 | 4.9 | 6,702 | 4.5 |
| Wood products (331, 332) (RB) | 365 | 2.9 | 6,265 | 4.2 |
| Transport equipment (384) (NRB) | 566 | 4.5 | 5,247 | 3.6 |
| Iron, steel and metal products (371, 372, 381) (NRB) | 357 | 2.9 | 4,819 | 3.3 |
| Food, beverages and tobacco (311-312, 313, 314) ^a (RB) | 781 | 6.3 | 3,676 | 2.5 |
| Rubber products (355) (RB) | 113 | 0.9 | 3,218 | 2.2 |
| Petroleum products (353, 354) (RB) | 1,041 | 8.3 | 3,127 | 2.1 |
| Non-metallic mineral products (361, 362, 363) (RB) | 150 | 1.2 | 1,678 | 1.1 |
| Other manufactured goods ^b | 706 | 5.7 | 9,315 | 6.3 |
| Total Non-Resources Based | 9,315.0 | 75.9 | 120,228.0 | 81.5 |
| Total Resources Based | 2,450.0 | 20.0 | 17,964.0 | 12.2 |
| Total ^c | 12,274 (0.03) | 100 | 147,507 (22.9) | 100 |

*NRB = Non-resource Based; RB = Resource Based

^a Figures in parentheses refer related to 3 digit industry code

^b Includes export of other manufactured goods besides above

^c Figures in parentheses are annual percentage change of total export of manufacturing goods

Sources: Malaysia (1999: xxx)
Malaysia (2001c: xxvii)
Malaysia (2001b: 238)

Structural change in the manufacturing industry from labour-intensive to capital-intensive (heavy industry) and optimising of resource-based industry have somehow relatively increased manufacturing activities in the less developed states. As mentioned earlier, the industrialisation era in Malaysia started with the labour-intensive industry and more of these industries were located in the more developed states. Besides causing unequal economic growth, it also affected the demographic structure in the less developed states, especially by out-migration

Growth in the manufacturing sector since the 1980s was a result of the diversification of manufacturing towards a capital-intensive industry especially export goods, as well as maximisation of the comparative advantage of Malaysia's resource endowment. Specific tax incentives were also provided to encourage the growth of export-oriented industries. Besides this, a substantial proportion of manufactured exports came from the FTZs.⁵

FTZs were specially designated for export-oriented industries. There are 14 FTZs in Malaysia, eleven of which are located in the more developed states, while the rest are in the less developed states (Kedah, Kelantan, and Pahang). Infrastructure network, which provided easy access to the services industry, was the main reason why most of the FTZs were located in the more developed states. The FTZs were developed near to the well-established industrial estates and infrastructure network mainly to make them generate backward and forward linkages to other industries as well as to make them more attractive to the FDI.

Overall industrial concentration shows more dispersal for food, beverages and tobacco (31) and basic metals (37), wood and wood products (33), chemicals and rubber industries (35), and non-metallic minerals (36) in the year 1995. At the same time, industries such as textiles and clothing (32), paper and printing (34) and metal products, and machinery (38) remain concentrated in the more developed states. Although the concentration of those industries is on an increase in the less developed states, the concentration of capital, labour, value added, and output remained dominant in the more developed states. This scenario has a close linkage with the background of the labour market in that particular state. It is undeniable that an educated and experienced worker will migrate to more developed states and the inexperienced ones will remain in the less developed state. This creates a lower technological industrial environment in the less developed states giving rise to such industries as food processing, drinks,

furniture, paper products, rubber products and non-metal products. These industries are not only providing lower labour product ability but also lower wages (Figure 2).

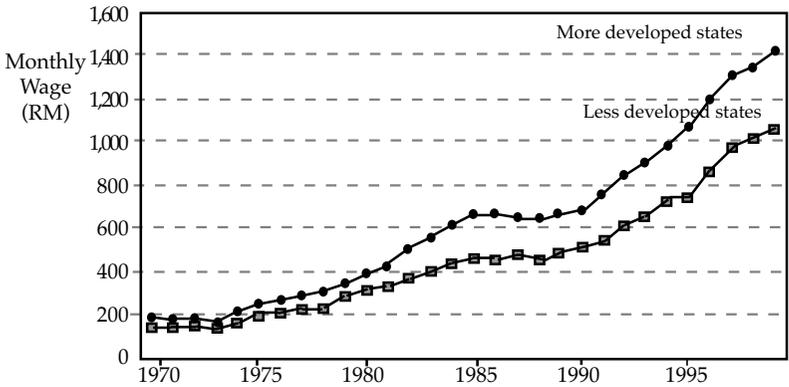


Figure 2
Average monthly wage per worker (RM) in the more developed and the less developed states, 1970 - 1999

Investor Distribution and Concentration

Since the 1970s, the public and private sectors have experienced rapid growth. Both sectors have played an important role in meeting the development objectives of the nation as well as achieving the New Economic Policy (NEP) objectives of poverty eradication and the restructuring of society. At the beginning of the NEP, the public sector paid more attention to increasing public utilities (infrastructure and other social infrastructure) and to improving the quality of life in rural areas. Private investment expanded rapidly in the industrial sectors, particularly in manufacturing and construction, petroleum exploration and production, and in the export-oriented industries located in the FTZs.

Foreign Direct Investment (FDI) played a significantly important role in Malaysia’s manufacturing activities. The importance of British investors before the 1970s had been overtaken by investors from Japan, USA, Singapore, Taiwan, and Switzerland.⁶ In 1983, about 17% of the total capital investment came from Japanese investors and increased rapidly to about 30% in the mid-1990s.⁷

The FDI increment was higher in the more developed states. In terms of percentage output share, chemical products were important in Johor,

while electrical, electronics, and machinery products were important in Melaka, Negeri Sembilan, Perak, Johor, and especially in Selangor and Pulau Pinang. Kedah was the only less developed state that had the advantage of increasing FDI in electrical, electronics and machinery products. Kedah experienced the spread effect because it was located near to the northern regional growth centre. The state of Kedah also had the advantage of external diseconomies of urbanisation in Pulau Pinang (potential for congestion, and high wages, and high employee turnover). FDI firms were more geographically dispersed throughout Peninsular Malaysia as compared with local investment firms. Local investors were more concentrated in Selangor, Johor and Terengganu. This situation somehow contradicts the early hypothesis of this study that FDI will increase the inequality between states in Peninsular Malaysia.

Approved manufacturing projects for the FDI were less associated with the participation rate of labour, mean monthly income, number of established manufacturing projects, and the education level of labour. Compared with FDI, domestic investors have higher correlation with all the indicators, which are also relatively high in the more developed states. Generally, most of the domestic investors are involved in resource-based and import substituting industries. In other words, they depend on the local consumers, while FDI depends on the overseas consumers (export-oriented industries). High consumer concentration was located in the more developed states, in which the number of established manufacturing projects and monthly household income, was also relatively high.

Figure 3 shows the trend of Industries distribution in Malaysia (by using the Gini coefficient) from 1970 until 1999.⁸ The Gini coefficient can be divided into five flows (A to E) and the trend significantly depends on the states' economic structure, government policy, and world economic scenarios.

Since the 1970 NEP, the government has started to promote the manufacturing sector as one of the instruments to diversify the economic base and at the same time, to decrease poverty, unemployment, and restructure society. However, the states' economic structure shift towards industrialisation did not happen at the same time for all states. In states that were more urbanised, with the establishment of the transportation system and public utilities, concentration of the commercial sector (tin and rubber products) enabled them to grow faster compared to states that depended on the traditional agricultural sector.

The percentage contribution to GDP by the agriculture industry decreased rapidly in all states (and regions) especially in the more developed states. Consequently, the importance of the agriculture and mineral sectors as the main contributor to GDP and employment, was over taken by the manufacturing sector. In these states, the urbanisation process and infrastructural amenities have been well developed and attracted a greater share of investment in the manufacturing sector.

At the beginning, especially after the Investment Incentive Act of 1972, the manufacturing sector started with import-substitutes (labour-intensive) industries which were more concentrated in the west coast (more developed states) of Peninsular Malaysia. Most of the comparative advantages were located in developed regions and this led to the widening gap between states. Besides, domestic investors (DI), FDI especially from Japan was also widely distributed in the more developed states. Among 330 Japanese firms in Peninsular Malaysia, 57.9% were located in Selangor and 22.4% in Pulau Pinang. Overall, 95.8% were located in the more developed states and the rest in less developed states. This matched Chunlai's (1997:8) study in China which showed that location determination of FDI inflow into developing countries was influenced by a large domestic market (in the case of Peninsular Malaysia - concentration of population in Selangor and Pulau Pinang), faster economic growth and higher per capita income (Selangor, including Kuala Lumpur have recorded per capita GDP of about 63% higher than the Malaysian average in 1970) (Malaysia, 1976: 200).

Because of the uneven economic growth during the early process of industrialisation, the distribution of industries in Peninsular Malaysia became more unequal. The Gini coefficient had increased since the early 1970s, reaching its peak in 1981 or in other words, the distribution has become more unequal.

However, the Gini coefficient started to decrease since 1982 (area-B in Figure 3), partly because of the important role played by the government since 1971, in order to increase infrastructural amenities as well as industrial estates to attract investors to the manufacturing sector in the less developed states. Besides this, the change of manufacturing structure from import-substitutes to export-oriented (labour-intensive) manufacturing activities has seen a total decrease in the imbalanced distribution of industries between states.

The export-oriented (labour-intensive) manufacturing activities give a comparative advantage to the less developed states because the cost of hired labour is relatively cheap and this attracted the FDI especially

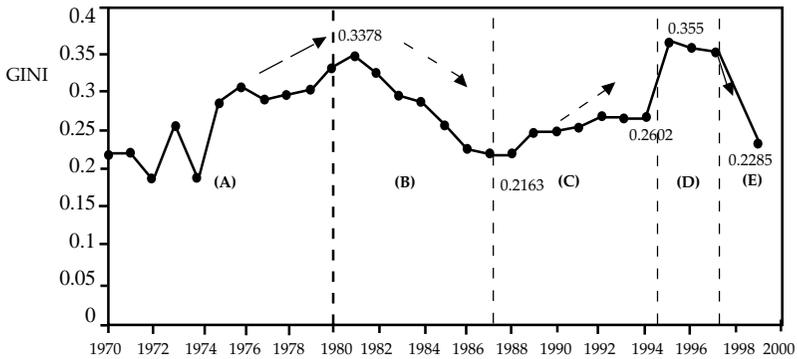


Figure 3
Trend of industry distribution in Malaysia, 1970-1999

the Japanese.⁹ The decrease in the imbalance of industrial distribution (Gini coefficient) also shows that the location incentive under the Investment Incentive Act of 1972 was not very successful in the beginning, but somehow succeeded in redistributing industry rather than concentrating in a particular state.

Since the government started to promote export-oriented and heavy industries (capital-intensive), especially after the Investment Incentive Act of 1986, the investment flows by DI and FDI increased rapidly and the Gini coefficient started to increase again, but the average percentage increase was small compared with the period 1970 to 1980 (area-C in Figure 4 and Figure 7). This situation can be explained by two factors. Firstly, the government had ended the location incentive scheme under the Investment Incentive Act of 1972 and there was no specific location incentive under the Investment Incentive Act of 1986. Secondly, because of the implementation of the FTZ industry areas, which focused on export manufacturing goods, most were located in the more developed states.

The imbalanced industrial distribution increased rapidly after 1994 (area-D in Figure 4 and Figure 5). This was because of the surplus in the world supply of electrical and electronics goods (as well as decrease in demand). It had caused a decrease in investment especially from the FDI. Without the assistance (reinvestment) by the FDI, industrial distribution become more imbalanced because domestic investors were less dispersed compared to FDI. It is however contradictory for the years 1998 and beyond. In 1998, DI was less than FDI, while in 1999 both types of investors decreased mostly because of the financial crisis, dating from the end of 1997 (area-E in Figure 4 and Figure 5). The

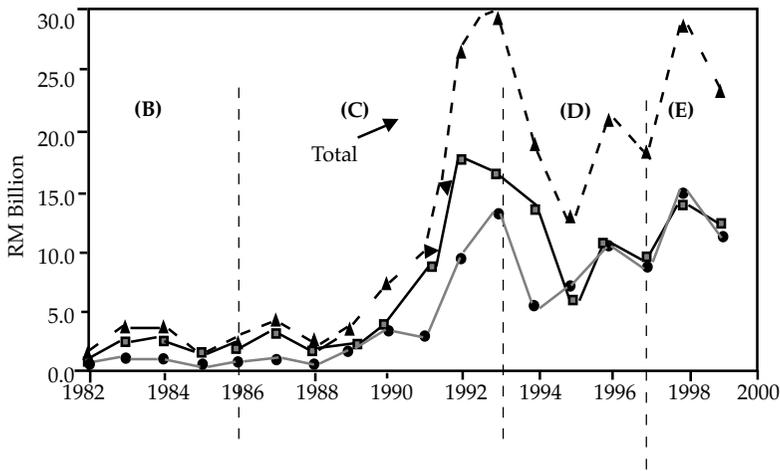


Figure 4

Trend of FDI, DI and Total investment in Malaysia, 1982 - 1999

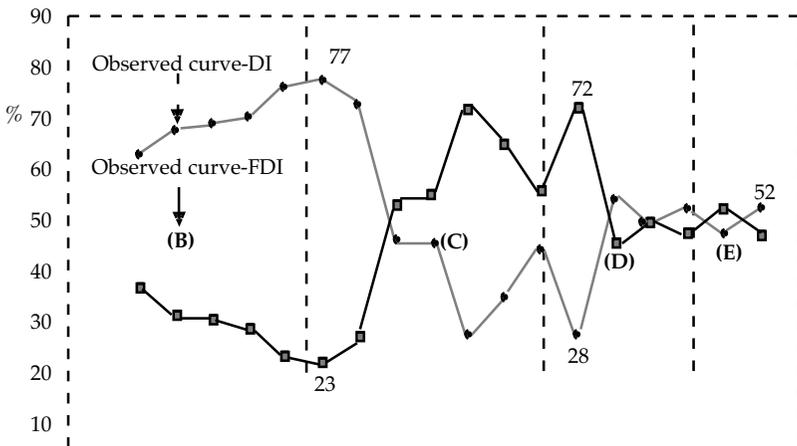


Figure 5

Mirror image of the percentage of FDI and domestic investment, 1982 - 1999

financial crisis was more serious in the more developed states where the industries were export-orientated and non-resource-based, compared to the less developed states, where the industries were more for the domestic market and resource-based. In this situation, the imbalance in industrial distribution decreased.

The changes in the distribution of the industries (Gini coefficient) are also interrelated to the percentages of DI and FDI in the manufacturing

activities. In general, when the percentage of FDI increases, the Gini coefficient will decrease, while when the percentages of domestic investment increase, the Gini coefficient will increase. The Gini coefficient trend shape is relatively similar to the percentage trend of the domestic investment. This can be shown clearly in Figure 5.

DI and FDI have a strong correlation with each other.^x Both have about the same effect on the domestic and international economic situation. In other words, when FDI increases, the DI will also increase. However, because the FDI has a negative effect on the Gini coefficient, FDI has to increase more than the DI investment in order to disperse the industries.

Regional Convergence

Since the Independence and especially after 1970, it was hoped that the manufacturing sector would increase economic opportunity through diversification of economic activities in the less developed states as well as convergence of manufacturing activities in the more developed states. However until 1999, the concentration, be it capital, labour, or output, continued to be dominated by the more developed states. In the year 1999, total manufacturing output in the more developed states was about 12 times greater than the less developed states increase from about RM3 billion in 1970 to about RM303 billion in 1999. Besides this, there are two important indicators towards convergence: value added and output per worker, which were also dominated by the more developed states and could perhaps be explained by the differences in investment rate, labour force growth rate, and technological progress.

Table 4
Value Added, Output and Capital Per Worker (RM)

| Region | Year | Value added Per worker | Output per worker | Total Manufacturing Output ('000) |
|-----------------------------|------|---------------------------|----------------------|--------------------------------------|
| More Developed States | 1970 | 7,881 | 25,814 | 3,617,357 |
| | 1980 | 9,584 | 67,420 | 27,964,096 |
| | 1990 | 29,232 | 118,427 | 79,615,778 |
| | 1999 | 65,942 | 279,246 | 303,631,335 |
| Less Developed States | 1970 | 4,414 | 17,803 | 316,681 |
| | 1980 | 5,747 | 44,254 | 2,812,780 |
| | 1990 | 20,218 | 73,901 | 7,637,396 |
| | 1999 | 48,512 | 193,592 | 25,627,524 |

Sources: Malaysia, Industries Surveys, various issues

Although the manufacturing sector in Peninsular Malaysia, as a whole, has experienced rapid average annual output growth rate, its distribution remained unchanged. It can be shown in terms of the *first* convergence or *second* convergence factors (or indicators). The *first* convergence will occur when the less developed states (low-income region) grow faster than the more developed states (high-income region) (the slope coefficient from regression of the growth of manufacturing output on the logarithm of its level). However, the trend of growth of manufacturing output in the more developed states and the less developed states was parallel (both coefficients were about 0.15). In other words, there is no tendency toward convergence between the more developed states and the less developed states (Figure 6).

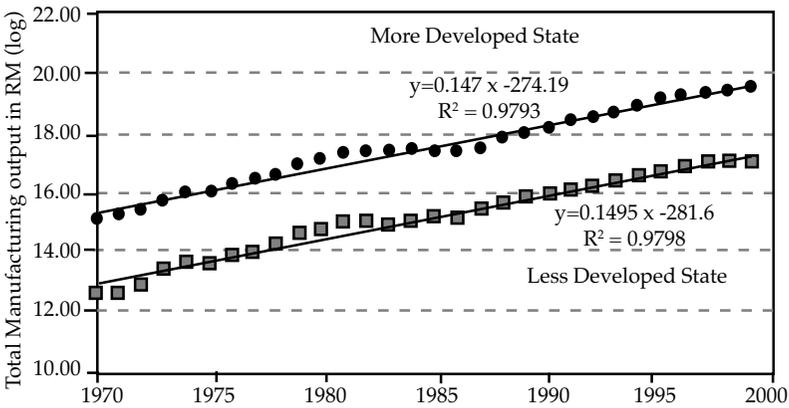


Figure 6
The *first* convergence factor

Meanwhile, the *second* convergence will take place when the gap between the more developed states and the less developed states decline (standard deviation of the distribution of the manufacturing output across regions decline).^{xi} The *first* convergence was in line with the *second* convergence factor. The distribution of manufacturing output across regions continued to increase (Figure 7). The *second* convergence increased rapidly especially after the implementation of the Investment Incentive Act of 1986. As was discussed in the previous part, this situation can be explained by the cessation of the location incentive scheme under the Investment Incentive Act of 1972 and the location of the FTZ which focused more on export manufacturing goods and most of it being located in the more developed states. Although under the Investment Incentive Act of 1986 the FDI and DI increased rapidly, it was greater in the more developed states rather than in the less developed states.

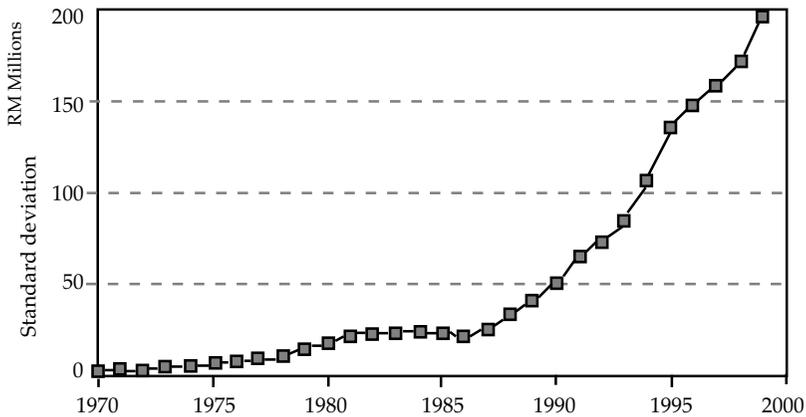


Figure 7
The *second* convergence factor

The lesser convergence between the more developed states and the less developed states was not only because of less FDI and DI (and less growth of manufacturing output) in the less developed states, but also because of socio-economic and demographic indicators that were more dominant the more developed states. This was in line with the convergence hypothesis (with more rapid convergence in countries with higher schooling levels); more schooling (as measured by male secondary attainment); higher life expectancy, (a proxy for better health and human capital in general); terms of trade improvement (high FDI flow) posited to generate added employment and income; a lower government share (investment), which is posited to release resources for more productive private investment; and a lower total fertility rate, which attenuates capital-shallowing; and adverse saving-rate impacts of high youth dependency (Kelley & Schmidt, 1998: 23).

Manufacturing activities in the more developed states concentrated more on export-oriented (mainly electronic and machinery industries) products while, manufacturing activities in the less developed states were more concerned with resource-based (wood and rubber) products and food industries, which were more for the domestic market. Convergence is stronger among countries that have strong trading relationships (Ben-David 1996). However, trading of the manufacturing products within the more developed and the less developed states was relatively low.

Other factors that caused convergence between the more developed states and the less developed states in Peninsular Malaysia did not happen because of the diffusion of technological change that was

dominated by the more developed states. Besides the higher secondary education levels, which facilitated the absorption of new technologies in the more developed states, capital-intensive industries were also congested in the more developed states. Technology transfers (mainly by FDI), large firm size and human resource development (HRD) (education and training), as well as the accumulation of knowledge through research and development (R&D)^{xii} drove faster productivity growth in the more developed states.

Low R&D and HRD not only caused low TFP^{xiii} but also less output elasticity of labour and capital in the less developed states. Labour and output in the less developed states were less efficient compared with the more developed states. However, government intervention by increasing the capital flow in government subsidiary companies in the less developed states showed a good response. In the period 1994-1995, the output elasticity of labour in the less developed states (LDS) was greater compared to the more developed states (MDS). In other words, more capital needs to flow to the less developed states in the process of convergence across regions (Table 5 and 6).

Table 5
Growth Account for Terengganu and Kuala Lumpur.^a

| State | Growth rate of manufacturing output | Contribution from capital | Contribution from labour | TFP growth rate |
|--------------------|-------------------------------------|---------------------------|--------------------------|-----------------|
| Terengganu (LDS) | 0.2032 | 0.1952 | 0.0081 | 0.0008 |
| | 100.0% | 95.6% | 4.0% | 0.4% |
| Kuala Lumpur (MDS) | 0.0532 | 0.0444 | 0.0010 | 0.0077 |
| | 100.0% | 83.5% | 1.9% | 14.6% |

^a average 1971-1999

Table 6
Capital and Labour Efficiency, 1990-91 and 1994-95

| | Output elasticity of labour | | Output elasticity of capital | |
|---------|-----------------------------|-----------------------|------------------------------|-----------------------|
| | More Developed States | Less Developed States | More Developed States | Less Developed States |
| 1990-91 | 1.606 | 1.082 | 0.972 | 0.657 |
| 1994-95 | 1.702 | 1.287 | 1.019 | 1.119 |

$$\text{Output elasticity of labour} = \frac{\partial Y / \partial L}{L / Y}$$

$$\text{Output elasticity of capital} = \frac{\partial Y / \partial C}{C / Y}$$

∂ = change in Y or L in that particular year

Y = output in M\$

L = number of labour

Overall the manufacturing sector in Peninsular Malaysia showed no tendency towards convergence between the more developed states and the less developed states. The growth trend of manufacturing output across regions (*first* convergence) remained unchanged while the distribution of the manufacturing output across regions (*second* convergence) increased continuously. The convergence process in Peninsular Malaysia was limited because of several factors such as a disadvantage in the demographic indicators, less trading relationship (between states), diffusion of technological change, fewer HRD and R&D and low productivity growth (TFP), as well as less efficiency of labour and capital in the less developed states.

CONCLUSION AND POLICY RECOMMENDATIONS

Since 1956, under the First Malaya Plan and especially after 1970, the manufacturing sector has been seen as the main tool to spearhead the restructuring of economic activities across regions. This is because industrial imbalance has an important relationship to the imbalance of household monthly income, poverty, and unemployment. The industrial dispersal strategy was incorporated in five year Malaysia Plans. In order to promote industrial activities in the less developed states, the government introduced the concept of development areas under the Investment Incentives Act of 1968; location incentive schemes under the Investment Incentive Act of 1971; and East-Coast corridor under the Investment Incentive Act of 1986. Industries located in those particular areas would get benefit through tax holidays and investment allowances that looked attractive to private investors. It was hoped that these incentives would increase manufacturing activities in the less developed states which recorded less monthly income, high poverty and unemployment, as well as out-migration.

However, the location incentives were less effective; projects approved under these incentives were small compared to other incentives æ it only accounted for less than 3% of the approved manufacturing projects

with incentives. Most industries were still located in the more developed states mainly due to established manufacturing activities in those areas with easy access to infrastructure, service industries, and large labour and consumer markets. Although the cost of land (industrial area, especially developed by the private sector) in the more developed states was relatively high, the investors were still willing to locate their firms in the more developed states after taking into consideration the deduction of production cost from the location incentives if the firm was located in the less developed states. The advantage from positioning the firm in the more developed states was greater than the advantage from the location incentive.

One disadvantage in the redistribution of manufacturing activities in Peninsular Malaysia was because of the Free Trade Zone (FTZ) industries strategy. Investors in FTZ were mainly FDI, export-oriented and capital-intensive industries. From the beginning (since 1970), FTZs were located in the more developed states mainly due to the infrastructure network, which provided easy access to the service industries. The FTZs were developed near to the well-established industrial estates and infrastructure network mainly to generate backward and forward linkages to other industries besides making it more attractive to the FDI. Because the FTZ were more concerned with export-oriented products, it was more convenient to locate it near a port. However, the major ports in Peninsular Malaysia were located in the more developed states - Port Klang in the state of Selangor and Pasir Gudang harbour in the state of Johor (beside the Singapore harbour).

Even though the number of existing industrial estates in the less developed states have increased, the size (in hectares) was small and the government developed all of them. The industries located in the less developed states were Small and Medium Industry (SMI) and were labour incentive. They were based more on resource-based (wood and rubber) and food manufacturing industries, and focused on domestic rather than exported-oriented products, while the more developed states concentrated more on electronic and machinery goods. These industries were capital-intensive and export-oriented (mainly dominated by the FDI in the FTZs).

Labour intensive industries showed more dispersal across regions (such as food, beverages and tobacco, wood and products, rubber industries, and non-metallic minerals), while high technological industries (such as textiles and clothing, paper and printing, and metal product and

machinery) remained concentrated in the more developed states. This scenario has a close linkage with the background of the labour market in that particular state which has less educated and experienced workers. Although the FDI was more dispersed compared with the DI, its number in the less developed states was still low and was more on labour-intensive manufacturing activities, mainly because the cost of hired labour is relatively cheap.

Even though the total manufacturing output in Peninsular Malaysia experienced rapid annual growth, its distribution remained unchanged. In other words, there is no tendency toward convergence between the more developed states and the less developed states. It seems that, there is a economic and demographic *disadvantage cycle* which occurs in the less developed states. This cycle is shown in Figure 8.

Most of the manufacturing activities in the less developed states are resource-based and labour intensive industries (1). It has a close linkage with the background of the labour supply in that particular state (2). This is because educated and experienced workers have migrated to the developed states (3), which creates a lower technological industrial environment in the less developed state (4).

The resource-based and the labour intensive industries are owned mainly by the DI and its products are also for the domestic market (compared with FDI, their activities were more on capital intensive and export oriented products) (5). A Lower technological industrial environment, small firm size and less HRD and R&D, as well as less output elasticity of labour and capital and less value added derived slowed the TFP growth. It is undeniable that all these factors have caused a low growth rate of manufacturing output (first convergence) in the less developed states (6) and increased the imbalanced distribution of manufacturing output (*second* convergence) across regions (7).

On the investor side, the low growth rate of manufacturing output means less marginal profit as well as less saving (8). In this scenario, less developed states also face the problem of capital scarcity and they choose to invest in manufacturing that uses less capital as well as less technological components as the best solution (9). Besides this, less marginal profit (because of low growth rate of manufacturing output) was the important factor why there were fewer industrial activities in the less developed states (10) while on the labour side, less marginal profit (because of low growth rate of manufacturing output) has a

strong linkage with the low wage rate (11), low monthly per capita income, and low saving rate in the less developed states (12). Less industrial activities as well as monthly per capita income (because of low wage rate) then causes high out-migration to the developed region (3). Only those with less education and experience remained in the less developed states and finally the cycle starts again.

Based on this disadvantages cycle, it is difficult for the government to increase manufacturing activities in the less developed states especially in the capital-intensive industries. Most of the industries are labour-intensive, which record low productivity and output growth rate that then slowed the process of convergence in the less developed states. Three strategies have been implemented to overcome the above problems. The strategies are increasing quality of life, including education and infrastructure; giving extra incentive for the capital oriented industries; and increasing government investment in the subsidiary companies in the less developed states. However due to the disadvantages cycle, would the convergence process in the less developed states remain unchanged.

Increasing education and infrastructure in the scenario in which the industrial activities in the less developed states remain unchanged (less number of industries and low wage rate) would make the out-migration continue to increase. Further incentive (under the Investment Incentive Act) for the capital oriented industries to be located in the less developed states were also unsuccessful mainly because of the background of the labour supply that was less educated and experienced. Finally, even though the government has invested in the subsidiary companies (capital-intensive industries) in the less developed states, those industries were more capital driven with less contribution from the TFP. It did not help much in the process of convergence because of the low growth rate of the manufacturing output.

Indeed, three main factors that caused the disadvantages cycle in the less developed states are high out-migration especially by educated and experienced workers to the developed states, which creates a lower technological industrial environment in the less developed states ('A' in Figure 9), industries that are more resource-based or labour intensive ('B'), and finally a lower investment rate ('C') (less domestic investment and saving, together with less FDI). By overcoming these problems (A, B and C), the other cycles in part 'D' will be overcome.

Further regional policies have to focus on these three main factors in order to increase manufacturing industries in the less developed states.

as less attractive to the investors. In order to give more comparative advantages to these areas, more benefits have to be allocated. To encourage the export industry, specific tax holidays based on the amount of product exported or labour used can be introduced.

Decreasing out-migration and encouraging in-migration, especially by educated and experienced workers, are also important regional instruments. These types of policies will hopefully overcome the problem of part 'A' in the disadvantages cycle in Figure 9. It can be done through providing some percentage of income tax deduction to the worker who works in these areas (less developed states). Currently, the government has already introduced capital and infrastructure allowance under the Investment Incentive Act of 1983. However other allowances such as professional labour allowance; human resources development allowance; science, technology research allowance, etc., can also be introduced. It is hoped that, in the long-run, such allowances will increase the productivity (TFP) in the less developed states.

Besides extra incentives to encourage capital-oriented and export-based industries (private investment), extra public investment (government expenditure) has to be considered. Increasing investment will hopefully overcome the problem of part 'C' in the 'disadvantages cycle' in Figure 9. It can be done through government investment directly to government or semi-government companies (industries) or through increasing public utilities. The government is now developing the motorway (highway) to link the west coast of Peninsular Malaysia with the capital cities on the east coast, which is a good move to develop the less developed states. In addition, developing an international airport and port has also to be considered (although there is now a port in Kuantan, Pahang, it is inefficiently used).

As discussed before, easy access to the service industries has a close link to the development of manufacturing industries. To increase the industries and the workers, service industries have to be developed either by the government or by private investors. It can be done through providing some percentage of profit tax deduction to the investors.

Currently, almost all the government research institutes related to food, agriculture (rubber and palm oil), and forests are located in Kuala Lumpur or the state of Selangor. However these institutes are no longer important to the economic activities in those particular areas. It is more relevant that these research institutes be relocated to the east coast of Peninsular Malaysia, where agriculture, food and timber (including furniture) industries are relatively important. Currently also, there are no universities in the east coast region of Peninsular Malaysia. Two

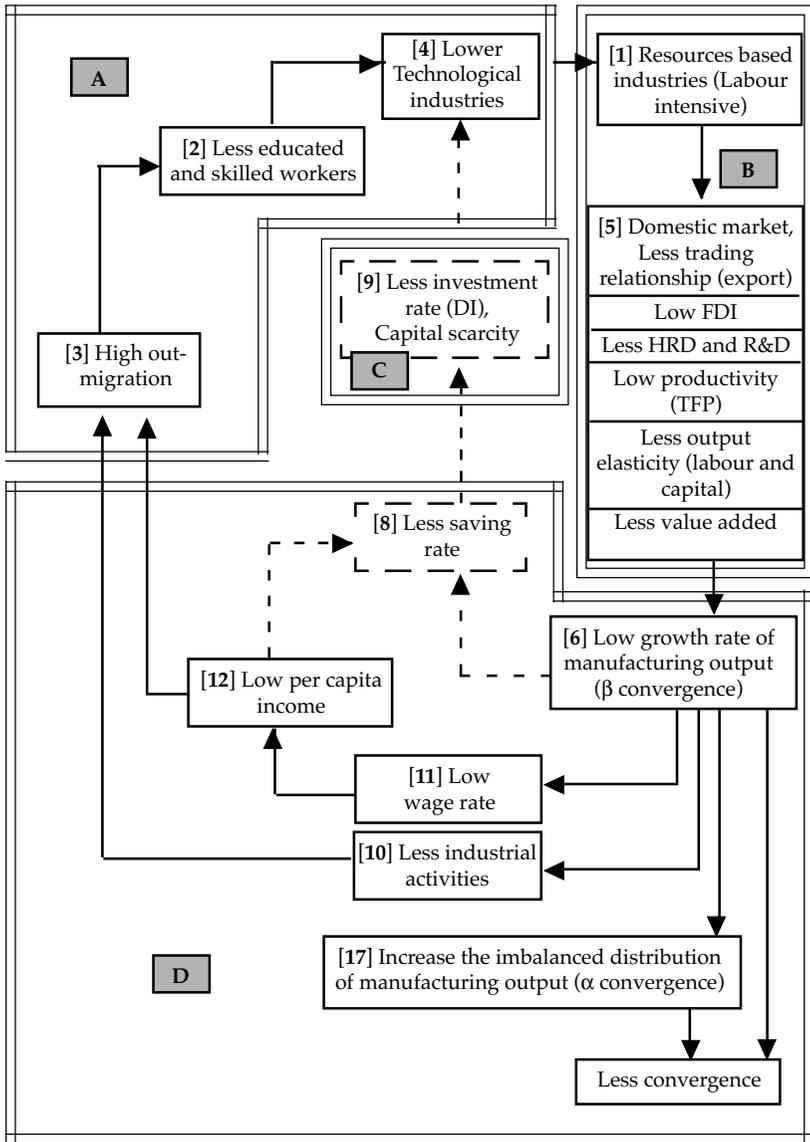


Figure 9
Policies in developing less developed states

types of universities suitable to be developed in these areas are petrochemical and agricultural based. These universities and research institutes should be located in one area (corridor) to make it easy for network connection (collaborative partnership). The private sector should also be actively involve with integrity and full responsibility to

provide on-the-job training. The involvement of the private sector can reduce dependability on the government in stages.

One of the problems facing the agricultural sector when the national economy transforms towards a manufacturing base is shortage of labour (especially in the agricultural sector). Currently, the government is using a *short-cut* instrument through encouraged migration of unskilled foreign workers. However, because the agricultural sector remains important in the less developed states, long-term instruments have to be considered.

High dependency on foreign workers causes not only a high out-flow of currency (sending income to their home country) but also tends to create an excess supply of totally unskilled workers, thus depriving them of higher wages, as compared to skilled workers. This would induce a wider income gap in the economy than before. Two instruments can be suggested.

1. For the investors, land-per-worker ratio has to decrease, by increasing capital and technology. To encourage more capital and technology used, the government can introduce incentives similar to the incentive for the manufacturing sector (such as Investment Tax Allowance, Incentives For Reinvestment and Infrastructure Allowance) that can also be applied to agriculture companies. These incentives should also be related to the number of local workers used (to reduce the use of foreign workers).
2. For the unskilled and semi-skilled workers (local and immigrant), the minimum wage should be higher than workers in other sectors and monthly income should be free from income tax for the local workers. It means that '*total useable income*' or '*total net income*' (income after income tax deduction) will be higher for the local worker in the agricultural sector compared with the local worker in the other sectors (because of difference in minimum wage). Besides this, total useable income will be higher for the local worker compared to the foreign worker in the agriculture sector (because income tax exemption will be only for local workers). This instrument, will hopefully overcome the problem of competition between local and foreign unskilled or semi-skilled workers.

In conclusion, industrial dispersion has to be seen as the main instrument for the achievement of development goals. Further incentives to develop the less developed states not only have to be

given to the manufacturing companies (to increase job opportunities) but also have to be given to the workers (to make job opportunities more attractive), and to the services companies (as a complement to the manufacturing companies and population growth).

If these suggestions are applied, it not only develops the less developed states (overcomes the problem of rural dwellers – high dependency ratio, gender inequality, abandoned land, relatively high poverty, and shortage of labour in the agricultural sector) but will also overcome the problem of urban poverty. This is because the increase in the size of the urban labour force has so far been mainly due to rural migration. The poverty problem in the cities is the extension of the poverty they endured in the rural areas. If there are enough job opportunities in the less developed states, it will reduce out-migration and at the same time reduce the problem of urban poverty.

END NOTES

- 1 The incentive provided for industries to locate in a development area and was linked to some of the incentives provided under the Investment Incentives Act, 1968. For pioneer industries locating in a development area, an additional year of tax relief was granted irrespective of the size of capital investment. Also, should an electronics firm which enjoyed the special incentive for the electronics industry be located in a development area, it became eligible for an additional year of tax relief. For a company that had been granted the investment tax credit (ITC), an additional credit of 5% of the approved capital expenditure would be granted if the company were to be located in a development area (Lee, 1978: 456-458).
- 2 In addition to the development area in the Investment Incentive Act, 1968, any industry located in the gazetted location incentive scheme became eligible for five years of tax relief compared with three year tax relief if the industry was located in the development area. Areas covered under the Location Incentive Act were overlapped with the location under development area in the Investment Incentive Act, 1968.
- 3 It was hoped that these additional incentives would decrease the cost of production. States in the east-coast of Peninsular Malaysia recorded less comparative advantage in terms of concentration of population (consumer), labour force (high out-

migration especially those who are experienced and educated), and social infrastructure.

- 4 In 1996 (July), from 4,403.47 total hectares of industrial land developed under Johor State Economic Development Corporation (SEDC), only 16.59 hectares (0.38%) were located at of Mersing Industrial Estates (Mersing I). While, in 1998 (January), from 4,443.78 total hectares industrial land developed under SEDC, only 1,500 hectares (0.33%) were located at Mersing Industrial Estates (Mersing II).
- 5 In 1995, the Malaysian Industrial Development Authority (MIDA) used the term *Free Zone* (FZ), in current publications, MIDA used the term *Free Industrial Zones* (FIZs). FIZs enable these export-oriented companies to enjoy minimal customs formalities and duty free import of raw materials, component parts, machinery, and equipment required directly in the manufacturing process, as well as minimal formalities in exporting their finished products. Companies can be located within FIZs when: (a) their entire production or not less than 80% of their products are meant for export; and (b) they mainly import their raw materials/components. Nevertheless, the government had encouraged FIZ companies to use local raw materials/components (MIDA, 2002: 92).
- 6 Before the 1970s, British investment contributed significantly to Malaysia's FDI. Initially British investment was channelled into agricultural (rubber estates) and mining (tin) sectors, and later (late 1950s) diversified into light industries (end consumer's products). In the 1950s as well, more than 70% of FDI came from Britain and 90% of its concentration in plantation and mining sectors. However, the percentages decreased in 1970 to about 45% and to 16% in 1983 (Mohammad & Chee, 1987:101,104). In the early 1980s, under the '*Look East*' campaign, the government welcomed FDI from Japan and South Korea, to emulate and learn from those countries' economic development experience (Brewer, David, Lim & Corredera, 1986:96). In terms of exports and imports, in 1957 14.6% of export was to United Kingdom and 17.7% of import was from UK. However in 1985, the Malaysian export to UK decreased to only 2.6% and import from UK decreased to 4.0%. In 1957, 10.1% of export was to Japan and 6.1% of import was from Japan. However in, 1985, the Malaysian export to Japan increased to 24.3% and import from Japan increased to 23.0% (Khong, 1987:1096). Malaysia was recorded as being in the top 50 countries with the most active

FDI inflow in the world and among the top 10 developing countries in this respect (UNCTAD, 2002).

7 Japan is the single most dominant economic power in Malaysia (Khong, 1987: 1095).

8 This Gini coefficient was calculated based on number of industry in that particular state vs. value of output in Malaysian currency (RM).

9 According to Mohammad and Chee (1987:103), most of the Japanese investors were involved in textile and textile products, and the electrical and electronics industry which were and the two most important export-oriented manufacturing activities and labour-intensive. According to the '*Kojima hypothesis*', Japanese investment tends to be '*trade cresting*' as it facilitates relocation of the labour intensive industries in which the home country (Japan) is losing its comparative advantage. See also K.Kojima. (1977). *Japan and A New World Economic Order*. Tokyo: Charles E. Tuttle & Co.

10 Correlation between $\ln DI$ and $\ln FDI$ was 0.881 and significant at the 0.001 level (2-tailed).

11 For more about convergences, see Nijkamp and Poot (1998: 26).

12 In 1989, the country's R&D expenditure was 0.8% of GDP. From this total, 20% was contributed by the private sector, which was made up of mostly foreign entities (FDI) (Malaysia, 1991:211).

13 In order to determine the contribution of capital, labour and technology, the researcher used the Neo-classical production function that has been developed further for spatial perspectives by Nijkamp and Poot (1998). There are only two types of input in the production process, labour $L(t)$, and physical capital $K(t)$ that will then determine the flow of output generated at time t , $Y(t)$. The production function can be derived as follows: $Y(t) = A(t) \cdot F[K(t), L(t)]$ or $Y = AK^a L^b \dots$ (1). The equation was in the continuous-time form and had been modified for empirical purposes to apply to discrete time by using logarithmic differences (Barro & Sala-i-Martin 1999:347). $\log[(A_{(t+1)}/A_t)/A_t] = \log[(Y_{(t+1)}/Y_t)/Y_t] - \{a(t) \cdot \log[(K_{(t+1)}/K_t)/K_t] + b(t) \cdot \log[(L_{(t+1)}/L_t)/L_t]\} \dots$ (2).

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