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# Development Policies of Singapore: Dynamics of Internationalism versus Regionalisation

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**Abstract**

Singapore is one of the few indisputable success stories of post-war economic development. The country therefore is something of a role model for less developed countries as to what has to be done in order to promote development, in spite of the fact that many characteristics of Singapore (e.g., small size, strategic location) sometimes make it difficult to draw parallels to other countries. This paper aims at summarising the policies employed by the Government in order to promote growth and development. In particular, the relation between internationalisation and regionalisation of the economy is addressed. In the core of the development strategy was originally an outward-oriented philosophy, largely relying on foreign direct investment and creating a conducive environment for investors, playing down the traditional entrepôt role of the city state. Later on, with rising income levels, the problem of industrial upgrading became increasingly important. Promoting more advanced industries and services, heavy investment in human resource development and outward direct investment with an emphasis on the region then became the main thrusts of the country's development policy. Regional free trade has also been strongly supported by Singapore.

Key words: Singapore, economic policy, development, regionalisation, globalisation.

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**ABSTRACT**


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Singapore is one of the few indisputable success stories of post-war economic development. The country therefore is something of a role model for less developed countries as to what has to be done in order to promote development, in spite of the fact that many characteristics of Singapore (e.g., small size, strategic location) sometimes make it difficult to draw parallels to other countries. This paper aims at summarising the policies employed by the Government in order to promote growth and development. In particular, the relation between internationalisation and regionalisation of the economy is addressed. In the core of the development strategy was originally an outward-oriented philosophy, largely relying on foreign direct investment and creating a conducive environment for investors, playing down the traditional entrepôt role of the city state. Later on, with rising income levels, the problem of industrial upgrading became increasingly important. Promoting more advanced industries and services, heavy investment in human resource development and outward direct investment with an emphasis on the region then became the main thrusts of the country's development policy. Regional free trade has also been strongly supported by Singapore.



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## INTRODUCTION

Singapore is one of the few indisputable success stories of post-war economic development. The country therefore is something of a role model for less developed countries as to what has to be done in order to promote development, in spite of the fact that many characteristics of Singapore (e.g., small size, strategic location) sometimes make it difficult to draw parallels to other countries. The pragmatic and unconventional approach to economic policy by the Government, which not always has been in accordance with standard advice of academics and international organisations, adds another dimension to the importance of the lessons to be learnt from Singapore. So does the fact that Singapore has developed seemingly without suffering from many common drawbacks of industrialisation: high inflation and other symptoms of macroeconomic imbalances, a deteriorating income distribution, environmental degradation etc.

Similarly, the rapid growth did not lead to serious social problems, common in many other developing countries. This was because social policies helped spread the increasing welfare to broad groups of the population and because the "meritocracy" pursued by the Government promoted upward social mobility. The economic policy of Singapore has been very proactive, not only reacting to problems when they turn up, but designed with clear strategic targets. In fact, the Singapore economy is run very much like a business enterprise. Even the pay of civil servants is partly tied to the performance of the national economy (cf., e.g., Tan and Toh 1998).

The scope of this paper is wide and provides a general overview of relevant economic policies pursued after independence from a development point of view. A certain emphasis is put on Singapore's integration policies with the global and regional economies as this is a cornerstone of the development philosophy of the country. Although conceived as a regional trading centre and military base the country opted for playing down the regional dimension after independence and chose to plug into the global economy instead. The regional economy returned to the agenda later on, however, but has never replaced the country's strong international orientation.

When discussion development policies of Singapore social policy, education etc. must be included to some extent in addition to purely economic issues, since they have been an integral part of the promotion of development. The significance of well-functioning social institutions, most of them provided by the state, for economic development has been emphasised recently (cf., e.g., Chang and Rowthorn 1995, Clague 1997, North 1997, Olson 1997). Moreover, a full comprehension of the economic development of Singapore cannot be reached without understanding the "endogenous" role of the state, since one need to know not only *what* has been done but also *why* it has been done. To do this, understanding the interplay between the state and the rest of the economy is essential. In exploring that relation one has to go far beyond a simple "targets and means" approach. I will concentrate the discussion in this paper on what has been done, however, not going into the political economy of *why* certain policies have been pursued.

Even a superficial glance at the available material — which is extensive — shows that Singapore is a very government-driven economy. This paper is bound to reflect that fact and it may seem more "government-oriented" than similar surveys of other countries. A crucial fact that needs to be mentioned in this context is that the same political party, the People's Action Party (PAP) has been in power since 1959, which has resulted in a unique consistency of economic policy over time. This reflects an understanding that long-run predictability and credibility are crucial for attracting foreign investors. The consistency can also partly be understood as a result of the fact that one single person, Goh Keng Swee, wielded a decisive influence on the economic policies, especially during the early years of independence (Aw 1991:403). (Furthermore, the same Prime Minister, Lee Kuan Yew, was in charge between 1965 and 1990.) Despite the leading role of the Government, the interventions undertaken were, by and large, not distortive but aimed at correcting market failures.

## THE STARTING POINT

Singapore became an independent country in 1965, having been expelled from the Malaysian Federation. At that time the outlook for the new state was bleak. Uninhibited access to the Malaysian home market was far from granted (Aw 1991:339) — in fact, the planned common market eventually dried up — and in 1967 the British government announced its plans to withdraw its military forces from the Republic, with very serious potential consequences for unemployment, which was high already (Low 1998, Krause et al. 1987: 177). Poverty was a serious problem, much of the infrastructure was undeveloped and the housing situation was miserable. Only 50 percent of the population were literate in any language (Sandhu and Wheatley 1989:v). Moreover, as emphasised by Lim Chong Yah (1989:206), the multiracial, multilingual and multi-religious society of Singapore did not have much sense of nationhood. Hence, the leaders had to build up the nation as well as the economy.

Despite all problems, Singapore was in several respects better off than most developing countries at independence. Its average income level was relatively high — US$ 524 per capita (Krause et al. 1987:8) — and some basic efforts at improving the health standard and education level had been made by the British colonial government. An efficient public administration was in place as well (Peebles and Wilson 1996:1–2). To that extent, at least, the country had a head start as compared to the other Asian newly industrialised economies (NIEs). Its strategic location was a distinct advantage as well. The traditional economic role of Singapore, that of a regional entrepôt, appeared to be waning, however, despite the fact that oil and industrial products offered some new prospects (Sandhu & Wheatley 1989: v, Edwin Lee 1989: 12). This trend was reinforced by the strained political relations to the republic's closest neighbours in the mid 1960s. Regional integration thus appeared as a rather unviable path to development.

In the short run there was little that could compensate for the country's diminishing role as an entrepôt and military service hub. Industry was underdeveloped and was, by and large, limited to some assembly plants, footwear and food processing (Edwin Lee 1989: 11–12). The small domestic market was not a viable base for import substituting industrialisation, the development model recommended by most policy advisors in the early 1960s.

Future development could benefit from facilities and skills related to the entrepôt economy, however. The service industries were well developed and comprised banking and insurance, transportation, marketing etc. The harbour was a major asset in this context. The extensive entrepôt activities had also contributed to the development of general business skills and entrepreneurship, even if the general level of formal education was low and the entrepreneurs were mainly traders, not industrialists.

Realising the questionable potential of entrepôt trade as an engine of growth the Government nevertheless followed the outward-looking tradition already established, in the sense that the strategy of development chosen was rapid outward-oriented industrialisation and free trade. The emphasis was on attracting foreign direct investment (FDI) in manufacturing, where the country could function as a production and export platform. Domestic entrepreneurs were not nurtured until much later, and the domestic manufacturing sector remained undeveloped. Instead the domestic resources in terms of labour and administrative capacity were mobilised in order to support the FDI activities. The small domestic market was of secondary importance for the investors. Hence Singapore embraced the idea of globalisation, defined as an increase in the international division of labour brought about by FDI and accompanied by increasing trade flows long before globalisation became a common catchword. Hence market integration took place at a global level rather than at a regional one.

Now, over thirty years later, it is obvious that Singapore is one of the few great success stories among the Third World countries of the 1960s. It shares this distinction with a few other economies, most of them Asian. Because of this there is now a voluminous literature on what has sometimes been called "the Asian model" (see, e.g. Islam 1994, Jomo 1997: 27, 157), aiming at finding out its "secrets". Whether such a "model" exists is unclear, however, since the East Asian economies are very different in a number of ways. Common traits are mainly a strong outward orientation, a more or less authoritarian government and — to a certain extent — a common Confucian heritage, but it is not always clear if and how these traits contribute to economic development.

It has been noted by, e.g., Tan and Toh (1998) that government policies in Singapore have been mostly geared towards the supply side. This is true especially for the long-run oriented policies. Instead of intervening in the distribution of income and demand structure through, for instance, a comprehensive welfare system, the Government used its resources to create physical and social infrastructure, and to strengthen the human capital stock through building up, e.g., education and health care systems. In the following sections these policies are described.

In the case of Singapore, the consensus seems to be that, at least during the first few decades, growth was largely factor-driven and based on successful mobilisation of capital (through very high savings rates and FDI) and labour (through mopping up the unemployment and allowing for immigration). Most studies suggest that the contribution of total factor productivity (TFP) increases to the growth was small (see, e.g., Tsao 1986, Young 1994, Tan and Suchin 1998, Tan and Toh 1998). This is surprising as such against the backdrop of the heavy investments in human resource development that have been made. (Note, however, Booth (2000) who suggests that the investment in education may have been exaggerated.) Due to the notoriously difficult measurement problems in this context it is probably not very meaningful to try to pinpoint exactly the role of TFP growth. There are also some results suggesting that the TFP growth may have played a similar minor role in the cases of early industrialisation in Japan and the United States (Tan and Toh 1998). Nevertheless, the seemingly weak TFP growth is clearly a reason for concern. Although factor-based growth may have been a perfectly sensible strategy in the early days of independence, given the high level of unemployment, it is obviously not a sufficient one in the future, as pointed out by Krugman (1994), among many others. It is possible, however, that the efforts towards developing the human resources produce tangible results only with relative long lags.

Traditional demand-oriented stabilisation policies have been pursued as well, despite difficulties due to the country's extreme openness. While these cannot be classified as development policies proper, they have contributed towards a climate conducive for private enterprise (Wong and Ng 1997). The actual performance of the economy has, in fact, displayed a good deal of independence from global and regional fluctuations, which suggests that there has been a role for such policy (cf. Krause et al. 1987:18).

Monetary policy has been employed for managing the exchange rate rather than the interest rate or domestic economic activity. This is because the exchange rate has been the most important instrument for controlling the domestic price level. At the same time, too rapid appreciation must be avoided, for the reason of competitiveness (Aw 1991: 327, Peebles and Wilson 1996:152, 183). There has been a trend of appreciation, however, over the long run which has helped keeping inflation in check.

Fiscal policy has been used for stabilising purposes as well, even though growth enhancement has been in the foreground. Especially public construction works are used as one of the main methods of stimulation during periods of recession (Krause et al. 1987: 143–44). Public sector capital formation has typically been very high, usually between 20 and 30 percent of total fixed investments. Tax reductions and reductions of the employers' Central Provident Fund (CPF) contributions have also been used as expansionary measures during recessions (Krause et al. 1987:147–49, Peebles and Wilson 1996:17, Wong 1999, World Bank 1999).

Labour policy has also been an important stabilisation instrument for the Singapore Government. Due to the centralised system of wage formation and the common use of wage supplements and bonuses the wages have been flexible in both directions. More importantly, however, due to the large numbers of temporary immigrant workers the size of labour force can be varied through the process of issuing work permits and employment passes (see Krause et al. 1987:165, 174).

## DEVELOPMENT, INDUSTRIALISATION AND TRADE POLICIES

From the beginning, the main targets for economic policy were high growth and a stable price level. Mobilisation of capital has a key role in this context, despite the fact that early development economics tended to exaggerate that role. Apart from efforts at attracting FDI, capital was mobilised through the highest savings rates in the world. These savings were, especially in the early days, channelled into basic infrastructure such as housing, and foreign assets (i.e., building up the country's international reserves) (see Krause et al. 1987:82–83, Linda Lim 1989:188).

In the core of savings mobilisation in Singapore is the CPF, originally established by the British administration in 1955, which is the basis of the social security system and to which employers and employees both make contributions defined as a certain percentage of the wage bill. As mentioned earlier, much of the funds have been used for basic capital formation, such as housing. 88 percent of Singaporeans own their own homes, most of whom live in Housing and Development Board (HDB) flats. The funds can nowadays also be used for buying shares or investing in trust funds (see, e.g., (Peebles and Wilson 1996:16–17) as well as for medical care (Medisave) and education. An even more important source of savings is the public sector while voluntary private saving has been less important because of the compulsory CPF savings (see, e.g., Peebles and Wilson 1996:25).

In a small open economy trade and industrialisation policies are two sides of the same coin and have to be dealt with in the same context. Singapore is, and has always been, an extremely open economy both in terms of the magnitude of trade flows compared to the GDP and in terms of trade barriers. This is due partly to the lack of domestic resources, partly to high import contents of some export products – such as oil-related goods — and partly to the important role of intra-industry trade, which in turn, is a result of the country's advanced industrial structure. In fact, in 1992 only about 20% of total exports were "domestic" in the value added sense (Peebles and Wilson 1996:159–63).
Historically Singapore enjoyed a free port status, a role that was interrupted only by a short period of import substitution after joining the Federation of Mala ysia (1963–65). Even then the level of protection was moderate. After independence, the protective measures were gradually dismantled — most of the process taking place during the period 1968–73 (Chng et al., 1988, Aw 1991: 316) and the country subscribed to the concept of free trade. As noted already, the openness also renders Singapore extremely vulnerable to external, economic and political, disturbances, however, as the recent financial crisis in Asia demonstrated. These

potential threats have been handled trough a build-up of very large foreign reserves (largest in the world, on a *per capita* basis (Wong 1999)) and through investing in defence and a regional security network.

Although the liberalisation if the Singapore economy has been unilateral by nature, the Republic has also been an active proponent of trade and investment liberalisation within regional organisations, particularly in the Association of Southeast Asian Nations (ASEAN) and, during the last decade, the Asia-Pacific Economic Cooperation forum (APEC). Although some of the *de facto* regional integration is likely to be a consequence of the effort of these organisations, much of the integration of Singapore's economy with its neighbours is market driven, however, and not a result of organised state-to-state co-operation. As a result, trade activities are concentrated to the Asia-Pacific region, although this pattern has not been specifically promoted. In fact, the recent financial crisis has prompted a new awareness of the need to go beyond the region and find new markets (Govt of Singapore 1998). ASEAN's share as a trade partner is prominent: In 1998 26 percent of Singapore's export went to and 29 percent of its imports came from ASEAN 10[1] (IMF 1999). (For 1996, the last "normal" year before the crisis, the figures were 32 for exports and 28 for imports.) Investment links with the neighbouring countries are encouraged, as will be elaborated on later, and probably explains much of the trade.

FDI as a vehicle for development was originally envisaged by a World Bank mission. Its recommendations, known as the Winsemius Report, were rather unusual then and apparently based on pragmatism more than prevailing economic theory at the time (cf. Haggard 1990:108). (As well known, FDI were highly unpopular at that time in most developing countries.) The report was not really adopted until Singapore's expulsion from Malaysia a few years after the publishing of the report forced a radical strategic overhaul of the country's economic policies. The PAP government soon saw the advantages of FDIs as a "packaged deal", however, including capital, technology, management and marketing skills (cf., e.g., Peebles and Wilson 1996:168). Since the domestic savings rate was very high in the first place it is likely that the latter components were more important than the mere inflow of capital (cf. also Aw 1991:356).

Singapore's attractiveness to foreign investment was not primarily based on low wages, the usual advantage of economies at an early stage of development, as these were rather high

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[1] ASEAN 10 consists of Brunei, Cambodia, Indonesia, Laos, Malaysia, Myanmar, the Philippines, Singapore, Thailand and Vietnam.

compared to other developing countries (Krause et al. 1987:8). Apart from the location advantages it was rather the favourable business environment that was the crucial attraction. A conducive business climate implies, among other things, that the costs for establishing new business are predictable and the start-up times are generally short. As emphasised by Huff (1999), a careful reputation building as to being reliable, uncorrupted and competitive is an essential part of the picture. It is also assumed that the lack of regulations and restrictions on the entry and operations of foreign firms, in terms of exchange controls, repatriation of profits, equity participation etc. made the country attractive as a production base (Chia 1985).

According to Krause et al. (1987:55), the favourable business climate comprised the following components: a) macroeconomic stability b) orderly industrial relations c) absence of distortions in trade policy d) taxation and incentives e) regulation of business. As a result foreign capital flows soon became very substantial. Foreign firms controlled 45 percent of total corporate assets, excluding the financial sector by 1989 and the largest firms in manufacturing, finance, construction and commerce were all foreign (Peebles and Wilson 1996:30– 31). Conducive conditions have not only attracted FDI but also changed its composition over the years, towards higher value added production (Wong 1998). In manufacturing alone, foreign capital accounted for some 60 percent of the total equity capital by 1993, and foreign firms have represented between 70 and 75 percent of manufacturing output sine the 1970s. As may be expected, the domestic firms tend to be smaller, on average, and technologically less advanced than the MNCs (Wong 1998). Although its economy is well diversified in general, a certain lopsidedness — as electronics constitute a very large part of the Republic's manufacturing base — is by now a cause for concern, however, as it may contribute to the economy's vulnerability to external disturbances (see, e.g., MAS 1998). Moreover, even this industry must be restructured in the long run. As a matter of fact, the lower end of the electronics industry, such as some of the disk drive manufacturing, is now moving on to cheaper locations (cf. Wong 1999, Dolven 2000a).

**Incentives**

Paradoxically, Singapore does not have an explicit industrial policy (Low 1998:155) although the combination of incentives and restrictions taken together are more or less tantamount to the same thing. Some of the incentives to investors were put in place even before full independence. (These incentives were not specifically aimed at *foreign investment* even if the foreigners have probably benefited more in practice due to the undeveloped state of domestic manufacturing in the early years.) The Pioneer Industries Ordinance was passed in 1959, providing tax relief for 5 years (from 40 to 4 percent), later extended to 10 years for some hi-tech industries (Aw 1991:349, Balassa 1991:78). The Industrial Expansion Ordinance was also passed in 1959 providing tax relief to firms that increased production of approved products. The tax holiday was 5 years, with relief granted on a sliding scale depending on amount of new capital invested. By and large, the early investment that flowed in as a consequence did have a considerable impact on economic growth but less so employment. This was because the industries invested in were mainly heavy, capital-intensive ones, such as shipbuilding, petroleum and chemicals (Aw 1991:350).

To speed up the orientation towards exports the Income Tax Amendment Act was introduced in 1965, allowing tax cuts for market development expenditures and double tax deduction for expenses incurred in promotion of exports. The Economic Expansion Incentives Act was passed in 1967. It reduced company tax on approved manufactures and exports (from 40 to 4 percent), lowered tax (from 40 to 20 percent) on royalties, licenses, technical assistance fees as well as contributions to research and development (R&D) costs to be paid to overseas enterprises (Aw 1991:329, 350, Balassa 1991:77). The tax relief was for a 15 year period (10 years for pioneer firms that had already enjoyed the tax holiday stipulated in the Pioneer Industries Ordinance). Moreover, it allowed duty-free import of equipment and inputs. However, these privileges were reduced in 1970, as they were thought to be "unnecessarily generous" (Aw 1991:341).

In 1974 subsidised financing of exports was made available and in 1975 the Export Credit Insurance Corporation, with 50 % government participation was established. Preferential loans and equity participation were available from the 1960s through the Economic Development Board (EDB) and subsequently from the Development Bank of Singapore (DBS). During the 1960s these contributions to a great extent went to traditional, labour-intensive industries, reflecting the need to improve the employment situation, but later on an increasing share was allocated to "targeted", non-traditional industries (Aw 1991:351). Textiles and garments, the mainstay of manufacturing capacity of many developing countries, never became very important in Singapore (Chia 1985). As to foreign investment the idea of Singapore as regional headquarters has been promoted though tax incentives etc. (Chia 1997, Peebles and Wilson 1996: 168). The importance of enhancing technology and innovation related activities came to the forefront after the severe recession in the mid 1980s and the revamping of economic policies that took place after that Loh (1998).

In 1978 and 1980 amendments of the tax laws allowed tax credit up to 50% for investments of firms not eligible for pioneer status, and provided incentives for research and development (R&D) (including double deduction for R&D) (Balassa 1991:77–79). 1978 came a programme called Second Technical Revolution aiming at increasing the relative importance of hi-tech industries (Balassa 1991:78) and in 1983 the Singapore Trade Development Board was organised for providing trade information and assisting companies in their efforts at globalisation (Peebles and Wilson 1996:168).

The main vehicle of the Government for promoting FDI was EDB, which was established in 1961 under the Ministry of Finance. The board enjoys a high degree of autonomy and operational independence (see, e.g., Haggard 1990:113) and provides, for instance, loans and equity financing, technical and marketing assistance, and industrial training schemes (including training of unskilled workers). It upholds joint industry training centres and institutes of technology with foreign governments and firms (Balassa 1991:75–76, 78). According to a mission statement of 1995, the EDB is to develop Singapore into "a global city with total business capabilities" (WTEC 1997). Agencies spun off from the EDB include, for instance, the Jurong Town Corporation (JTC), another so-called statutory board (see below), which was established in 1968 for providing key infrastructure for industrial sites, including buildings and cargo handling facilities (Peebles and Wilson 1996:168). The DBS bank, National Science and Technology Board (NSTB), the Trade Development Board (TDB), and Singapore Institute of Standards and Industrial Research (SISIR) belong to this group as well (WETC 1997).

The real role of all the investment incentives remains a moot point. Chances are that the economy would have developed in a similar way without the selective measures, as these mainly seem to have accommodated and strengthened dynamic natural comparative advantages, i.e., the "targeted" industries were the ones that were in turn to develop anyway. The measures of public goods character, such as a strong physical and institutional infrastructure and support to R&D, may, in fact, have been more important since they would not have been produced by the market, at least not in sufficient quantities.

Most of the measures envisaged over the years are still in place, in principle, although the industries favoured by the Government have changed somewhat with general industrial developments. The present system of tax incentives is roughly as follows: A pioneer industry may receive a five-year income tax holiday, extendible to another five years at a rate of 10 per cent, from the Minister of Finance (the normal rate is 26%). Investment allowances of a maximum of 50 percent for expenditures incurred on plant, machinery, know-how, patent rights and factory buildings for approved projects as well as normal capital allowances are granted for a group of industries. These are: manufacturing, technical services, construction, production of drinking water, engineering or consulting, research services, computer-based information operations, industrial design development and some other prescribed services (Danziger FDI 1999).

**Industrial structure**

Investment polices are closely related with *de facto* industrial policies in general, especially in an economy as open as Singapore. A leading theme of the former has been the concept of industrial upgrading, due to the fact that comparative advantages change as a consequence of factor accumulation and deliberate policy measures. In fact, the industrial structure of Singapore has changed dramatically over the years of independence. From the early 1970s on some labour intensive industries and industries producing only for the domestic market were no longer eligible for pioneer status (Aw 1991:351). The share of the labour intensive industries (e.g., textiles, food and beverages, and wood) decreased from 45 percent of manufacturing production in the early 1960s to only about 5 percent in 1995. Electronics and electrical products, in turn, grew from a mere 4 percent in the early 1960s to over 50 percent by the mid-1990s (Wong 1998).

Upgrading efforts have been carried out supported by, for instance, a favourable attitude towards immigration of skilled manpower, encouragement of high technology and – from time to time – allowing high wage increases in order to squeeze out labour intensive production (cf. Krause et al. 1987:60–61). While the immediate concern after independence was employment and the emphasis on labour intensive production, this soon changed and the policy eventually came to favour more advanced, especially knowledge-based production. By and large, the growth of manufacturing has kept up with the rest of the economy: between 1960 and 1996 manufacturing grew by 9.9 percent on average as compared to 8.4 percent for GDP (Wong 1998).

It is the view of the Government that manufacturing must continue to play a leading role in the economy (see, e.g., Peebles and Wilson 1996:240). In a strategic economic plan (SEP) from 1991 the Government defined a 25 percent share of manufacturing as its strategic target (Wong 1999). In a later document, the report of a committee on Singapore's competitiveness (Govt of Singapore 1998) manufacturing and services are identified as the "twin engines of growth". Large multinational companies continue to dominate, however, especially in manufacturing, although more attention has lately been paid to small and medium sized companies.

The importance of technological strengthening was again taken up in a government report, known as "The Next Lap" from 1991 (Govt of Singapore 1991). In 1991 the National Science and Technology Board (NSTB) was established (Loh 1998). The development of technological abilities has been orchestrated through national science and technological plans (NSTP) during the 1990s, which have been accompanied by increasing investments in R&D and technological infrastructure. The instruments available to the Board include loans and grants for R&D, support to institutes and centres that cater to R&D needs of companies. Moreover the Board aims at identifying and recruiting appropriate manpower and technologies for building competitive advantage in R&D (see, e.g., WTEC 1997). NSTB supports particularly thirteen industrial clusters:

— Commodity trading (offshore trading, transhipment, re-export trading);
— Shipping (strengthening Singapore's position as a maritime hub and a regional headquarters for shipping etc.);
— Precision engineering;
— Electronics;
— Information technology;
— Petroleum and petrochemicals;
— Construction;
— Heavy engineering (mainly ship repair and oil rig construction);
— Aerospace;
— Finance (to become a major international financial centre);
— Insurance (to develop Singapore into a regional insurance and reinsurance centre and increase the insurance coverage of the population);
— General supporting industries (to establish a one-stop regional service centre);
— Tourism (WTEC 1997).

The board is structured so as to be able to concentrate on the following "thrusts":

— Growing "technopreneurial" businesses;
— developing a conducive environment;
— promoting finance and investment;
— developing manpower for R&D and "technopreneurship";

— establishing international linkages;
— strengthening the technology infrastructure (NSTB 1999).

The service sector is more domestically (and regionally) oriented and it is regarded as having good potential for further internationalisation, despite the fact that Singapore is the world's 11th largest exporter of services already, thus adding to the country's export potential. An outline of possibilities to this effect was made in the implementation plan, related to the SEP from 1991, called IBH (International Business Hub) 2000 (Wong & Ng 1998). This prospect is attractive not least because world trade in services grows faster than merchandise trade. In fact, this sector stood for 41 percent of net foreign exchange earnings in 1990, although it represented only 23 percent of total exports (Govt of Singapore 1998). The traditional hub services, such as financial services, logistics and tourism, are important here.

The emphasis is increasingly put on high-level services like information technology and finance but also "new" exportable services as health care, education, engineering and management, consultancy services etc. (Govt of Singapore 1998). Plans for developing the information technology sector were formulated in the early 1990s ("IT2000"), aiming at transforming the republic to "an intelligent island", and has been followed by heavy investments in IT infrastructure and education (see National Computer Board 1997, Reid 1996). In 1999 the statutory board called Infocomm Development Authority (IDA) was created (from the merger of the National Computer Board (NCB) and the Telecommunication Authority of Singapore (TAS)). The aim of the organisation is to develop Singapore into global info-communications centre, and to be a catalyst for the Republic's transformation into a knowledge-based economy and society. IDA has the double role as a regulator and promoter (Govt of Singapore 2000b).

Despite its dedication to the market process the Singapore Government did not shy away from establishing state-owned enterprises (SOE) when deemed necessary. (The successful shipbuilding and repair industry, for instance, had its origin in the British naval dockyards which were converted into SOEs in the early 1970s (Chia 1997:40).) Singapore has a large number of government-linked companies (GLCs) although the trend from the late 1980s has been towards more privatisation[2]. This has not kept the Government from pursuing so-called rolling privatisation, investing in new industries when deemed necessary while divesting from "old" ones (Low 1998:158). Originally, the main reason for the Government to get involved was the high risk involved in the projects, which were sometimes very big. Characteristic for

[2] For details, see Low 1998:156– 168.

the Singapore Government is its pragmatic view of GLCs: As long as they were operated in a business-like manner and had no special privileges they were not considered a problem (Pang 1985). The government ownership is exerted mainly through three holding companies: Temasek Holdings, under the Ministry of Finance, MDN Holdings (Ministry of Finance) and Sheng-Li Holding Company (Peebles and Wilson 1996:32).

An important part of the *de facto* industrial policy was also the statutory boards, which are semi-governmental organisations, producing mainly public utilities. The number of such statutory boards is large, the most important ones being the Civil Aviation Authority of Singapore (CAAS), the Economic Development Board (EDB), the Public Utilities Board (PUB, partly privatised from 1996) and the Port of Singapore Authority (PSA). As pointed out by, e.g., Peebles and Wilson (1996:32) the statutory boards have a monopoly position and their actions have the force of law. They operate according to economic principles, however, aiming at making profit (cf., e.g., Govt of Singapore 1998).

**Nurturing domestic companies**

It has often been maintained that the Singapore Government, by concentrating its efforts on becoming a base for foreign multinationals, neglected domestic entrepreneurs (for a recent example, see Dolven 2000b). The latter also used to be suspicious of the Government, and saw it as biased against themselves (Haggard 1990:147)[3]. Although the situation has changed considerably, especially from the mid 1980s, this is still a historical fact that left its trace on the industrial structure of Singapore.

With a tradition in entrepôt trading, Singapore was rather weak as to the availability of hi-tech entrepreneurs (unlike the other Asian NIEs) and the dominating strategy of the domestic firms was to utilise existing technology, developed elsewhere and avoid taking on superior competitors head-on. The old-style domestic entrepreneurs responded to the perceived adverse climate by vacating the little domestic manufacturing there was and moving into services such as hotels, catering, tourism, real estate and housing development, and relocating labour intensive activities to neighbouring countries (see, e.g., Krause et al. 1987:94, 103). Domestic entrepreneurs could thus be found originally mainly in entrepôt-related activities, such as trade, transport, banking and finance, construction, transport and communication and

[3] This feeling may not have been entirely unjustified during the 1960s due to the fact that the Chinese entrepreneurs often were found on the “wrong” side of the barricades between the moderate wing of the PAP and pro-communists, within and outside the PAP in the 1950s and early 1960s.

real estate (Krause et al. 1987: 91–92, Paix 1993).

Discouraging domestic entrepreneurship could take different forms, most of them no doubt unintended. One of the problems perceived was that government-linked companies competed directly with private ones (Haggard 1990:149). There is also a large concentration of graduates in the public sector, including the statutory boards and GLCs, which does its best to secure the best talents for itself and foreign investors also compete for available factors of production. This allegedly crowds out the private sector from the market for well-educated manpower (cf., e.g., Krause et al. 1987: 208, Wong 1998). Another factor mentioned is that there are no pressures to become an industrial entrepreneur in Singapore as there are so many other lucrative options. In a more long-run perspective, such concerns seem to be exaggerated, however, as the foreign firms have formed a basis for a domestic industry of subcontractors and assemblers and have contributed to considerable technology diffusion to these firms. This took time, however, since Singapore never imposed any local contents requirements and fledgling local component manufacturers found it difficult to compete with imports (Chia 1997).

The investment incentives may have favoured foreigners in practice, even if they were neutral in principle, as they targeted large investment in high priority, growth oriented industries (cf. Chia 1985). Measures to help smaller local firms specifically were adopted much later than the investment incentives (such as the Small Industries Finance Scheme, Product Development Assistance Scheme, Small Industries Technical Assistance Scheme etc. (Krause et al. 1987:92–93)). Some authors point at a certain reluctance of the local entrepreneurs to approach the EDB due to the increasing state scrutiny that would lead to and, at the same time, as noted already, they often felt that the government agency had little interest in them anyway (see, e.g., Huff 1999).

Among other reasons for the slow emergence of domestic manufacturing companies are an allegedly low propensity of risk-taking (Pang et al. 1989: 140), a low tolerance for failure and an educational system that, according to its critics, emphasises grades instead of creativity. (In fact, one reason stated for the establishment of so many state-owned enterprises was the alleged risk aversion of domestic entrepreneurs (Aw 1991:404)).

With a new, well-educated generation, domestic entrepreneurship in manufacturing has recently shown signs of new-born vitality. In manufacturing, one may distinguish between three groups of companies according to Wong (1998). The first one consists of firms specialising on subcontracting for the large MNCs. The second group consists of companies producing their own brands, utilising their product technology and marketing ability, such as Creative Technology, the global leader in PC sound cards. The third group comprises government-linked companies that target strategic industrial sectors, like aerospace and semiconductor wafer production.

In its thrust to develop rapidly through an inflow of capital, talent and technology from abroad Singapore until recently devoted relatively little to R&D as compared to e.g. Taiwan and Korea. The number of domestic patents and established domestic brand names is also relatively small (Tan and Toh 1998; see also Lim Swee Say 1998). In 1990 Singapore used 0.9 percent of its GDP for R&D, the corresponding figures being 1.3, 1.8 and 2.9 percent for Taiwan, Korea and Japan, respectively (Peebles and Wilson 1996:189).
Successful domestic entrepreneurs today usually need a more sophisticated technology and education base, however. The percentage of R&D is therefore rising rapidly, from 0.26 percent in 1981 to 1.35 percent in 1996. The endowment of research scientists and engineers increased from 10.6 per 10,000 workers in 1981 to 56.3 in 1996 (Loh 1998). The aim for R&D was set at a minimum of 2 percent of GDP and the ratio of research scientists and engineers at 40 per 10,000 by 1995 in the first National Technology Plan from 1991 (Loh 1998, Wong & Ng 1997). Incentives to locate R&D activities in Singapore (e.g., grants from the Research Development Assistance Scheme (RDAS) and the Research Incentive Scheme for Companies (RISC)) are available to both domestic and foreign firms (Wong & Ng 1997). The Government also assists with research facilities and access to new technology, in industries like computing, aerospace and biotechnology (Peebles and Wilson 1996:31). Its promotion of the ISO9000 certification system has been conducive to improving technological and managerial abilities as well (Wong 1998). In particular, the cluster around chemicals and pharmaceuticals has grown rapidly and now produces a value added half that of electronics (Wong 1999). Considering the large share of foreign companies in the Singapore economy, the local ones represent a large share of total R&D activities, about 40 percent all in all (for details, see Loh 1998). These activities are strongly supported by the Government, through, e.g., the RISC scheme (Wong 1998).

The strategic planning of the Government as to industrial development has frequently been quite far-sighted. For example, information technology (IT) was mentioned in mid-80s as a possible niche for Singapore as was robotics (Krause et al 1987:63). To a certain extent, thus, the state assumed the role of an entrepreneur itself (cf. Yu 1997) even though a state cannot be seen as taking risks in the same way as private entrepreneurs. According to the so-called

Industry 21 blueprint, the EDB aims at nurturing the following industrial clusters and development programmes: Electronics, chemicals, life sciences, engineering, education and health care, logistics, communications and media, headquarters, "world-class companies/promising local enter-prises" (see below), innovation, international business, resource development, and co-investment (Economic Development Board 1999). While these definitions are sometimes wide and somewhat inexact, they still give a fair idea of what kinds of activities are the present.

Singapore aims at building at least 50 local "world-class knowledge-based enterprises" by 2010. The strategic goal of such firms would be either to serve MNCs or to create their own market niche. EDB co-operates with potential world-class companies on securing financial resources for mergers and acquisition (e.g., through co-investing, providing resource support, assisting in image building, technology acquisition and forming strategic alliances and partnerships). This complements the EDB's so-called Promising Local Enterprises (PLE) programme the aim of which is to develop a minimum of 100 local enterprises with a turnover of at least S$100 million per year, by 2005 (Economic Development Board 1999). Government grant and loan assistance is available as well as tax incentives (Wong & Ng 1997).

The efforts aimed at promoting FDI in neighbouring countries and thus increase the size of the Singapore economy outside Singapore are mainly targeted at domestic firms. The aim is to foster a globally competitive group of domestic (or partly domestic) MNCs, active mainly in the ASEAN region (Govt of Singapore 1998). This will be elaborated on below. During recent years Singapore's FDI have been large. The total figure for 1995, for example, was close to S$ 37 billion, up from about 3 billion in 1989 (Dept of Statistics, various issues). The figure includes investment outside the region and by foreign firms, however. These issues will be looked into more closely in the section on regional integration.

## HUMAN RESOURCES

Since people are the only resource of Singapore, apart from its geographical location, labour policy takes on a special significance in the country's development policy. Especially in the regional context the strength of its human resources has been a key factor (cf. Tan and Toh 1998). Singapore had a history of rather militant labour unions with considerable communist influence, which was an important albeit hardly the only reason for the restrictive approach taken in subsequent labour legislation (see, e.g., Aw 1991, Chia 1985).

In 1965 unemployment was 9% and, adding to the problems, the British military had announced its withdrawal from its bases in Singapore. Since the British military administration employed directly about 20 percent of the working population (representing 14 percent of GDP) (Vasil 1989: 157) and the impending withdrawal caused concerns as to national security, this was a serious blow and added to the urgency of quick export-oriented industrialisation based on foreign multinationals. This in turn required reasonably peaceful industrial relations. This was soon achieved as there have been no industrial stoppages after 1978, with one minor exception (Ministry of Manpower 1999).

The new labour laws (the Employment Act and the Industrial Relations (Amendment) Bill in 1968 disciplined the labour movement, reduced the influence of trade unions and introduced the tripartite system, including Government, unions and firms, which has survived until today (cf., e.g., Pang et al. 1989: 129–130). The Employment Act lengthened the standard work week, reduced the number of holidays and set various pay restrictions. The Industrial Relations Bill, in turn, limited the rights of managerial staff to be represented by unions and exempted work assignments, firings, transfers and promotions from collective bargaining (Haggard 1990:112). It is clear that labour market reforms in the late 1960s and early 1970s, restrictive as they were as far as trade union activity was concerned, contributed essentially to the industrialisation process of Singapore (Vasil 1989:154, 164). In the core of the system is the symbiotic relationship between PAP and the labour movement. The unions form the National Trade Union Congress (NTUC), established in 1964. Its Secretary-General is also a Cabinet minister, and functions as an intermediary between the unions and the Government (Aw 1991:325, Peebles and Wilson 1996:15). From 1972 candidates from NTUC have been chosen for parliament election (Vasil 1989:160).

The National Wages Council (NWC), established in 1972, recommends across-the-board nominal wage increases for the whole economy and is an important part of the labour-management system (Vasil 1989: 162). The guidelines of the Council are not mandatory but are followed by the Government and widely also by the private sector. The NWC resulted in orderly and fast wage settlements but at a cost: the uniform wage increases may have required more quantitative adjustment of the supply of labour than would otherwise have been necessary. (Foreign labour had the role as a buffer here.) According to Krause et al. (1987:197) NWC was helpful especially in the 1970s since both sides of the labour market were inexperienced in wage bargaining.

Unemployment was down at 4.5 percent by 1973, with remaining unemployment largely frictional (Balassa 1991:77). Thus the acute employment problem of the early days of independence was solved. By the 1980s it became necessary to increase productivity to sustain economic growth. This made better industrial relations necessary also at the grass-roots level (Krause et al. 1987: 177). In 1981 the tripartite National Productivity Board (later renamed Singapore Productivity and Standards Board after a merger with the Institute of Standards and Industrial Research) was set up to boost labour productivity (Peebles and Wilson 1996:168). One of the leading ideas was to emulate some traits of the Japanese model of development, especially in the field of industrial relations and management style (see, e.g., Margolin 1993). (Whether these ideas have had any lasting impact on the way Singaporean business is managed is unclear, however.)

The labour market of Singapore has always been characterised by a large number of foreign workers. The labour supply can therefore be regulated also quantitatively, through the process of issuing work permits and employment passes. A foreign worker levy was introduced in 1982 as another instrument for controlling the number of foreigners (Low 1998:45). In the early 1980 the goal was to eliminate the need for foreign workers but this had to be given up as unrealistic (Krause et al. 1987:210–11, Pang et al. 1989:134). The number of foreign workers (some of them Malaysian non-residents) is presently about 450,000 (Dolven 2000a). Singapore has used its large pool of foreigners to even out fluctuations in the demand for labour. During the 1974–75 and 1985–86 recessions, and then again during the "Asian crisis" in 1997–98, large numbers of work permits were revoked. Hence there was less need for wages to adjust, even if wage decreases are no unknown measure. After the serious downturn in the mid 1980s the wage structure was remodelled in a way that added to flexibility. In excess to the basic wage, a supplement of one month's basic wage was granted and, moreover, two months wages provide an adjustable margin which can be used to reflect productivity gains.

As to more long-run measurers, the employment problems of early independent Singapore made the Government pursue a restrictive family policy until 1986. Later, however, it has encouraged educated women to have more children. In both cases income tax incentives were used (Low 1998:116). Despite the present encouraging policy as to procreation, the ageing workforce is a problem (Low 1998:94, Pang et al. 1989: 137–38). In its search for ways of increasing the domestic labour force the Government has focused on gradually increasing the retirement age (originally only 55) to 67 by 2003 and increasing female work participation, which now is only about 50 percent (Low 1998:97). To this effect the Government has subsidised hiring and training of former housewives and retirees within the so-called “Back to Work” programme and provided some tax incentives (Koh 1998, Low 1998:122). The country has also openly encouraged immigration of “talent” since the 1980s and, even more decisively, from the mid 1990s, particularly Asian scientists, engineers etc. (cf., e.g., Govt of Singapore 1998, Wong & Ng 1997). The quality of the work force has been enhanced through a health care system which is regarded as being of high standard despite being rather inexpensive compared to other developed countries (Low 1998:95).

Wage policy has been used not only as a cyclical policy measure but also as an instrument for restructuring the economy (Krause et al. 1987: 192). In the late 1970s the wage level was allowed to increase sharply in order to force out labour intensive production (Balassa 1991:79, Peebles and Wilson 1996:37). The restrictions on foreign labour should be seen in the same light. After the severe recession in the mid-1980s this policy had to be reversed, however, due more to wrong timing than a change of heart. The idea itself, i.e., the necessity of phasing out labour intensive production, survived.

Employment as such has not been much of a problem in Singapore since the early 1970s, apart from the sharp spells of recession in the mid 1980s and late 1990s, which both saw an increase in the unemployment figures. There has been a structural problem, however, as a changing industrial structure with increasingly sophisticated production created a need for rapid upgrading of the skills of the work force. This has not always been easy as the education level of the older generation is low, on average (cf., e.g., Dolven 2000a). This takes us to the issue of education in general and vocational training in particular.

**Education and Training**

The quality of the Singapore labour force is high. For instance, it has several times been judged as the best in the world by the American Business Environment Risk Intelligence (Koh 1998). As the Singapore economy becomes more advanced, a strong emphasis on education has become necessary, however, in order to sustain rapid economic development. This is one of the realms where government policy is crucial due to the public goods character of knowledge. Left to the market it seems inevitable that too little human skills would be produced.

As a heritage from the colonial period there are still weaknesses in the educational profile. For instance, the illiteracy rate is still surprisingly high among older people. 40 percent of the workforce has qualifications less than lower secondary education while the foreign workers are mostly unskilled as well (Tan and Toh 1998, Lim Swee Say 1998). As noted by Aw (1991:325) investments in education are likely to produce results only in the long run. Hence, much is done also in terms of more quickly working measures. Great emphasis has been put on on-the-job training. As early as in 1972 three training schemes were adopted and the Government also began to pay subsidies for training (Balassa 1991:77). To achieve higher labour force participation rates among older people and prevent them from falling behind the development it is necessary to invest especially in retraining programmes for them. As an incentive for employers, their CPF contributions for older workers have been reduced (Low 1998:97–98).

The Singapore Government has been keen on assisting firms with training programmes for their labour force. In 1968 the Technical Education Department was established. Curricula were revised to increase emphasis on technical education and new courses were set up at the university to train increasing numbers of students in engineering, accounting and business administration. The employers have been encouraged to spend resources on training through, among other things, having to contribute (from 1979) to the Skills Development Fund (SDF) from which grants are paid to employers for carrying out training programmes. The expenditure on training has, partly as a result of these efforts, increased from 1 percent of total wages in 1986 to 3.6 percent in 1995 with a long run aim of 4 percent (Koh 1998). Nevertheless, skilled manpower is still in relatively short supply in Singapore, which means that it is expensive (Tan and Toh 1998).

In 1986 EDB introduced a programme called LIUP (Local Industry Upgrading Program) in which selected local industries were attached to groups of MNCs, which trained their workers to make the inputs they needed for technologically advanced products. The programme has recently been applied with an emphasis on the IT sector. A widening of the scope of LIUP to all sectors, not just manufacturing, and including areas like marketing and HRM, was recently proposed by the Committee on Singapore's Competitiveness (Govt of Singapore 1998). Training provided and skills learned during the compulsory National Service period (minimum two years) add to the overall picture (Peebles and Wilson 1996:16). Recently a national training centre was set up with the goal of training up to 50 percent of the workforce (Koh 1998).

The strongly increasing emphasis on development of human resources as is evident in, for example, the above-mentioned report on Singapore's competitiveness (Govt of Singapore 1998). The education policy emphasises especially technical and professional manpower. Today half of the graduates of the universities are in the science and technical fields (Govt of Singapore 2000a). Nanyang Technological University (NTU) was established in 1991 with the primary function of providing facilities for tertiary education and research in engineering and technology. A third university, the Singapore University of Management, modelled on Wharton Business School, is now being set up. At a lower level, the Institute of Technical Education provides training in mechanical and electronic engineering for students with "O levels" education, while several polytechnics also provide technical education (Koh 1998).

## REGIONAL CO-OPERATION AND INTEGRATION

As mentioned earlier, the official Singapore has tended to stress the importance of globalisation more than regionalisation. Its heavy dependence on MNCs from Japan, the US and Europe tended to reduce its degree of integration in the Southeast Asian region (cf. Chia 1997). Political friction with its Southeast Asian neighbours contributed to this outcome and have tended to re-surface from time to time. Although a large part of the city state's export markets, especially for domestic exports, are outside the region, East Asia as a whole has become more and more important over time as a trade partner, however. Singapore's role as an entrepôt has survived and developed towards trade in manufactures (especially electronics). In 1994, for instance, 40 percent of the country's total exports were in the entrepôt category (Chia 1997). Another central consideration when the regional aspect is brought up is the restructuring and upgrading of the Singapore economy, a process that entails relocation of labour intensive and other unsophisticated production to countries with an appropriate comparative advantage for such production.

As Singapore has been a proponent of free trade and FDI in general, this stance is, of course, also valid in the regional context. Through its entrepôt function the country has been a *de facto* linchpin of integration in Southeast Asia for a long time. The growth of production networks through FDI has later contributed greatly to this role. Formalised attempts at integration are of a more recent date and have arguably been less important than the market-driven developments. In the long run the effects of such efforts are likely to become more tangible, however.

ASEAN is the cornerstone of Singapore's regional policies. Apart from streamlining intraregional economic relations it has given the Republic greater bargaining strength also in international trade negotiations (cf. Chng et al. 1988). Singapore has actively and consistently worked for a more liberal trade and investment environment in the region. The ASEAN Free Trade Area (AFTA) and an industrial co-operation scheme (ASEAN Industrial Cooperation, AICO) is now being implemented as the most important vehicles for deepening integration (see, e.g., ASEAN Secretariat 1999). Despite setbacks, partly related to the recent financial crisis in Asia, the commitment of the members of ASEAN to these programmes appears to be strong.

Apart from trade, where Singapore dominates the intra-ASEAN trade flows, the economy of the city state is now being integrated in ASEAN through the policy of growing a “second wing” of domestic FDI in the region. (In this context the region has been implicitly defined as including also India and China.) The idea as such was, in fact, born during the years of the high-wage policy in the late 1970s and early 1980s when the wages were allowed to increase in order to squeeze out labour intensive, low-productive industries, inducing them to move to other locations (cf. Leggett 1993). It has been pursued actively only from the early 1990s, however.

The objectives of the “second wing” policy were outlined in another spin-off from the SEP, the Regionalization 2000 programme (Wong & Ng 1997). The immediate objective of this programme is to overcome physical limitations like a lack of natural resources and manpower and to take advantage of the growth potential of the region. At the same time operations requiring a higher level of skills are aimed at remaining in Singapore. To facilitate this, industrial parks have been established in China, India, Vietnam and Indonesia (Economic Development Board 2000). Government co-operation was crucial in order to set up these facilities but the private sector, in the form of consortia of Singaporean firms and joint ventures with local ones, has been responsible for the operations (Wong & Ng 1997). Many of the domestic manufacturers of the subcontractor type have moved production activities to neighbouring countries with lower labour costs (Wong 1998). From a strategic point of view the objective is forming “a network of strategic zones in key markets with emphasis on building good linkages between Singapore’s regional projects and domestic clusters” (Wong & Ng 1997). One reason is apparently also a need to cultivate the political ties with the country’s ASEAN neighbour countries, given that these have not always been unproblematic (cf. Govt of Singapore 2000a).

The Republic is now one of the leading investors in several ASEAN countries (Wong 1999). Especially the transition economies of the region (then including China and India) are thought to provide opportunities for investment and several government-sponsored projects have been undertaken in these countries apart from private investments (see, e.g., Peebles and Wilson 1996:13, 239, Govt of Singapore 2000a). The recent crisis and subsequent economic restructuring may offer an opportunity for Singaporean firms to make acquisitions in the ASEAN region at a reasonable price, either alone or together with foreign MNCs (Wong 1999). The regionalisation of domestic Singaporean enterprises also provides the Singapore Government with an opportunity to work as a facilitator, a “one-stop agency” for foreign MNCs which want to invest in the region (Wong & Ng 1997).

The EDB is the main tool for the Government in its efforts to facilitate the regionalisation of the Singapore economy. Examples of practical measures are centralised marketing of the above-mentioned industrial estates (so-called flagship projects) built and managed by or with a strong contribution by Singapore in other Asian countries, assistance with feasibility studies, establishing government-to-government committees, bilateral business councils, dispatching overseas mission etc. On the firm level, tax incentives and training grants are also available (Economic Development Board 1999). Other services, such as international schools for the children of Singaporean expatriates, are also made available (Wong & Ng 1997). In practice, the “second wing” was spearheaded largely by MNCs and GLCs which then were followed by subcontractors and partners in the LIUP (Low 1998:162).

As mentioned above, much of Singapore’s *de facto* integration with other ASEAN economies so far is not likely to be a result mainly of intergovernmental co-operation but has been driven by the laws of economics. The differences in factor endowments between Singapore and its neighbours are simply so great that moderate trade barriers etc. are not sufficient to prevent increasing economic interdependence. According to a business survey from 1993, over 40 percent of the respondent firms had already moved or considered moving production facilities abroad (Lee Tsao Yuan 1997).

Although the urge to step up regional activities suffered a setback during the Asian financial crisis — much of it due to political unrest — it is still on the strategic agenda. However, a more global approach as to outward FDI has now been recommended in order to avoid too much dependence on one single region (Govt of Singapore 1998). Hence we witness another balancing act between regionalisation and globalisation. Deliberate promotion of Singapore as a site for regional headquarters of MNCs tends to strengthen the regional economic networks and the international connections simultaneously and keeps Singapore in the focal point. This is a role the country plays already to a great extent — over 5000 international companies have by now located their regional headquarters in Singapore (Economic Development Board 2000).

**Growth triangles**

The process of regional integration in ASEAN has partly taken place through so-called growth triangles[4]. The general idea is to link adjacent parts of two or several countries with different comparative advantages based on, e.g., differences in technology, labour, natural resources, capital etc., to form a sub-region conducive to growth, driven by market dynamics (ASEAN Secretariat 1997:138). Such a growth triangle is “borderless” regarding goods and capital movements, although there are likely to remain barriers against the free movement of labour. Thus large wage differences may be part of the picture (Lee Tsao Yuan 1997).

The first such “triangle” the Singapore-Johor-Riau (SIJORI) area was conceived after 1988 with a revision of investment regulations in Indonesia. (The other “triangles” are far less developed and are not directly relevant for Singapore. Therefore I will not deal with them here.) To begin with, the development was mainly based on joint ventures between Singapore GLCs and the Indonesian private sector. Subsequently MNCs based in Singapore began to locate investments in Batam and Bintan (in Indonesia), which both can offer land an labour at low cost. (The cost of labour in Riau is only about one-fifth of that in Singapore.) Business grew rapidly after development of infrastructure and transport links (ASEAN Secretariat 1997:145, Kakazu 1997).

It is generally agreed that the greatest impact of the SIJORI triangle has been in Batam. Relations between Singapore and Johor are much older than the Growth Triangle concept, for historical reasons. Companies from Singapore moved to Johor before there were any formal agreements because of the short distance and cultural closeness. However, the third leg of the triangle, the Johor-Riau link is still weak due to the alleged lack of complementarity and the physical distance (ASEAN Secretariat 1997:145). The central government in Kuala Lumpur has also been less interested in the project — despite a strong endorsement by Prime Minister Mahathir Mohamed (Kakazu 1997) — than its counterparts in Jakarta and Singapore.

[4] The term was minted by Prime Minister (then Deputy Prime Minister) Goh Chok Tong in 1989 (ASEAN Secretariat 1997:140).

The growth triangle concept offers possibilities especially for vertical integration. The service sector, in particular tourism, has benefited as well. Manufacturing FDI include electronics, chemicals, oil and mining equipment etc. Singapore has, expectedly, been the major investor but there are considerable FDI activity from other countries as well, such as the United States, Japan, Hong Kong and the Netherlands (Kakazu 1997). There have also been problems, however. Among these is a perception of unequal benefits (countries experiencing lower benefits need to be politically motivated to continue). Inadequate infrastructure and complex decision-making structures have been cited as well. Recent political tensions in Malaysia and Indonesia, spilling over to these countries relations with Singapore, have also demonstrated unexpected weaknesses in the arrangement.

The SIJORI triangle involves both the public and the private sectors, where the latter takes on the role as the growth engine proper. The direct role of governments is one of a facilitator, even if GLCs participate actively. According to Lee Tsao Yuan (1997) the government activities related to SIJORI can be summarised in seven points:

1) The triangle was endorsed at a high political level;
2) There is a series of bilateral agreements between Singapore and Indonesia (but not between Singapore and Malaysia) on the joint development of the Riau islands;
3) Bilateral committees were set up to co-ordinate the co-operation;
4) Liberalisation of FDI regulations in Malaysia and Indonesia;
5) Duty-free internal movements of goods was achieved through various arrangements;
6) Efforts at simplifying customs and immigration procedures were made;
7) Basic infrastructure was provided.

In the official documents the role of the Singapore Government is defined to comprise four tasks:

1)“Entering into bilateral agreements with countries which are of interest to the private sector;
2) encouraging government-linked companies to become partners of private-sector companies in larger scale projects;
3) disbursement of various regionalisation financial schemes to assist companies in going abroad;
4) establishing bilateral business councils as a means of networking and exchanging business” (Govt of Singapore 2000a).

**Financial markets**

Singapore is an international and regional hub and aims at becoming even more of a centre for international transactions. This role has both global and regional dimensions. Singapore has the fourth largest forex market in the world measured by turnover and the fourth largest over-the counter (OTC) market for derivatives (Lim Guan Hua 1998). The emergence of Singapore as a finance centre is largely a part of the Government's policy to diversify the economy towards greater emphasis on the service sector, and has been strongly supported by tax incentives as well. The Asian Currency Market (ACM) and Asian Dollar Bond Market (ADBM) are cases in point. These offshore markets — until recently — have been kept separate from the domestic markets, however (Lim Guan Hua 1998, Peebles and Wilson 1996:193–194, 246, Wong 1999). In the latter, a distinction between fully licensed and restricted licensed banks is still upheld, where the latter are not allowed to be involved in retail banking, but even here a trend towards further liberalisation can clearly be discerned. In order to deepen the financial market and add to liquidity tax incentives for fund managers and credit-rating agencies were introduced after the onset of the Asian financial crisis in 1997 (Ganesan 1998).

As to the forex market, internationalisation of the Singapore dollar has not been encouraged (see, e.g., Low 1998:146) although this standpoint has gradually been relaxed and further internationalisation can hardly be avoided as the country develops as an international finance centre. The resistance has presumably been due to the fear that internationalisation would add to the volatility of the exchange rate, considering the small size of the country's economy and that the Government's control of monetary policy would be lost. Partly the caution can probably be interpreted as a calculated resistance to very fast liberalisation rather than to liberalisation as such (cf. Govt of Singapore 1998, Lim Guan Hua 1998). The financial market in Singapore is now in a process of being strengthened in order to be more competitive in facing further liberalisation (cf. Wong 1999).

A gradual liberalisation of CFP rules and fund management of the GLCs and statutory boards has added significantly to the volume of the financial market. In 1995 the Government, through the Government of Singapore Investment Corporation (GIC), decided to start using local fund managers instead of going via international centres, such as New York, London or Tokyo, in order to contribute to building up the fund management industry (see, e.g., Peebles and Wilson 1996:18). Ordinary citizens have gradually been permitted to use CPF savings for investment not only in domestic but also in foreign shares (Peebles and Wilson 1996:194).

## CONCLUSIONS

When evaluating the development policies of Singapore one has to remember that part of the obvious success probably can be explained by other circumstances than policy. History and accident obviously play a major role as well. The country's strategic location, a relatively good infrastructure and an industrious, mostly immigrant population, are certainly important and so are the external economic conditions in the 1960s. Among those, the boom in world trade, and the intensified regional oil explorations well as the emergence of multinational companies eager to take advantage of comparative advantages of different locations are especially important.

Despite the fact that Singapore is a market-driven open economy, it is impossible to deny the important positive role of the Government, however. Although the state was very active it was not intrusive as far as regulation of business activities was concerned. Its role was at a more general level. One aspect of this is institution building, including an efficient and reliable bureaucracy, which has resulted in a stable and predictable economic environment for investors, foreign and domestic alike. Another one is specific incentives. These may not have been crucial in themselves for bringing in FDI but have no doubt been important for determining what kind of investment has dominated and for the structural change of those investments over the years. Thirdly, providing public goods in the form of physical and social infrastructure and contributing to education and upgrading of the labour force as well as to immaterial investment in R&D, all with a clear element of public goods, is likely to have contributed greatly.

The internationalisation strategy of Singapore has alternated between a global and a regional approach. Although these approaches large seem to have been parallel the emphasis has usually been heavier on one at a time. Political and security concerns have clearly been a factor behind the process.

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