

# Trade, employment and industrialisation in Singapore

Linda Lim and Pang Eng Fong



Employment, Adjustment and Industrialisation 2



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## *Preface*

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This study on Singapore is one of a number of country studies prepared for the second phase<sup>1</sup> of a research project on employment, trade and North-South co-operation undertaken within the ILO's programme concerning the International Division of Labour. Its authors are Linda Y. Lim and Pang Eng Fong of the National University of Singapore.

The successful economic development of the newly industrialising countries (NICs) is a subject on which a growing amount is being written. This increase reflects the attention that this group of countries is receiving from planners and policy-makers in other developing countries who want to learn how and under which circumstances this success was achieved. It also reflects the concern of policy-makers, entrepreneurs and trade unionists in the countries in which industry had been well established previously about the increased competitiveness of products originating in the NICs and the conditions under which they are being produced.

Some studies on the NICs have examined their economic, industrial and export growth, including the role of foreign capital and multinational enterprises in particular. Others have focused on the extent to which imports from NICs have displaced domestic products in the industrialised countries and the importance of the NICs as markets for them. Still others have dealt with the prevailing conditions of work, including the level of wages and trade union rights.

The studies on the NICs undertaken for our project give due attention to all these factors. Yet their prime focus is on policy. The central question they try to answer is what influence has policy had on their successful growth performance. Such an analysis of policy and its implementation also necessitates an examination of the constraints under which economic policy-makers operate. They include shortages of skilled labour, capital and technology. They are also of an institutional character and determine to a large extent the room for manoeuvre that policy-makers are allowed in the face of the influence and power of the civil service and the social partners, employers and trade unions.

As this study shows, government intervention has been crucial for Singapore's successful development, although it is true that certain initial conditions were also favourable. Upon independence Singapore was not a low-income country by today's standards; it had a well-trained civil service, a well-developed infrastructure and port, an excellent location and, above all, no large agricultural sector to support. The merit of the Government's pragmatic policies is that it has exploited these initial conditions to the full. It used interventionist policies and

market signals to accelerate economic growth while at the same time satisfying basic needs and providing a high level of public services. But as the authors say, in so doing "it did not confuse the goal of economic efficiency in production with the goal of equity in distribution".

The Government has become an important force as a generator of savings, and as an intermediary for channelling these savings to investments that it considers important for economic and social reasons. Even more important has been its intervention in wage setting. Through its control over the National Wages Council, yearly wage increases were kept low and behind productivity increases for many years. Even during times of very low unemployment this could be done because of the Government's control over the trade unions and through its immigration policy that allowed more foreigners in whenever the labour market was tight. In more recent years the Government's reluctance for Singapore to become too dependent on foreign workers, as well as a desire to "increase" the skill intensiveness of domestic industry, has led to a series of high annual wage increases.

The impressive way in which the Singapore Government has guided the economy leads one to query whether foreign investment is bound to be accompanied by foreign political influence as some writers maintain. An attractive investment climate gives the country the opportunity to benefit from foreign ideas and technology. Such a climate, say the authors of this study, requires measures to ensure industrial peace and wage stability, but need not compromise a country's economic and political sovereignty. Singapore's recent history seems to prove their case. But is it exceptional? Domestically the Government's strong position owes much to the well-oiled political machinery that serves the party in power and to the strong personality of its Prime Minister who is highly committed to the development of the country and its people.

The economic development of Singapore has brought great gains in welfare to all its citizens in terms of secure jobs, adequate housing, educational opportunities for children and good health facilities. Between 1960 and 1982 their average income increased by almost a factor of 10 in local currency and even more in United States dollars. This is a very impressive record that few (if any) countries can challenge. The Government believes that this record could not or would not have been achieved without a certain degree of control over trade unions, for example, and without limiting the range of personal choices. Choices such as how many children to have, where to live, where to go to school and what to study at school and university have increasingly been influenced by government rules and incentives, but this influence, the authors say, is widely regarded as necessary for social order and progress. Whether to agree with the authors' assessment that the costs of rapid development in Singapore's tightly run society "are minor" remains a question all persons concerned have to answer for themselves.

This study on Singapore is one of a series covering both industrialised and developing countries. They include the Federal Republic of Germany, Japan, the Netherlands, the United Kingdom, the United States, Brazil, Cameroon, the Republic of Korea, the Philippines and Tunisia.

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The project was designed by Gijsbert van Liemt of the ILO's Employment and Development Department together with Geoffrey Renshaw of Warwick University and Jacques de Bandt of the University of Paris X, Nanterre. Mr. van Liemt co-ordinated the project throughout.

The entire project was financed by the Government of the Netherlands.

*Note*

<sup>1</sup> The project is a follow-up of an earlier project carrying the same title. For a description of the results of the first phase, see Geoffrey Renshaw (ed.): *Employment, trade and North-South co-operation* (Geneva, ILO, 1981).

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## *Chapter 1*

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### *Singapore: social and economic characteristics*

#### *General country background*

The Republic of Singapore is an island nation of 618 square kilometres, situated at the southern end of the busy Straits of Malacca, just north of the equator, in South-East Asia. Its nearest neighbours are the Federation of Malaysia to the north and east, and the Republic of Indonesia to the south and west. About half the total land area of Singapore has been developed for residential, commercial and industrial use. The 1982 population numbered 2.47 million, giving a population density of 3,999 persons per square kilometre. Reflecting its immigrant origins, the population includes 76.7 per cent Chinese, 14.7 per cent Malays, and 6.4 per cent Indians, and is linguistically, culturally and religiously, as well as ethnically, diverse.<sup>1</sup> Though there are four official languages – Malay (the national language), Chinese, Tamil and English – the main language of modern business, government and industry is English.

Founded in 1819 as a British trading post, the colonial city of Singapore grew rapidly to become a major international port. Entrepot trade and British military services formed the basis of its economy. In particular, Singapore served as the port and administrative headquarters for British Malaya. During the Second World War, Malaya was occupied by the Japanese from 1942 to 1945. In 1957, while the rest of Malaya became independent as the Federation of Malaya, Singapore was retained by the British as a separate Crown Colony. Internal self-government was granted in 1959 and 1963 Singapore became independent from the British within the newly established Federation of Malaysia, which included also the former British territories of Sabah and Sarawak in North Borneo.

In August 1965 Singapore separated from the Federation to become a sovereign nation, member of the United Nations and the British Commonwealth of Nations. Since 1959, it has been ruled by the People's Action Party (PAP) under the leadership of Prime Minister Lee Kuan Yew. From 1968 to 1980 the PAP was the only party in parliament, responsible for setting all social and economic policies. (An opposition Member of Parliament was elected in 1981, the first and only one since independence in 1965.) It has engineered an efficient market-based economic system that includes both private and state enterprise.

In international politics, although a member of the non-aligned group of nations, Singapore's leaders generally favour a pro-Western, anti-communist line. In 1967 the country joined with four other like-minded South-East Asian neighbours – Malaysia, Indonesia, Thailand and the Philippines – to form the regional Association of South-East Asian Nations (ASEAN).

## Basic economic facts

Despite its tiny land area and small population (it ranks 112th among 125 countries, territories and areas with a population exceeding 1 million), economically Singapore is more than a mini-State. Its 1982 GNP of over US\$15,000 million is larger than that of all but three countries in Africa, and exceeds that of much larger and more populous Asian countries like Bangladesh and Burma. In terms of per capita income, Singapore's 1982 level of over US\$6,000 in per capita GNP and about US\$5,000 in per capita indigenous GNP, ranks it in the top quarter of the world's nations and is comparable to that of European nations such as Spain, Greece, Hungary and Poland.<sup>2</sup> In Asia outside of the Middle East,

Table 1. Basic economic data <sup>1</sup>

	1960 <sup>2</sup>	1970 <sup>2</sup>	1980	1981	1982 <sup>3</sup>
Land area (sq km)	585.1	586.4	617.8	617.9	618.1
Population at mid-year (m)	1.65	2.07	2.41	2.44	2.47
Annual change (%)	2.4	1.5	1.2	1.2	1.2
Labour force (m)	0.48	0.69	1.10	1.15	1.17
Employed (m)	0.45	0.64	1.07	1.11	1.14
Unemployed rate (%)	4.9 <sup>4</sup>	6.0	3.0	2.9	2.6
Gross National Product (GNP) at current market prices (S\$m)	2 189.0	5 861.1	23 228.6	27 372.1	30 379.2
Annual change (%)	9.9	14.3	14.0	17.8	11.0
Per capita GNP (S\$)	1 329.6	2 825.3	9 622.9	11 202.9	12 290.3
Indigenous GNP (S\$m)	n.a.	4 989.9	18 750.5	22 531.6	24 868.6
Per capita indigenous GNP (S\$)	n.a.	2 405.4	7 767.7	9 221.8	10 060.9
Annual change (%)	n.a.	11.5	15.8	18.7	9.1
Real per capita indigenous GNP Annual change (%)	n.a.	5.9	7.3	10.5	5.2
Gross Domestic Product (GDP) at 1968 factor cost					
Annual change (%)	8.7	9.4	10.2	9.9	6.3
Inflation: Annual change (%)					
Consumer Price Index	1.2	5.6	8.5	8.2	3.9
GDP deflator	1.0	4.9	7.4	6.4	3.8
Gross Domestic Fixed Capital Formation (GDFCF) at 1968 prices					
Annual change (%)	21.7	10.8	20.1	15.8	24.1
GDFCF as % of GDP	9.4	32.2	41.2	43.8	49.0
Gross National Savings					
As % of GNP	n.a.	19.3	32.9	35.9	38.5
As % of GDFCF	n.a.	59.8	79.9	81.9	78.7

<sup>1</sup> S\$1 = US\$0.33 in 1960 and 1970, S\$1 = US\$0.5 in 1980 and 1982 approximately. <sup>2</sup> Annual changes refer to averages for the decades 1960-69 and 1970-79 respectively. <sup>3</sup> Preliminary. <sup>4</sup> 1957 figure from *Census of Population, 1957*.

Sources: Singapore, Ministry of Trade and Industry: *Economic Survey of Singapore, 1982* (Singapore, Singapore National Printers, 1983); Singapore, Department of Statistics: *Yearbook of Statistics, 1982/83* (Singapore, Singapore National Printers, 1983).

**Table 2. Economic structure: industrial sectors as proportions of Gross Domestic Product, at 1968 market prices (percentages)**

Industrial sector	1960	1970	1980	1981	1982 <sup>1</sup>
Agriculture and fishing	3.8	2.3	1.2	1.1	1.0
Quarrying	0.3	0.4	0.3	0.4	0.5
Manufacturing	12.8	20.5	24.1	24.0	21.5
Utilities	2.3	2.6	2.9	2.8	2.7
Construction	3.5	6.3	4.7	5.1	6.5
Trade	31.2	28.1	24.4	23.5	23.2
Transport and communications	13.3	11.3	18.3	19.0	19.5
Financial and business services	7.1	13.9	18.0	19.4	20.7
Other services	17.7	13.6	11.0	10.7	11.1
Total	100.0	100.0	100.0	100.0	100.0
GDP at 1968 prices (\$m)	2 304.5	5 579.3	13 366.5	14 695.2	15 626.9

<sup>1</sup> Preliminary.

Sources: Singapore, Department of Statistics: *Singapore National Accounts 1960-1973* (Singapore, Singapore National Printers, 1975); idem: *Yearbook of Statistics, 1982/83* (Singapore, Singapore National Printers, 1983).

Singapore's per capita income is exceeded only by that of Japan, and the tiny oil-rich newly independent State of Brunei. Its per capita income is comparable to that of Hong Kong, and between two to three times that of newly industrialising countries like the Republic of Korea, Malaysia, Brazil and Mexico.

As the second busiest port in the world, trade and transport and communications have been and still are prominent sectors of the Singapore economy. In 1960 these two sectors, together with other services (then including British military services), accounted for over 60 per cent of total output. Manufacturing ranked fourth in terms of contribution (12.8 per cent) to domestic output. Ten years later it had risen to account for one-fifth of total output, second only to trade. Its GDP contribution reached a peak of 23 per cent in 1981, matching that of trade. Its decline in 1982 reflected the disproportionate impact of the world recession on Singapore's manufacturing exports. In 1982 the transport and communications sector contributed 19.5 per cent to GDP, while the GDP share of the financial and business services sector more than doubled from 7.1 per cent in 1960 to 20.7 per cent in 1982 (see table 2).

Today, in addition to being a major world port and communications centre, Singapore is also an international banking and financial centre, and an important exporter of manufactures from the developing world. Nearly two-thirds of manufacturing output is exported, and manufactures account for 75 per cent of all domestic exports. The openness of the economy is shown by the fact that total trade was three-and-a-half times the value of GNP in 1982, which was the same as in 1960 (see table 3).

Singapore has a small, young and slowly growing population, the result of high rates of population growth in the 1950s (4.4 per cent in the census year of 1957), slowing down to 2.4 per cent per year in the 1960s and 1.5 per cent per year in the 1970s. In 1982 the population growth rate was 1.2 per cent, and nearly

Table 3. Summary statistics on trade and manufacturing

	1960 <sup>1</sup>	1970 <sup>1</sup>	1980	1981	1982 <sup>2</sup>
<i>Index of industrial production</i> (1978 = 100)	n.a.	43.0	129.2	145.9 <sup>3</sup>	129.6 <sup>3</sup>
Annual change (%)	n.a.	12.1	12.3	5.8 <sup>3</sup>	-11.2 <sup>3</sup>
<i>Manufacturing output as % of GDP</i> at 1968 prices	12.8	20.5	24.1	24.0	21.5
<i>Manufacturing employment as %</i> of total employment	14.3 <sup>4</sup>	22.0	30.1	30.4	29.5
<i>Manufactured direct exports as %</i> of manufacturing output	11.9	59.5	60.6	60.7	60.3
<i>Manufactured direct exports as %</i> of domestic exports	75.5	83.1	77.0	77.7	75.0
<i>Trade/GNP</i>	3.45	2.10	3.99	3.75	3.45
<i>Annual change in total trade (%)</i>	4.2	20.2	34.0	10.5	2.1
<i>Annual change in domestic exports (%)</i>	25.5	26.9	41.8	14.1	-1.0
<i>Balance of payments:</i>					
Current account balance (S\$m)	-244.7	-1 750.8	-3 349.3	-2 920.5	-2 737.2
Overall balance (S\$m)	140.1	564.8	1 433.8	1 938.4	2 517.5

<sup>1</sup> Annual changes refer to averages for the decades 1960-69 and 1970-79, respectively. <sup>2</sup> Preliminary. <sup>3</sup> Fourth quarter figures. <sup>4</sup> 1957 figure from *Census of Population, 1957*.

Source: Same as table 2.

Table 4. Singapore: structure of employment by industrial sector (percentages)

Industrial sector	1957	1970	1980	1981	1982
Agriculture and fishing	6.9	3.5	1.6	1.1	1.0
Quarrying	0.3	0.3	0.1	0.1	0.2
Manufacturing	14.3	22.0	30.1	30.4	29.5
Utilities	0.9	1.2	0.8	0.7	0.7
Construction	5.2	6.6	6.7	6.0	6.3
Trade	27.8	23.4	21.3	21.7	22.2
Transport and communications	10.7	12.1	11.1	11.4	11.4
Financial and business services	4.3	4.0	7.4	7.6	7.9
Other services	29.1	26.8	20.9	21.0	20.8
Total	100.0	100.0	100.0	100.0	100.0
Total employment (persons)	471 918	650 892	1 077 090	1 112 818	1 140 507

Sources: Singapore, Department of Statistics: *Report on the Census of Population, 1970* (Singapore, Singapore National Printers, 1973); idem: *Census of Population, 1980*, Release No. 4 (Singapore, Singapore National Printers, 1981); Singapore, Ministry of Labour: *Report on the Labour Force Survey of Singapore, 1981* (Singapore, Printers & Converters, 1982); idem: *Report on the Labour Force Survey of Singapore, 1982* (Singapore, Photoplates Private Ltd., 1983).

half of the population was under the age of 24. The rate of literacy was 85 per cent in 1982, up from 52 per cent in 1957.

Although total population grew by less than half between 1960 and 1982, the labour force more than doubled to 1.17 million in 1982, of whom about



one-tenth were non-citizens. Full employment has been maintained since the early 1970s. In 1982, a year of high unemployment in industrial countries, Singapore's unemployment rate was only 2.6 per cent. Manufacturing is today the largest employer in the economy, accounting for 29.5 per cent of total employment, followed by trade with 22.2 per cent, and other services with 20.8 per cent. This pattern of employment contrasts with that found during the census of 1957, when other services (including British military services) employed the most people (29.1 per cent), followed by trade (27.8 per cent), and then by manufacturing (14.3 per cent) (see table 4).

### *Economic performance, 1960-83*

At self-government in 1959, Singapore faced major social and economic problems, namely a stagnant economy, high unemployment, a high rate of population growth, and poor housing conditions. The PAP-led Government quickly embarked on a mass public housing programme, and a vigorous family planning campaign. It also expanded expenditure on education, and instituted industrial development policies to diversify the trade and service-oriented economy. These policies had barely got off the ground when Singapore separated from the Federation of Malaysia in 1965. Its economic vulnerability as a city State with no natural resources was increased by the scheduled withdrawal of British military forces in 1968.

Fortunately, government policies and world economic conditions intervened to produce one of the most spectacularly successful country economic performances in the world. Spurred by a boom in world trade, United States Viet Nam War-induced expenditure in South-East Asia, oil exploration in the region, and a strong take-off into manufacturing for export – all occurring simultaneously in the second half of the 1960s – GNP growth averaged 9.9 per cent annual rate from 1960 until 1969, while real GDP grew at 8.7 per cent a year.

In the 1970s this rapid rate of growth accelerated to an annual average of 14.3 per cent growth in GNP, and 9.4 per cent in real GDP, despite a slowdown in the world economy, the fourfold oil price increase in 1973 and the world recession that followed in 1974 and 1975, and protectionist restrictions in the leading industrialised countries against Singapore's manufactured exports.

In the first two years of the 1980s GDP growth averaged 10 per cent a year, despite the prolonged recession in industrial countries, Singapore's major markets. In 1982 the Singapore economy finally felt the effect of the recession and GDP growth declined to 6.3 per cent. In 1983, with the unexpected strong recovery of the United States economy, its growth quickened to 7.1 per cent, similar to the rate achieved in the two years after the 1974-75 recession.

Since independence in 1965 *economic growth* has derived mainly from the export of goods and services, which accounted for 62 per cent of overall growth between 1965 and 1969, and 63 per cent in the 1970s. In the second half of the 1970s (1975-79), this contribution rose to 70 per cent.<sup>3</sup> Domestic goods exports were concentrated in labour-intensive manufactures such as textiles,

clothing, footwear and electronics. The export of services expanded in the 1970s with the growth of the transport and communications sector, especially after 1974. These two sectors were the fastest and third fastest growing sectors of the economy in the 1970s, with manufacturing in second place.

With economic growth came *structural change*: a diversification from trade and services into manufacturing in the 1960s, and a further diversification into transport and communications, and financial and business services in the 1970s, cushioning the economy from the deceleration in the trade and manufacturing sectors in the mid-1970s.

In the 1960s *capital investments* contributed an average of 18 per cent to overall growth, as the physical infrastructure for industrialisation was being built up. This contribution declined to 11 per cent in the 1970s reflecting a drop in private sector investment from 1975 to 1977. In the 1970s, gross national savings financed an average of 60 per cent of domestic investment, rising to an average of nearly 80 per cent for the first three years of the 1980s. Savings rose from an average of 11 per cent of GNP in the 1960s to an average of 19 per cent in the 1970s, and an average of 35 per cent for the period 1980-82.

Economic growth was achieved with relative *price stability* in the 1960s, when the GDP deflator and the consumer price index registered average annual increases of around 1 per cent. In the 1970s world inflation and the oil price crisis added to domestic demand pressures in this extremely open economy, causing the consumer price index to rise by 5.6 per cent a year, and the GDP deflator by 4.9 per cent per year (see table 1). Inflation rates were lower after 1975 than in the early 1970s. They rose in the late 1970s and reached a peak of 8.2 per cent in 1981 before falling rapidly to 1 per cent in 1983 in line with declining world inflation.

Since independence Singapore's overall *balance of payments* each year has been in surplus: the surplus of S\$2,500 million in 1982 was 18 times the surplus in 1960. Over the years the current account deficit has widened, reflecting the country's dependence on imports for all its consumption and industrial requirements, and the effect of oil and other commodity price increases. Increased imports of intermediate and capital goods were also needed for the accelerated industrialisation programme – they accounted for over 84 per cent of total retained imports in the 1970s, compared with 66 per cent in the 1960s. The current account deficits were covered by increased net service earnings from the expansion of transport and tourism, averaging S\$2,800 million annually in the 1970s compared with S\$580 million annually in the 1960s, and by net foreign capital inflows from long-term foreign investments and Singapore's growth as a financial centre. Net capital inflows in the 1970s totalled S\$14,300 million, compared with only about S\$1,000 million in the 1960s.<sup>4</sup> These inflows continued to increase in the 1980s, averaging S\$3,700 million a year for the first three years of the 1980s.<sup>5</sup> Because of healthy balance of payments surpluses and the accumulation of foreign reserves, the Singapore dollar appreciated against most major currencies throughout the 1970s: since the early 1970s it has appreciated by about one-third against the United States dollar.

As the economy thrived, *living standards* improved greatly. Per capita GNP was nine times greater in 1982 than in 1960. Per capita indigenous GNP

increased four times between 1970 and 1982, and registered an average annual growth rate of 5.9 per cent in real terms during the 1970s (see table 1). Rapid growth apparently has not worsened the distribution of income, at least until the mid-1970s.<sup>6</sup> *Employment* more than doubled between 1960 and 1982. Full employment was first reached in the early 1970s, and maintained since the late 1970s. In fact, since the early 1970s labour shortages have been persistent in many fast-growing sectors of the economy. To sustain its high rate of economic growth, Singapore has had to import both professional and unskilled foreign workers.

### *Manufacturing performance*

Since 1960, with the exception of the 1974-75 and 1982-83 recession periods, manufacturing has been the fastest-growing sector of the economy, with annual rates of output growth averaging between 20 and 25 per cent. It ranks only slightly behind trade as the largest sector of the economy (see table 2), and employs more people than any other sector (30 per cent of the total). Manufactured exports have grown more rapidly, and manufacturing employment more slowly, than manufacturing output. Manufactured exports account for three-fifths of all manufacturing output, and for 75 per cent of total domestic exports (see table 3).

Within the manufacturing sector, there has been a change in the industrial composition of production (see table 5). In 1960 nearly 90 per cent of all manufacturing was for the domestic market and food and printing were the largest industries. Two decades later 60 per cent of manufacturing output was exported, and petroleum, transport equipment and electrical machines were the major industries. These three industries together accounted for 60 per cent of all manufacturing value-added in 1982.

*Table 5. Singapore: percentage distribution of manufacturing value-added by industry*

Industry	1960	1970	1980	1981	1982 <sup>1</sup>
Food	31	12	5	6	6
Printing	17	- <sup>2</sup>	4 <sup>3</sup>	5 <sup>3</sup>	5 <sup>3</sup>
Metal	8	7	2	2	2
Wood	7	6	2	2	2
Transport equipment	2	15	12	12	11
Electrical and electronics	6	12	33	32	31
Petroleum	- <sup>2</sup>	19	17	17	18
Chemicals	- <sup>2</sup>	- <sup>2</sup>	5	5	5
Others	25	29	20	19	20
Total	100	100	100	100	100

<sup>1</sup> Preliminary. <sup>2</sup> Included in "Others" category. <sup>3</sup> Includes paper products.

Sources: Singapore, Ministry of Trade and Industry: *Economic Survey of Singapore, 1979* (Singapore, Singapore National Printers, 1980), p. 65; idem: *Economic Survey of Singapore, 1981* (Singapore, Singapore National Printers, 1981), p. 83; idem: *Economic Survey of Singapore, 1982* (Singapore, Singapore National Printers, 1983), pp. 100-101.