

**The Developmental City-State In An
Open World Economy:
The Singapore Experience**

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Table of Contents

1.	Introduction	1
2.	The Sources of Singapore's Economic Growth	4
3.	Creating Competitive Advantage: Singapore's Conditions for Investment and Growth	13
4.	The State and the Economy in Singapore: The Building of a National Polity in an International Economy	28
5.	Singapore's Great Leap Forward and Its Aftermath: From Restructuring to Crisis, to Restructuring?	52
6.	Conclusion: Lessons for World Development	72

Tables

number	title	follows page
1	Sources of Growth of Aggregate Value Added	4
2	Capital Formation	6
3	Savings by Public and Private Sectors	6
4	Gross Domestic Capital Formation	6
5	Selected Indicators of Foreigners' Role	8
6	Contribution of Foreign Capital	8
7	Correltion Coefficients of Real GDP Growth	8
8	Principal Sectors of Manufacturing Ind	12
9	Gross Domestic Product by Industry	12
10	Public Sector Revnue and Exenditure	28
11	Measurements of Role of Government	30
12	Wages, Total Labor Costs	56
13	Sectoral Performance	58
14	Relative Labor Costs and Exchange Rates	60
15	Real GDP Per Worker	62

Charts

number	title	follows page
1	Per Capita GNP of Selected Countries	2
2	Changes in Share of Information Occupations	12
3	Communist United Front Influence	16
4	Financing Government Expenditure, Sources	28
5	Financing Government Expenditure, Uses	28
6	Government's Giant Hand in Business	32
7	The Total Approach to Productivity	34
8	Changes in Real GDP/GNP of Asian NICs	60
9	Economic Growth in Selected NICs	60
10	Annual Productivity Growth	62
11	Indicators of Technological Policy	66

1. Introduction

By any standards Singapore's economic performance during the twenty years after her independence (1965-1985) is nothing short of extraordinary. Indeed, during that period, Singapore achieved the highest average rate of GDP growth in the world: between 8% and 10% per year in real terms for the entire period, although there was some variation between sub-periods.* Singapore's rate of growth outperformed that of all other Asian NICs, with the exception of Korea and Hong Kong in the period 1973-79. By 1983 Singapore's GNP per capita had jumped to over US\$6,500, more than twice that of South Korea and Taiwan, surpassing several EEC countries (see Chart 1). Such a phenomenal growth was achieved while maintaining low inflation rates (CPI of 3.7% in 1965-73, 5.9% in 1973-79, and 4.9% in 1979-84), and with very little borrowing from external financial sources (Singapore's foreign debt amounts only to about 1% of its GNP).¹

Although wages grew at a slower pace than productivity for the period as a whole, standards of living for the population of Singapore improved dramatically. Unemployment, which was at double-digit levels in the early 1960s, declined to the 3-4% range in the early 1980s. Real earnings for all industries increased at an average annual rate of 2% in the 1970s. Real income inequality is

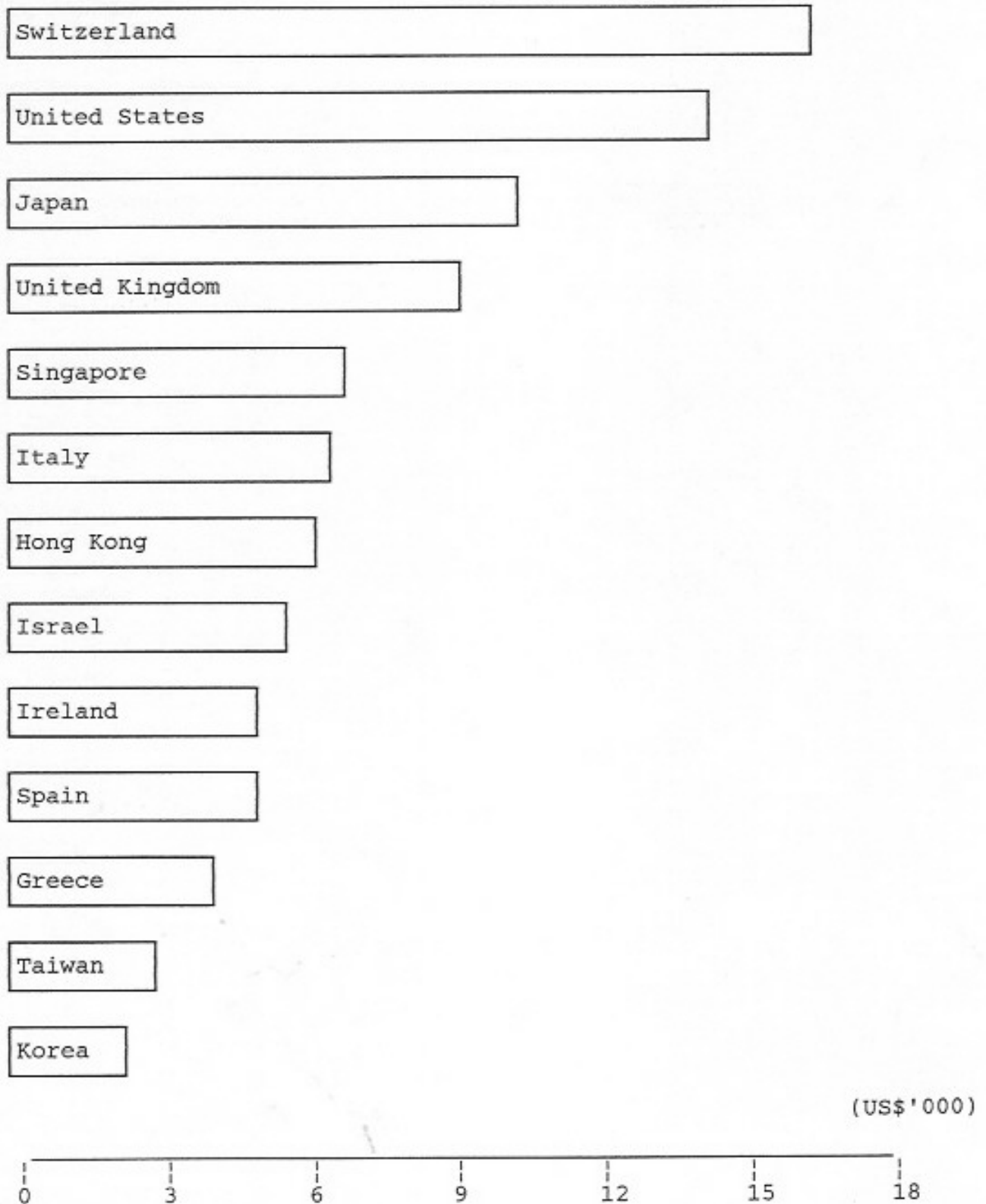
*. 1965-73 witnessed an annual average growth of 12.7% that slowed down to 8.7% per year in 1973-79, and to 8.6% per year in 1979-84, thus maintaining very high rates of growth in spite of two oil crises and the world recession of 1980-82.

estimated to have declined by 7% during 1966-75, although it appears to have increased again in the 1980s.² Indeed, real income inequality in Singapore is currently higher than in the other NICs.³

While there is no unemployment allowance in Singapore, there is a form of Welfare State. 85% of the population is housed in Government flats, 70% of them in home-ownership status. Primary education is mandatory, universal and free, while secondary education is also generally provided by the Government, although for a smaller portion of the population.⁴ Health care is very cheap for the low-income groups.⁵ The infant mortality rate for 1981 was 11%, a level lower than that of the U.S. in 1978 (13%). Life expectancy at birth in 1981 was 72 years, similar to that of the U.S. and Western Europe. There is a mandatory retirement pension system that can be activated at the age of 55, although the system is individualized, non-redistributive, and fully funded through the mandatory contributions of each worker and his/her employers. Public services are inexpensive and generally efficient.

Overall, using traditional economic standards, Singapore has achieved rapid growth that has filtered down to the great majority of the population, although with the structural unevenness typical of any class society. These achievements are particularly impressive given the total lack of natural resources of Singapore (if we except its strategic location in the straits that connect the Pacific and Indian Oceans), its small size (618 square kilometers, 2.6 million people in 1987),

Chart 1
Per Capita GNP of Selected Countries, 1983



Source: World Bank Atlas

and its political instability and international isolation at the moment of independence (1965). Although the political means through which this process of development has been achieved are controversial (a point to which we will return in this paper), any serious attempt at understanding the lessons that Singapore has to offer to development theory must start with the recognition of these achievements, and with a rigorous, unbiased appraisal of the empirical factors that account for such developmental dynamics. At the same time, the analysis should also pinpoint the limits of this model of growth, as revealed by the very serious economic downturn experienced by Singapore in 1985-1986, because such crisis seems to go deeper than the cyclical movements of the international economy.

Truly, Singapore represents such a specific situation--being a small city-state, without an agricultural sector, entirely open to the international economy--that her experience is hardly extrapolable to other countries.⁶ However, this openness provides the opportunity to examine the working of the new international economy as it interacts with a strong, developmental state fighting for survival.⁷ By identifying some key mechanisms underlying one of the world's most successful processes of growth of the last two decades we will shed some light on the broader trends that constitute the new, emerging international economic order.

A major hypothesis of our analysis should be stated at this point: An open economy does not imply a laissez-faire economic policy. In fact, strong development policies, guided by

governments, become a necessity to compete successfully in an open economy structured at the world level. Singapore is the quintessential Developmental State.

2. The Sources of Singapore's Economic Growth

Before undertaking the analysis of the structural determinants and economic policies responsible for Singapore's economic performance we must identify empirically the immediate factors contributing to it in the 1965-84 period. The most recent, rigorous econometric analysis, that of Tsao Yuan,⁸ shows that capital was the main contributing factor to growth with labor being also a positive factor to a lesser extent, while total factor productivity had a negligible or negative contribution, in a pattern quite different from that of advanced industrial economies. (See Table 1.)

Let us start with labor, since the matter is relatively simple.⁹ In 1966, when Singapore had a 9% unemployment rate and a labor force participation rate of 42.3%, and an average population growth rate of 3.3% per year (1957-1966), priority was given to lowering this population growth rate so as to avoid a dramatic worsening of the employment situation. Almost two decades later, in 1983, the unemployment rate had gone down to 3.2% (mainly structural), the rate of labor force participation had reached 63.8% (thanks to a considerable increase of women's rate of participation from 19.8% to 54.3%), and the number of jobs had been multiplied by a factor of 2.25 (up to a total of

Table 1

Sources of Growth of Aggregate Value Added:
Capital, Labor and Total Factor Productivity (TFP)

<u>Year</u>	<u>Rates of Growth Capital</u>	<u>Growth Labor</u>	<u>GDP</u>	<u>Contribution to Growth</u>		<u>TFP</u>
				<u>Capital</u>	<u>Labor</u>	
1972-73	18.5	10.9	11.2	11.9	3.9	-4.2
1973-74	13.8	9.1	7.4	9.0	3.2	-1.9
1974-75	11.6	2.5	4.1	7.3	0.9	-4.2
1975-76	8.9	6.5	7.1	5.4	2.6	-0.9
1976-77	9.3	5.3	7.3	5.5	2.1	-0.4
1977-78	7.7	3.2	8.1	4.6	1.3	2.2
1978-79	8.4	7.7	8.9	5.1	3.1	0.7
1979-80	9.1	7.2	10.0	5.4	2.9	1.7
Average 1966-72	16.7	6.0	12.5	9.3	2.7	0.6
Average 1972-80	10.9	5.5	8.0	6.8	2.1	-0.9

Source: Department of Statistics, Singapore.

1,168,000), to the point that Singapore needed to appeal to foreign workers, who represented about 10% of the labor force in the early 1980s. Thus, a significant share of the economic growth achieved was the result of rapid incorporation of labor (and particularly of women's labor) into the productive system.

Yet such sudden input of productive labor was only possible because capital was ready for investment at an even faster pace than that of labor growth. Singapore's growth has been, primarily, due to massive, efficient, capital investment. Thus, two key questions must be answered to understand the basic structure of Singapore's growth: 1) What were the sources of capital, and 2) What were the origins of the pre-existing demand that was to offer a market for investments made in Singapore?

Concerning the first question, we must distinguish several aspects. Singapore's economy displays an impressive level and rate of growth of gross domestic capital formation, reaching over 45% of GDP in the early 1980s. In this sense, it is a showcase for standard economic theory, in which investment is the fundamental engine of growth. This investment had two major sources, as indicated in Table 2:¹⁰ 1) an exceptional rate of growth of gross national savings, reaching over 42% of GDP in the mid-1980s--indeed, Singapore has the highest savings rate in the world, and 2) net capital inflow, mainly from direct foreign investment, that oscillated between 10% and 20% of GDP between 1970 and 1980.

For the overall period 1966-85, gross national savings amounted to 74.1% of total gross domestic capital formation,

with net capital inflow accounting for the remaining 25.9%. Much of domestic savings are generated by the public sector (45.6% of gross national savings on average for 1974-85). This high figure reflects the contribution of Government's controlled Central Provident Fund, a sort of Social Security scheme whose key role in the Singapore economy will be discussed later.

However, the predominance of the public sector in the savings process is not accompanied by public sector predominance in investment. Table 4 shows that the private sector (both foreign and domestic) accounts for about three-fourths of investment, on average, for the period 1974-85. Government's share of investment has grown over time, although its share of savings has increased much faster. Some of these savings are invested in Singapore, both in public infrastructure (particularly public housing and transportation), and in private corporations in which the government participates. Another part is invested abroad by the Government of Singapore, to decrease the vulnerability of its resources vis-a-vis potential downturns of the Singapore economy. And a substantial surplus (as much as 24% of total government revenue, in 1986, for instance) is reserved in a Development Fund to stabilize the economy and allow for strategic development expenditures. Thus, the Government's role as an intermediary between savings and investment gives to it a major leverage over the direction of the economy.

Yet the actual dynamism of investment is left to private capital, and particularly to foreign investment, whose flows are

Table 2

Capital Formation
(at current market prices)

	Gross National Saving		Net Capital Inflow		Total Gross Domestic Capital Formation	
	<u>\$m</u>	<u>% of GDP</u>	<u>\$m</u>	<u>% of GDP</u>	<u>\$m</u>	<u>% of GDP</u>
	1960	-52.3	-2.4	296.8	13.8	244.5
1965	497.6	16.8	150.1	5.1	647.7	21.9
1970	1,129.7	19.5	1,114.8	19.2	2,244.5	38.7
1975	3,406.3	25.5	1,628.3	12.2	5,034.6	37.7
1980	7,641.8	31.5	3,349.3	13.8	10,991.1	45.3
1983	13,846.8	39.4	2,019.1	5.7	15,865.9	45.1

Source: Department of Statistics, Singapore.

TABLE 3

Savings by Public and Private Sectors, 1974-85
(In S\$ millions)

Year	GNS	GDS	Public-sector Saving ^a	Private-sector Saving			CPF		Share of Public-sector Saving in GNS	
				Local ^b (1)	Local + Foreign ^c (2)	S\$m (3)	(3)/(1) (per cent)	(3)/(2) (per cent)	GNS	GDS
1974	3102	3548	736	2366	2812	643	27.2	22.9	23.7	20.7
1975	3851	3820	1362	2489	2458	821	33.0	33.4	35.4	35.7
1976	4441	4644	1470	2971	3174	831	28.0	26.2	33.1	31.7
1977	4904	5200	2021	2883	3179	888	30.8	27.9	41.2	38.9
1978	5649	5780	2230	3419	3550	1027	30.0	28.9	39.5	38.6
1979	6946	7102	2801	4146	4301	1534	37.0	35.7	40.3	39.4
1980	7642	8880	3407	4235	5473	2036	48.1	37.2	44.6	38.4
1981	9906	11576	4261	5645	7315	2599	46.0	35.5	43.0	36.8
1982	11508	13750	5936	5572	7814	3506	62.9	44.9	51.6	43.2
1983	14020	16282	8649	5371	7633	3849	71.7	50.4	61.7	53.1
1984	17645	18267	11291	6354	6976	3165	49.8	45.4	64.0	61.8
1985*	15954	15771	11052	4902	4719	4159	84.8	88.1	69.3	70.1
Average 1974-85							45.8	39.7	45.6	42.4

* preliminary.

a current surplus in consolidated accounts of the public sector (government plus statutory boards).

b GNS minus Public-sector Saving

c GDS minus Public-sector Saving.

Source: Department of Statistics, Yearbook of Statistics, various years; and Ministry of Trade and Industry, Economic Survey of Singapore, various years.

Table 4

Gross Domestic Capital Formation by Private and Public Sectors
at 1968 Market Prices, 1960-85

	Gross Domestic Fixed Capital Formation (\$ mil)	Percentage Share of -----	
		Public Sector	Private Sector
1960	219.9	29.8	70.2
1965	639.5	31.0	69.0
1970	1712.0	19.2	80.8
1974	2953.8	18.4	81.6
1975	2902.2	23.5	76.5
1976	2908.6	29.3	70.7
1977	2945.8	30.3	69.7
1978	3270.5	29.4	70.6
1979	3601.2	21.6	78.4
1980	4289.0	21.9	78.1
1981	5204.0	21.0	79.0
1982	6415.8	24.3	75.5
1983	6963.6	27.5	72.5
1984	7575.1	27.6	72.4
1985*	6588.5	30.7	69.3
Average 1974-85		25.5	74.5

* preliminary

Sources: Wong (1986), Table 3.3; Department of Statistics., Yearbook of Statistics, various years; and Ministry of Trade and Industry, Economic Survey of Singapore, various years.

probably underestimated in the recorded statistics. Tables 5 and 6 illustrate the important and growing role of foreign investment and foreign firms in the Singapore economy, most notably in export-oriented manufacturing.¹¹

Thus, inducement for foreign capital inflows and Government-controlled large domestic savings are the key sources for the very high rate of investment that appears to be the most powerful factor underlying Singapore's economic growth.

The second question is a key point for examination: Where are the potential markets for such investments to be realized in anticipation of profitable returns? Given the small size of the Singapore economy, its lack of integration in any broader market area, and the low level of income of its population in the mid-1960s, it is obvious that the dynamism of the development process derives from the tight connection between Singapore and an internationalized world economy. It is on the basis of an expanding external sector that the Government of Singapore was able to extract revenues with which to generate domestic demand. And on the basis of both Government-induced activities and multinational capital investments, a domestic private sector can thrive, mainly in services linked to the old and new entrepot activities (from commerce to financial and business services). Indeed, in 1982, the sum of merchandise exports plus imports (excluding re-exports) in Singapore amounted to 390% of its GDP, a higher figure than anywhere else in the world, reflecting the importance of intermediate inputs in the economy.¹² Thus, investment and growth in Singapore are highly dependent upon the

performance of the world economy in the long term, particularly of the OECD area (see Table 7). However, the robust performance of Singapore in the aftermath of the 1974 and 1980 U.S. recessions shows the resilience of its economy. This is related to the Singapore economy's growing diversification in terms of sectors of activity and international markets, a point that we will develop below.

Thus, the main source of Singapore's growth results from a sustained high rate of investment for a long time. The capital was foreign. Revenue generated by growth was captured by Government and re-invested according to a strategic program, in a behavior that appears to be typical of a developmental state. The foreign investment, as well as the Government's strategic investment, was geared toward international markets, particularly in the OECD area. Singapore's take-off occurred during an expansionary period of the world economy, in 1966-72, and from then on Singapore was able to position herself in the redeployment of capital and markets that took place in the restructuring of the international economy. The ability to attract capital in Singapore in order to produce, trade, or invest vis-a-vis the world markets was the result of two major characteristics of the Singapore economy: its competitiveness, and its gradual diversification.

A) Competitiveness results, in this particular case, from five different sets of factors:

TABLE 5

Selected Indicators of Foreigners' Role in Singapore, 1966-85

	1966-73	1973-79	1979-84	1985 ^P
Share of Resident Foreigners and Resident Foreign Companies in GDP as % of GDP at current market prices	15.7	23.6	28.1	25.9
Ratio of Resident Foreigners and Resident Foreign Companies in GDP to Indigenous GNP	18.0	29.8	36.1	31.4
Net Factor Income from abroad as % of GDP	1.0	-0.9	-2.2	1.5
Net Transfers from abroad as % of GDP	-0.1	-0.5	-0.7	-1.0
Net Factor Payment to Foreigners as % of GDP*	5.1	4.2	8.5	7.0
Net Borrowing from abroad as % of Gross Domestic Capital Formation	35.2	24.8	17.5	3.4
Non-Residents' Consumption Expenditure Locally as % of GDP at current market prices	16.7	18.3	25.4	23.5
Indigenous GNP as % of GDP	89.1	78.9	78.1	82.5
Gross National Savings as % of Gross Domestic Capital Formation	64.8	75.2	82.5	96.6
Net Factor Receipts of Singaporeans from Rest of the World as % of GDP	4.7	4.7	6.2	8.5
Residents' Consumption Expenditure Abroad as % of GDP at current market prices	2.8	4.3	5.1	6.4

* Net factor receipts of Singaporeans from rest of the world minus net factor income from abroad, divided by GDP at current market prices.

Sources: Department of Statistics, Singapore, *Economic and Social Statistics of Singapore, 1960-82* (Singapore National Printers, 1983); and Department of Statistics, Singapore, *Yearbook of Statistics 1985/86* (Singapore National Printers).

Table 6

Contribution of Foreign Capital* to Singapore's
Manufacturing Sector, 1975-84

Percentage Share of Foreign Firms in terms of

Year	Number of Establishments	Number of Workers	Output	Value Added	Direct Exports	Capital Expenditure
1975	22.0	52.0	71.3	62.7	84.1	64.6
1976	22.0	53.9	73.1	64.1	84.7	66.6
1977	22.8	54.5	73.4	65.2	84.5	67.4
1978	21.7	52.5	71.5	63.5	83.7	69.8
1979	23.9	57.2	73.8	67.3	85.2	73.1
1980	24.9	58.4	73.7	67.4	84.7	74.6
1981	26.1	58.5	76.0	67.7	86.8	71.8
1982	25.4	55.4	73.7	66.6	83.6	63.6
1983	21.0	50.8	71.5	63.2	82.9	58.5
1984	21.0	52.8	70.9	63.0	82.0	61.8
Average 1975-84	23.1	54.6	72.9	65.1	84.2	67.2

* more than 50% foreign-owned.

Source: Department of Statistics, Singapore, Census of Industrial Production, various years.

Table 7

Correlation Coefficients of Real GDP Growth Rates between
Singapore and Major Groups of Countries, 1966-84

	1966-73	1973-79	1979-84	1966-84
OECD (PB 5) ^a	0.33 (0.41)	0.52 (0.71)	0.27 (0.44)	0.46 (0.50)
Asian NICs ^b	-0.33	0.84	-0.35	0.15
ASEAN 4 ^c	-0.42	0.27	0.42	-0.23

^a USA, Japan, Canada, Australia and New Zealand, frequently called the Pacific Basin Five (or PB 5).

^b Hong Kong, South Korea, and Taiwan.

^c Indonesia, Malaysia, Philippines, and Thailand.

Sources: International Monetary Fund (IMF), International Financial Statistics, various years; Council for Economic Planning and Development, Republic of China, Taiwan Statistical Data Book 1985; and Asian Development Bank, Key Indicators of Developing Member Countries of ADB, various years.

1) conditions conducive to a favorable business environment, including labor costs and government regulations. These conditions, mainly created by the Singapore Government, are discussed in the following section.

2) Industrial, business, transportation, and communications infrastructure that integrates a somewhat distant location in the actual space of production and management of the main areas of the world economy. In this sense Singapore has greatly benefited from the simultaneity of its development and of the revolution in information and communication technologies. Without the miniaturization of electronic devices, the breakthroughs in telecommunications and online information systems, and the progress in air transportation, today's Singapore would be unthinkable. This is a good example of the chances for development offered by new technologies, when the economic conditions suit the opportunities and government policies seize such opportunities.

3) An advantageous inflation differential vis-a-vis the main world markets, so that the price structure favors location of investment over other areas, including the main target markets. Singapore has enjoyed a structurally low inflation rate (with the exception of 1974) as a result of free trade policy (which cheapens imports), government control over wages, and non-inflationary public finance, based on budget surpluses and a tight monetary policy organized around the intervention of the Monetary Authority of Singapore in the foreign exchange market. (The Singapore dollar fluctuates

against a basket of currencies of major trade partners, but the weight of each currency in the fluctuation is kept secret. In recent years it has generally followed the U.S. dollar.)

4) Stable fiscal policy and institutional environment that enhance predictability and safety of investment. Singapore's political stability since 1965, together with a more than cautious fiscal policy fully meet these conditions.

5) Flexibility of government regulations and economic institutions, able to adapt to the variations of the world economy. Singapore's small size, her interpenetration with the global economic processes, and total government control over the institutions of the society facilitate quick reactions to world economic trends.

B) The diversification of Singapore's economy, in a pragmatic adaptation to the changing conditions of the world market, is another major source of growth.¹³ While its role as a major port originally emphasized the shipbuilding and repairing industries, along with steel mills linked to its position in the waterways, the emphasis quickly shifted to electronics and machinery. The Vietnam War provided a golden, though sinister, opportunity for Singapore to become the world's third largest oil refining center, thus thriving in the oil crisis of the 1970s, during which Singapore, as a major refining and shipment location for the main oil corporations, behaved more as an oil exporter. Connected to this major role in the oil industry, Singapore also became a major manufacturer of oil

rigs.¹⁴ Although the role of petroleum trade, refining, and related industries naturally declined in the 1980s, in 1981 petroleum still accounted for 38.4% of total output and 18.4% of value-added in the manufacturing sector (see Table 8), and 23.4% of total net exports, although down from the 34-43% levels of the previous decade. In 1987, Singapore's refineries were recovering from the crisis because new technological modernization enabled them to diversify and customize their production.

Table 8 also shows the diversity of the manufacturing sector, particularly in terms of employment, although the main industrial sector continues to be the machinery and appliances sector, with its core in electronics. Nevertheless, the major diversification of Singapore's economy has taken place outside the manufacturing sector. As shown in Table 9, the share of manufacturing and construction in the GDP has been overtaken by services, in spite of manufacturing's robust performance in the 1969-79 period (20.6% annual average growth in nominal terms). Particularly impressive are the performances of financial and business services and of transport and communications sectors.

In terms of employment, Kuo and Chen¹⁵ have estimated that 34.1% of Singapore's labor force in 1980 was engaged in information-processing activities. Whatever the possible arbitrariness of such definitions, the rapid transformation of Singapore's occupational structure, as shown in comparative terms by Chart 2, is quite impressive. A similar diversification has taken place in the external sector, with

exports of services (business, tourism, transportation) playing an increasing role in the balance of payments. In fact, contrary to the image of Singapore as a manufacturing export platform, her trade balance in manufactured goods has been consistently negative, since most of the manufactured goods are intermediate products that have to be imported to be processed and then exported. Thus, the services component of the external sector is crucial to reduce the deficit of the trade balance. But even with their positive contribution the current account balance still remains negative (except for the 1985-86 recession). It is only when the capital account balance is taken into consideration that the overall balance of payments shows a steady surplus, leading to a an abundance of official foreign reserves (estimated in 1986 at about US\$14 billion, or about six months of potential financing for merchandise imports).

Thus, Singapore's ability to attract capital and to invest it productively in a variety of sectors is the key factor ensuring both the dynamism and the equilibrium of her economy. But this capacity is no fortuitous accident. It results from a number of specific conditions, most of them the product of government policies. We now turn to the analysis of these policies.

Table 8

Principal Sectors of Manufacturing Industry^a 1981

	Output	Value added	% of total Employment	Value added per worker (s\$'000)
Petroleum	38.4	18.4	1.3	505.5
Machinery & appliances ^b	25.0	32.3	37.6	29.6
Transport Equipment	7.1	13.8	10.5	45.6
Food/beverages	5.9	4.5	5.0	30.7
Fabricated metal products	3.6	4.6	6.4	24.8
Chemical Products	2.9	4.8	2.3	71.7
Paper products/printing	2.8	2.9	10.8	9.4
Wearing apparel	2.6	2.9	10.8	9.4
Non-metallic minerals	2.2	2.6	1.7	54.2
Wood products	1.9	1.9	3.6	16.9
Rubber/plastics products	1.8	2.4	4.0	21.1
Basic metals	1.4	1.5	0.8	65.2
Textiles	1.3	1.7	3.1	18.9
Precision equipment	0.8	1.4	1.9	26.3
Furniture	0.7	1.0	2.3	15.5
Other products	1.6	1.5	2.6	20.5
Total	100.0	100.0	100.0	34.6
Total, excl petroleum				28.6

^a Excluding rubber processing.

^b Including electrical/electronics.

Source: Economic Survey of Singapore, Yearbook of Statistics.

TABLE 9

GROSS DOMESTIC PRODUCT BY INDUSTRY, 1960, 1970, 1980 AND 1984-1986

Industry	1960	1970	1980	1984	1985	1986p	1969-1979	1984	1985	1986
	Million Dollars						Annual Percentage Change			
	<i>At Current Factor Cost</i>									
TOTAL	1,985.3	5,319.9	23,271.9	36,551.7	35,217.0	35,180.5	15.2	8.4	-3.7	-0.1
Agriculture & Fishing	74.9	133.3	314.5	335.5	295.3	250.0	8.6	1.9	-12.0	-15.3
Quarrying	6.1	19.6	80.3	125.3	104.9	80.1	9.2	-8.3	-16.3	-23.6
Manufacturing	235.6	1,047.9	7,088.4	9,362.9	8,683.2	9,558.0	20.6	9.4	-7.3	10.1
Utilities	49.7	148.1	529.0	730.7	750.8	800.7	12.1	9.7	2.8	6.6
Construction	71.7	386.1	1,594.9	4,690.1	4,015.4	2,999.5	15.6	16.7	-14.4	-25.3
Commerce	712.5	1,608.3	5,532.4	7,091.8	6,752.4	6,706.2	12.9	2.2	-4.8	-0.7
Transport & Communications	282.8	595.0	3,415.0	5,102.0	5,134.8	5,530.6	18.3	6.1	0.6	7.7
Financial & Business Services	224.5	757.4	3,855.3	7,796.2	8,134.6	8,143.1	16.3	13.9	4.3	0.1
Other Services	360.6	734.4	2,273.0	4,144.6	4,542.1	4,441.4	11.5	11.5	9.6	-2.2
Less: Imputed Bank Service Charge	33.1	110.2	1,410.9	2,827.4	3,196.5	3,329.1	na	na	na	na

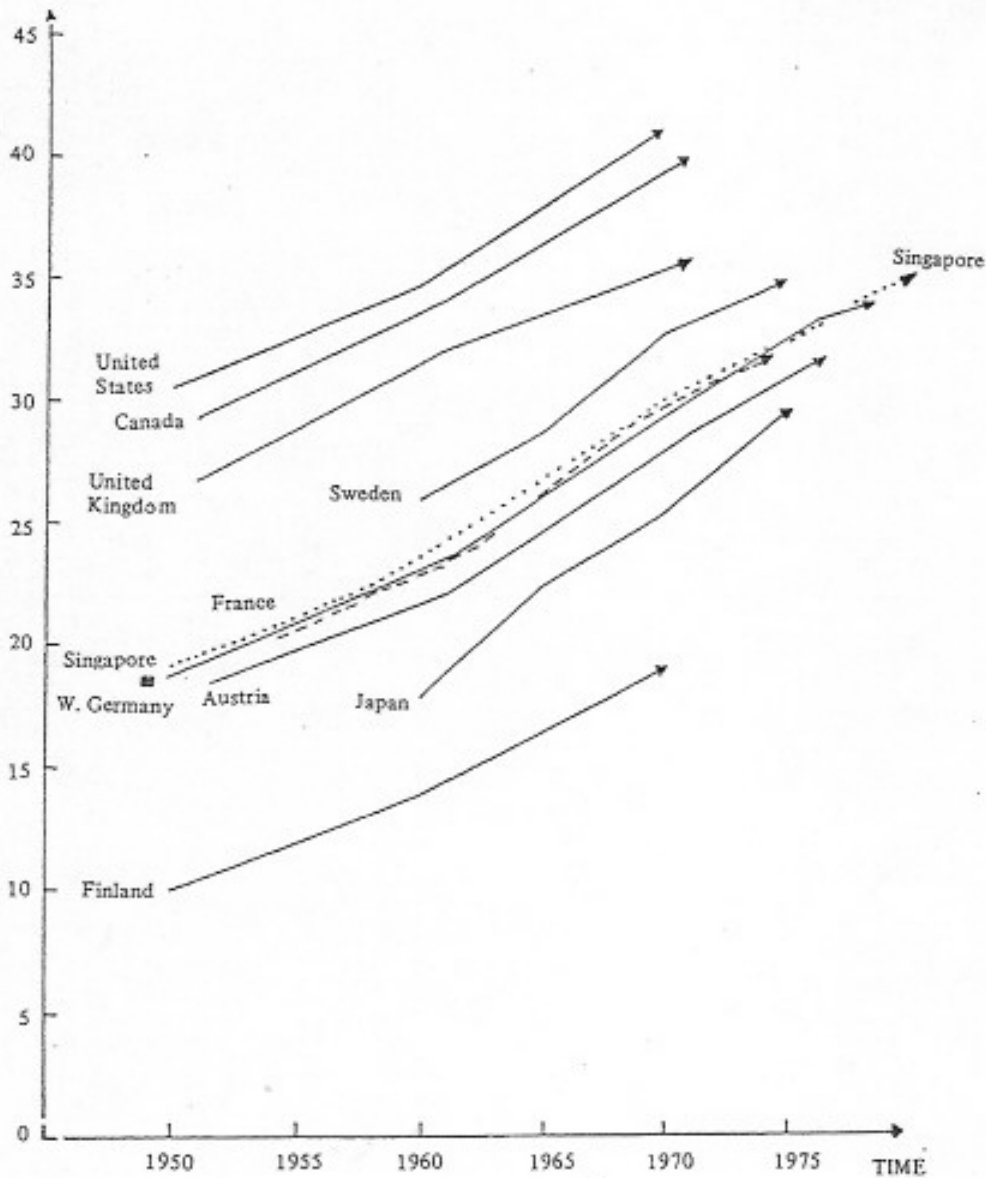
Industry	1960	1970	1980	1984	1985	1986p	1969-1979	1984	1985	1986
	Million Dollars						Annual Percentage Change			
	<i>At 1968 Factor Cost</i>									
TOTAL	2,122.3	5,107.0	12,160.5	16,603.8	16,309.9	16,511.7	9.4	8.2	-1.8	1.9
Agriculture & Fishing	87.7	128.5	159.1	153.5	137.5	121.9	2.2	4.1	-10.4	-11.3
Quarrying	7.5	19.2	43.7	85.0	78.6	66.8	9.1	-1.6	-7.5	-15.0
Manufacturing	279.7	1,007.0	2,909.6	3,344.9	3,099.1	3,357.9	12.1	8.8	-7.3	8.4
Utilities	53.4	144.9	357.0	472.2	494.0	522.6	10.1	7.9	4.6	5.8
Construction	79.3	343.0	611.1	1,462.7	1,258.9	940.4	6.9	15.5	-13.9	-25.3
Commerce	713.4	1,538.1	3,139.3	3,879.7	3,815.6	3,805.6	7.6	5.8	-1.7	-0.3
Transport & Communications	297.6	593.1	2,334.8	3,531.8	3,649.7	3,984.5	14.8	9.8	3.3	9.2
Financial & Business Services	247.5	716.4	2,162.7	3,685.1	4,070.1	4,211.5	11.0	14.5	10.4	3.5
Other Services	391.9	723.6	1,336.8	1,765.3	1,836.8	1,920.5	6.7	4.6	4.0	4.6
Less: Imputed Bank Service Charge	35.7	106.8	893.6	1,777.2	2,130.4	2,320.0	na	na	na	na

Source: Department of Statistics

CHART 2

CHANGES IN THE SHARE OF INFORMATION OCCUPATIONS,
ALL ECONOMICALLY ACTIVE POPULATION, 1950 - 1975

INFORMATION OCCUPATIONS AS % OF ECONOMICALLY ACTIVE PERSONS



Source: Kuo and Chen, op.cit., 1985 (Adapted from OECD)

3. Creating Competitive Advantage: Singapore's Conditions for Investment and Growth

A number of conditions appear to have been responsible for attracting capital investment to Singapore, for allowing a high rate of domestic savings, for fostering competitiveness and diversification in the economy, in a series of interactions that constitute a complex, virtuous circle. Let us first outline these conditions, before examining their relationships and tracing back the process of their formation.

A) The first condition, at the very basis of everything else, is the social and political stability, since 1965.¹⁶ Since the separation from Malaysia and the end of the confrontation with Indonesia, Singapore has managed to maintain stable international relations, in part through the workings of ASEAN, a strong connection to the West, particularly through the Commonwealth, and thanks to the existence of a strong, well-trained armed forces, originally organized with technical advice from Israel.¹⁷ In spite of Singapore's role as a support-base for U.S. forces during the Vietnam War, she has been playing a mediating role in the Cambodian conflict, trying to mobilize ASEAN support to obtain a negotiated settlement that would enhance stability in the region. Also, in spite of a strong anti-communist stance, Singapore has managed to establish increasingly close ties with the People's Republic of China, with whom she has developed a growing number of technical and economic joint ventures.¹⁸

In domestic politics, the People's Action Party (PAP) has won all the elections since 1959, the date Singapore obtained the granting of self-government from the United Kingdom.¹⁹ The leader and founder of the party, Mr. Lee Kuan Yew, an Oxford-educated lawyer, is clearly Singapore's national leader, and his charisma and political skills are widely recognized, even by his critics.²⁰ Furthermore, a small core group of political leaders have kept the key positions of power during these twenty years, ensuring continuity and control. The Singapore Government is a strong, authoritarian government with little tolerance for opposition. Yet, at the same time, most observers consider that the PAP has enjoyed genuine support from a majority of the population for the long twenty-five years. We will return below to a consideration of the specificity of Singapore's politics.

At this point of our analysis, what is important is to observe is that social and political stability have actually been achieved, unlike in the experience of most authoritarian governments in the Third World. It is not authoritarianism that accounts for social stability. If so, the Philippines, or South Korea would be expected to show greater stability than Singapore. Five separate elements appear to provide for Singapore's social and political stability: 1) the prestige of the PAP for its leading role in the anti-colonialist movement.²¹ 2) the practice of efficient, clear, non-corrupt government, modeled after a strong civil service tradition.²² Although not exempt from faulty behavior, Singapore clearly stands in contrast to other countries in the region, as a result of a

systematic policy to control corruption, which probably exists at the same "normal" levels as in the Western democracies.

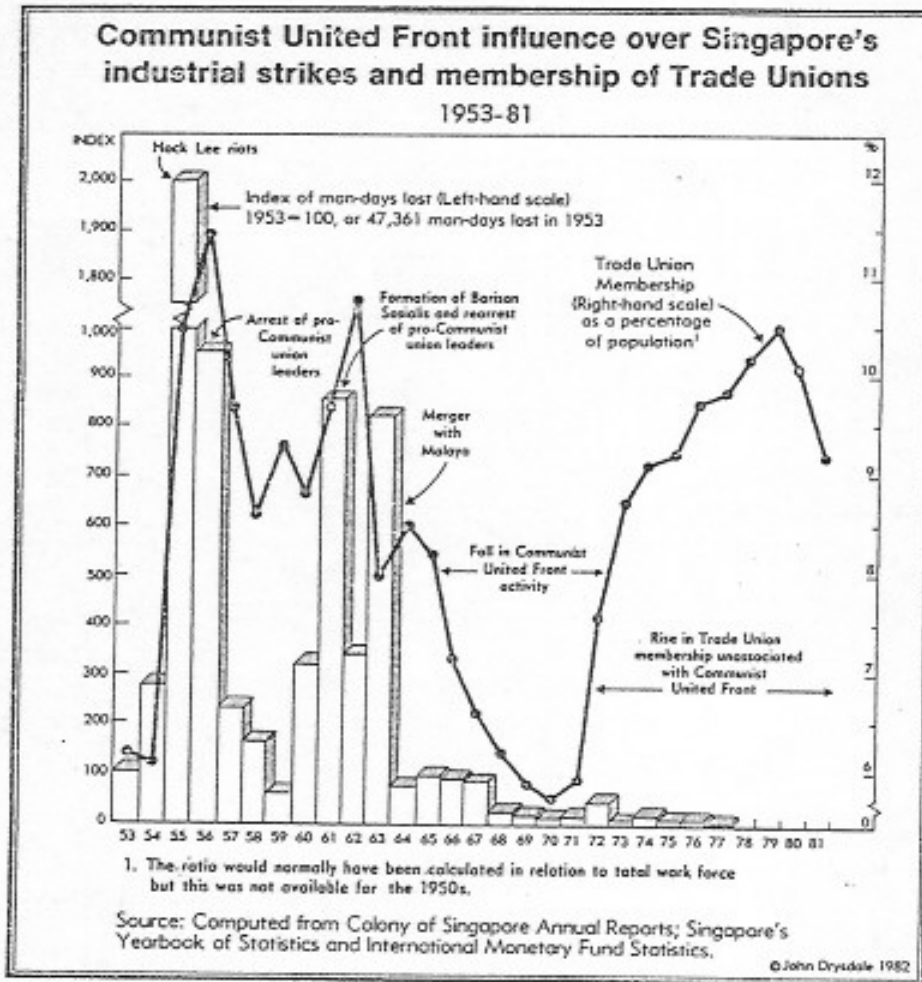
3) The repression of left-wing and pro-communist political leaders in the 1960s, and the dismantlement of left-wing labor unions (STUC) in 1964.²³ 4) The organization of a new labor movement (NTUC), under the control of the PAP, partly on the basis of the militant tradition of some PAP labor leaders during the anti-colonial struggles. NTUC, while aligning itself with the government, actually provided services to the workers. It also bargained on behalf of the workers within the broader parameters of government policy, along lines similar to those of unions linked to populist governments in Third World countries (for instance Mexico's CTM, or Tunisia's UGTT). 5) Social policies of the government, aimed at improving living conditions and exerting social control by the same mechanisms. Public housing, and its organization in clean, efficient, well-equipped, well-controlled new towns, played a paramount role in creating social stability.²⁴

As an indicator of such stability directly related to economic growth, we can observe the evolution of industrial strikes. Chart 3 shows the spectacular decline of strikes after 1964, in line with the shift from left-wing STUC influences to PAP-NTUC organization of unionized workers. Since 1978 there has not been a single industrial stoppage in Singapore! In this sense, Singapore fits the traditional radical image of paradise for multinational capital (as much as Switzerland does). But it would be simplistic to associate decline of labor militancy with

government tactics, without considering the overall pattern of development, social reform and social control that explains why Singapore achieved the stability that so many dictatorships pursued in vain through more violent methods of coercion. We will examine this point later, in a more analytical vein. In the case of Singapore, the net result of this political process was to provide the safest possible haven for capital investment in one of the most promising, yet most turbulent, regions of the world.

B) The second major favorable condition for investment is the quality and cost of labor, particularly in manufacturing. Singapore could offer a relatively educated, and to a large extent English-speaking pool of labor at wages much lower than those of any industrialized country (in 1978, 73% of all manufacturing workers earned less than US\$200 a month²⁵; in electronics, average wages are lower--about 80% of the average manufacturing wage--because of the overwhelming proportion of low-paid women workers).²⁶ In addition, with the exception of pollution control, government regulations concerning working conditions are kept to a minimum. Although this necessarily has severe consequences for the health and safety of workers,²⁷ this helps in reducing overall production costs. However, labor costs alone do not seem to have been the overriding factor for multinational investment in Singapore, since neighboring countries could offer even cheaper labor. Furthermore, if we compute into the labor costs the employers' contribution to the Central Provident Fund (equivalent to 25% of wages in 1984), as

CHART 3



Artwork by Neng Sulaman

well as other special contributions, total labor costs were not as competitive as generally claimed. The competitive advantage of Singapore's labor for international corporations seems to derive from two factors: a) the ratio quality/cost; b) the predictability of industrial relations and wage determination.

Concerning the first factor, what counts is less the cost or even workers' motivation (that could be as high in the Philippines, for instance) than their relatively high educational level and internalized social discipline.

Even more important seems to be the second condition, the institutional conditions organizing industrial relations in Singapore. The 1968 Employment Act provided very strict limits to negotiable benefits for workers and enhanced the powers of management. The Industrial Relations (Amendment) Act excluded issues such as recruitment, retrenchment, and dismissal from collective bargaining. Detailed procedures for arbitration of labor conflicts were established, so that in practice strikes are legally impossible without the tacit consent of the government. The entire legislative environment was explicitly aimed at creating a favorable environment for business to operate in Singapore. Concerning wages, a National Wages Council was established in 1971, with tripartite representation from government, trade unions, and employees, to set up guidelines for wage increases at the national level. Its target figures are only recommendations, for reference in bilateral negotiations at the company level. However, the public sector has strictly followed NWC's targets, and the private sector is

highly influenced by its guidelines.²⁸ Nonetheless, labor markets have some autonomy on their own, so that they somewhat exceed or do not reach the set wage level, depending upon the tight demand or oversupply of labor in regard to broader economic conditions.

In any case, the stability and predictability of labor conditions and wage settlements in Singapore far exceed those of any other capitalist country, closely resembling in fact those of the most stable socialist countries. The net result was a much faster increase in output than in real wages until 1980. Real earnings for production workers grew at only 1% per year during the 1960s. Average real earnings for all industries rose by 2% per year in the 1970s, although increase in the manufacturing sector proceeded at a slower pace.²⁹ On the other hand, real value-added per worker grew at an average of 55% a year over the period 1961-1979, although the second half of the 1970s saw a slowdown in productivity growth, particularly in manufacturing. Nonetheless, overall, productivity seems to have grown between three and four times faster than real wages, accounting for a high rate of profit, thus attracting investment and spurring capital formation. The story from 1979 to 1985 is a different one and requires careful consideration in a subsequent section.

C) A third important condition attracting capital investment stems from a series of fiscal incentives and financial support schemes offered by the government of Singapore to industries that are targeted as deserving support in terms of

the overall development strategy.³⁰ It must be noted that in the early 1960s any foreign investor was to be welcomed with special conditions in Singapore provided it brought in capital and jobs. But in the late 1970s incentives were more selective and targeted to specific development purposes. Peter S. J. Chen has usefully summarized the set of financial incentives for capital in Singapore:

In order to attract foreign investment, the Singapore government provided the following fiscal incentives in the 1960s:

1. The Pioneer Industries Ordinance (1959) gave pioneer industries exemption from company income tax for five years;
2. The Industrial Expansion Ordinance (1959) allowed tax exemptions on a sliding scale varying progressively with capital invested, for existing enterprises whose investment expansion was approved;
3. The Economic Expansion Incentives (1967), whereby profits of approved manufacturing goods and additions to exports were to be taxed at only 4 per cent instead of the usual 40 per cent for company tax for a period of ten to fifteen years.

These incentives were subsequently revised and more schemes have been introduced to provide a broader basis to promote industrialization. At present, the following incentive schemes are available:

(i) The Pioneer Status -- which provides for zero tax on company profits for five to ten years, depending on the merits of the project, e.g. type of product, investment level, skills and technology, etc.

(ii) The Export Incentive Scheme -- which provides for 4 per cent tax on export profits instead of the normal 40 per cent on company profits for a period of five to fifteen years. It is used to encourage exports for cases where it will be unjustified to award pioneer status because of existing local manufacture.

(iii) Investment Allowance -- which is available as an alternative to pioneer status and export incentives for manufacturing and related servicing projects. Under this scheme, tax-exempt profits are limited to specified percentage (up to 50 percent) of actual fixed investment on factory buildings and protective equipment for an approved project.

(iv) Small Industries Finance Scheme (SIFS) -- which was introduced by the EDB in December 1976, and is jointly operated by the EDB and the approved financial

institutions. The SIFS is essentially a loan scheme, with low interests, aimed at encouraging the further development and technical upgrading of the operations of small industries. Small industries are so defined that their fixed productive assets, inclusive of the amount applied for, should not be more than S\$2 million.

(v) Capital Assistance Scheme -- which was established by the EDB in 1975 with a budget of S\$100 million to provide financial assistance to companies with specialized projects of unique economic and technological benefit to Singapore. Under this scheme an industrial investor can obtain equity and/or loan capital.

(vi) Product Development Assistance Scheme -- which was set up by the government in recognition of the need to develop local applied research and product development capability and to build up indigenous technology. The scheme, administered by EDB, is to encourage local companies to develop new, or improve existing, products/processes related to their manufacturing activities.

(vii) Warehousing and Servicing Incentives -- which is intended to encourage the warehousing/servicing of desirable engineering products either as a new or expanded activity, especially if there is some degree of repair or other technical services involved. Under this scheme five years' company tax reduction from the normal rate of 40 per cent to 20 per cent on profits derived from export services will be given.

(viii) International Consultancy Services Initiative -- which is specifically for encouraging 'brain' services in overseas projects involving plant and civil construction and related activities. Approved projects will be given five years' company tax reduction from the normal rate of 40 per cent to 20 per cent on export profits.

(ix) International Trade Incentives -- which is meant for trading companies which export Singapore-manufactured products or domestic produce; or trade in non-traditional commodities. Under this scheme, qualified trading companies can apply for five years' concessionary company tax at 20 per cent on export profits instead of the normal company tax rate of 40 per cent.

(x) Investment Guarantee -- Singapore has signed investment guarantee agreements with the following countries: the United States (1966), Canada (1971), Netherlands (1972), Federal Republic of Germany (1973), United Kingdom (1975), France (1975), Switzerland (1978), Belgo-Luxembourg Economic Union (1978), and Sri Lanka (1979). Under these agreements, the investment by nationals of companies of both contracting parties in each other's respective country is protected for a specified period, usually fifteen years, against war and non-commercial risks of expropriation.

(xi) The Skills Development Fund -- which was set up by an Act of Parliament in 1979 to finance the upgrading of

skill in the restructuring process. The Fund is managed by the Skills Development Council -- a tripartite body consisting of representatives from the government, the employers' organizations and the trade unions. The fund is used to support employee training programmes, ranging from 30 per cent to 70 per cent of the training costs.[31]

In addition, there is total freedom for repatriation of profits, as well as of movement of capital, machinery, and personnel for companies located in Singapore.

It is undeniable that these measures have contributed to the business climate, thus attracting investment to Singapore. However, several remarks must be made in this regard for an adequate understanding of the process. Many other Third World countries have similar incentive schemes that do not achieve equally successful results. In our personal conversations with managers of multinational companies in Singapore we came to the conviction that these incentives were an important, but not an overriding consideration for their locational choice. To some extent, given the general movement to lure multinationals into countries throughout the world, these incentives seem to have become necessary but not sufficient conditions. In the case of Singapore four additional factors seem to account for her competitive edge: 1) the already mentioned institutional and labor-related conditions; 2) the provision of adequate industrial, communications, and business infrastructure; 3) for some industries, certain locational advantages (maritime position in the marine industries, time zone for financial transactions, geographic situation for penetration of Southeast Asian markets); 4) but in addition to these objective factors,

there is a very important subjective condition: the active entrepreneurial role of the Singapore government in prospecting foreign investors and actually attracting them to Singapore. A key actor in this process was the Economic Development Board (EDB) established by the government in 1961, with the purpose of stimulating growth through a variety of policies and incentives. The EDB has offices throughout the world that have been actively contacting top companies in key industries, to "sell Singapore" as an advantageous location.³² So, between the structural conditions favorable to investment and the actual decision to locate precisely in Singapore, the institutional mediation provided by the EDB's initiative and efficiency has actually been an indispensable element in the process of capital formation.

D) Another major condition for investment and growth is the existence of adequate infrastructure for industrial and business activities. Some of the elements of such infrastructure were linked to the history of Singapore as a major port and a military base, a nodal point in maritime communications. But most of the improvements came from the 1960s onwards. The Jurong Town Corporation, a government corporation originally part of the EDB, took care of providing industrial sites suitable for production, adapting its facilities and types of buildings to different requirements of each industry, from oil refineries and shipyards to rental flatted factories by electronics firms. In 1986, the corporation managed 19 industrial sites, housing 2,700 companies that employ, in the

island, a total of 210,000 workers. 1,400 of these factories, with a total of 180,000 workers, are located in Jurong Town, a totally planned industrial estate in the western tip of the island, in an industrial zone that is one of the fastest planned developments in recent economic history. About two-thirds of the companies served by JTC are foreign. JTC also manages an Industrial Port and provides facilities for the offshore oil industry at the Jurong Marine Base. Factories are leased for fixed terms, and leases are renewed under negotiated conditions. Thus, investors locating in Singapore need not bother with construction requirements, once they have settled the financial conditions. This has a decisive effect on the flexibility and rapidity of implementation for investment conditions, once the decision is taken, since JTC has sites and factories built and ready, before companies are contacted, on the basis of its market provisions. Although industrial parks exist in many other countries, the scale and efficiency of Singapore's industrial zones have played a role in attracting investors. Other basic facilities have also been developed and provided by the government: a major port (the second busiest in the world), fully containerized; an international airport with good air connections, spearheaded by a large and efficient government-owned airline; good urban infrastructure and public transportation, further improved by the construction of a rapid transit system (MRT) in service in 1988; abundant, modern, fully equipped office space; and, above all, excellent telecommunications infrastructure, which played a major role in

the development of Singapore as a regional financial center in the 1970s. (Singapore is likely to become the first country in the world to have all its lines converted to fiber optic, admittedly an easier move in this city-state than in the U.S.) One of the consequences of Singapore's good telecommunications infrastructure is to reinforce its nodal position in the world of international flows of decision-making processes. For instance, most of the management decisions of American companies in Southeast Asia are communicated via Singapore, regardless of the relative hierarchy of their Singapore branch, given the direct satellite link-up between the U.S. and Singapore. A similar pattern seems to operate for European companies.

It is the conjunction of these four sets of conditions that seem to account for the exceptional rate of foreign capital investment in Singapore. Underlying most of the processes leading to the emergence of these conditions we find the key role of the State as a developmental force. This role is as evident in the second major factor responsible for capital formation in Singapore, namely the high level of domestic savings and their productive investment.

E) Singapore's capital abundance is only partly due to attractive conditions for foreign investment. As we stated, most of the savings, as well as of the investment, come from Singapore herself, although official statistics probably underestimate capital inflows, and in any case, do not render full justice to the driving role of foreign capital in the overall process of growth. Nonetheless, local savings (both

private and public) are substantial and provide a major source for capital formation. Throughout the 1970s and 1980s, the state has played the central role in the process of accumulating domestic savings.³³

The State has operated directly through the public sector savings, and indirectly through the Central Provident Fund that in the 1974-1984 decade accounted for between 27% and 71% of local private sector savings, for an average share of 45.8% in the 1974-1985 period (see Table 3).³⁴ The basic condition for domestic savings to thrive, making possible investment and growth, is the widespread control of the State over the economy and society of Singapore.³⁵ Individuals' contributions to CPF, until 1985, could not be used before the retirement age (55 years) for anything but the acquisition of a public housing flat. Consequently, CPF has been a major source of capital accumulation in Singapore. In fact, it would seem that the main reason for the substantial increase in contributions to CPF during the 1970s (both from employees and employers, to up to a combined 50% of all wages) was to fulfill the government target of increasing home ownership.³⁶ But even with massive investments in public housing and urban infrastructure mainly financed from CPF contributions, CPF still had a large surplus that, by law, was required to be held mainly in government securities.³⁷ As Yuan writes, "what happens therefore is that advance deposits are placed with the MAS [Singapore's equivalent to a central bank without currency issuance powers--our note] for subscription to future issues of government securities.

This constitutes a withdrawal of money supply from the system which results in an excess demand for money and in incipient rise in domestic interest rates. This causes, among other things, banks to borrow money from the offshore market or abroad. The incipient appreciation of the Singapore dollar causes the MAS to intervene by supplying Singapore dollars to meet the excess demand. The advance deposits at the MAS are therefore translated into foreign exchange holdings which are then managed by the Government of Singapore Investment Corporation (GIC)."³⁸ Thus, overall, there is a withdrawal of liquidity from the domestic economy as a result of the government's role of intermediation between savings and investment. This certainly keeps inflation down, and provides the government with very great financial room to maneuver in the international scene, as well as in the domestic economy. However, such a thrifty policy is carried at the expense of the immediate consumption capacity of Singaporeans, and threatens to cool off the economy excessively, as some observers argue happened in 1985.

Government finance in Singapore combines in fact four different sectors, interlinked through a highly centralized decision-making process at the top governmental level:³⁹

- a) The Government budget.
- b) The statutory boards, semi-autonomous institutions, with their own accounting procedures and financial policies, such as

the Post Office Savings Bank, the Port of Singapore, the Housing Development Board, the Telecommunications Authority, etc.

c) Government's foreign investments, managed by the Government of Singapore Investment Corporation (GIC).

d) Government investments in Singapore companies (in number, about 490 different firms), most of them being managed by three government-controlled holding companies (Temasek, MND, and Sheng-Li Holdings).

Thus, the Singapore government's budget, illustrated by Charts 4 and 5, relative to the 1986 budget, is most atypical. On the revenue side, taxes only account for 40%, while funds income, derived from former surpluses, and interests and dividends from government investments, play a significant role. On the expenditures side, only half of the budget is destined to cover current expenditures, while 26% goes to development expenditures (mainly public housing and public works) and 24% is simply accumulated as surplus. Over the last decade, as Table 10 shows, Singapore's public sector has registered a systematic current surplus, and, in 5 out of 11 years, an overall surplus even after discounting for major development expenditures.

A second major set of conditions for investment and growth in the Singapore economy boils down to a simple and fundamental mechanism: the state seizes directly and indirectly a substantial share of the value produced and allocates it for investment or savings along carefully defined economic, social, and political objectives. It is indeed a process of politically

determined primitive accumulation of capital, a process underlying all major developmental experiences in history.

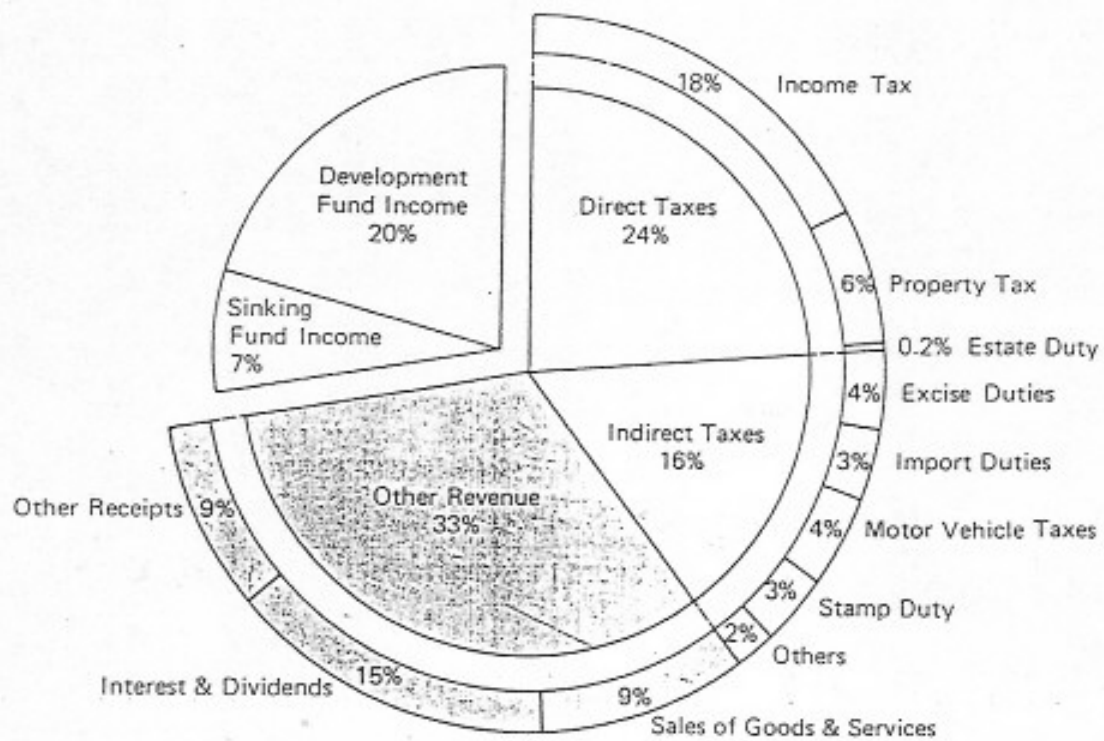
This conclusion requires that we undertake the analysis of the role of government in the process of economic development in Singapore in a more systematic way. Such analysis cannot avoid a brief examination of the political foundations of the government's actions and policies.

4. The State and the Economy in Singapore: The Building of a National Polity in an International Economy.

By now, the decisive role that the government played, and continues to play in the development process of Singapore should be clear. We will review here, systematically, the basic functions performed by government policies. However, our analytical purpose goes beyond the mere description of the mechanisms involved. The basic thesis we would like to put forward is that government intervention in the economy, in Singapore as elsewhere, is fundamentally a political process, aimed at implementing a political strategy toward the fulfillment of some overriding political goals--in the broader meaning of political, that is, the exercise of power to act upon society.⁴⁰ Most of the economic literature treats government policies as exogenous variables, generally subordinate to the mechanisms of the market.⁴¹ We take exception with this traditional economic view. In contemporary economic experience,

CHART 4

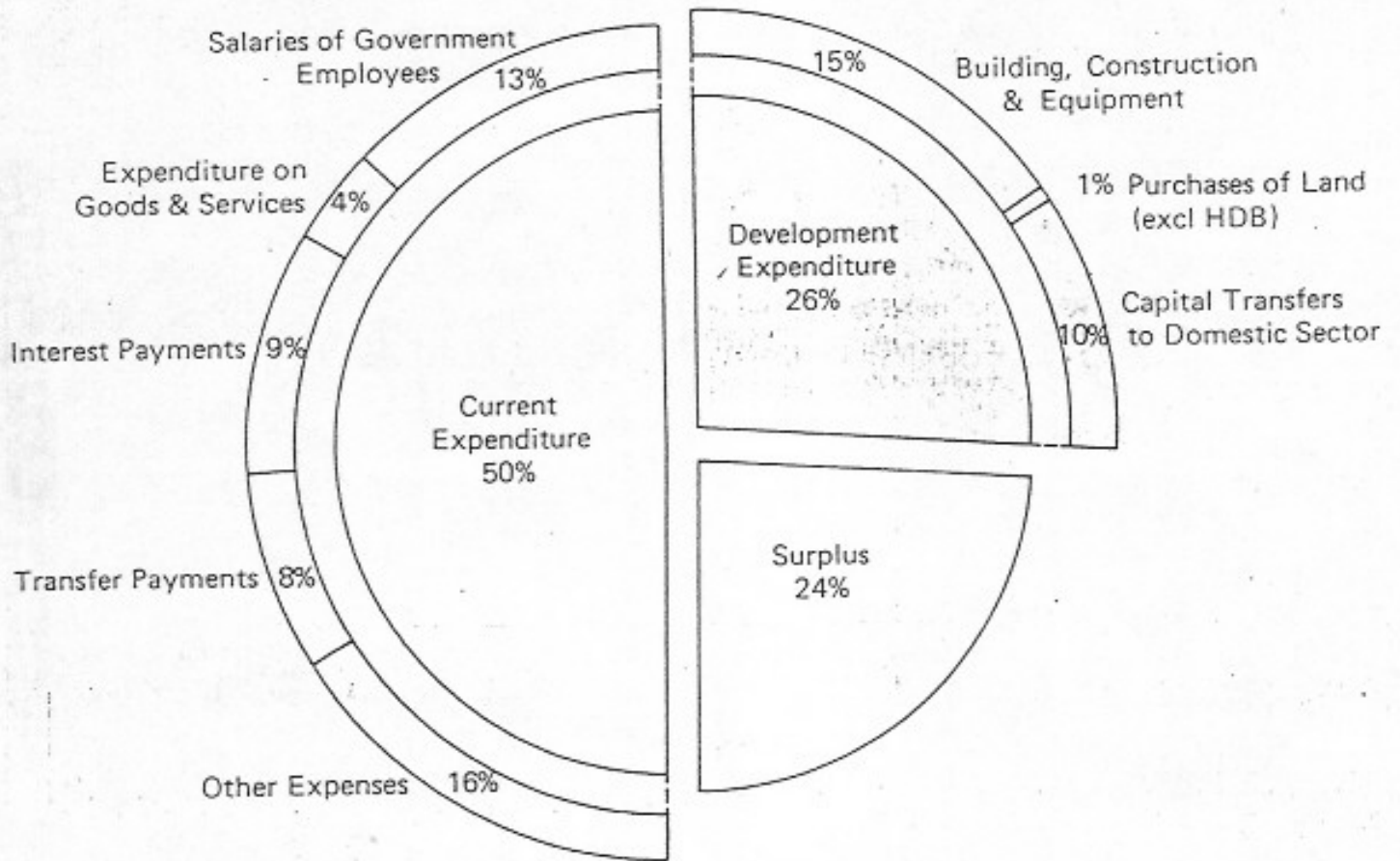
FINANCING OF GOVERNMENT EXPENDITURE, 1986
SOURCES OF FUND : \$12,630 MILLION



Source: Government of Singapore, Department of Statistics.

CHART 5

FINANCING OF GOVERNMENT EXPENDITURE, 1986
USES OF FUND : \$12,630 MILLION



Source: Government of Singapore, Department of Statistics.

TABLE 10

Public Sector Revenue and Expenditure
(In S\$ millions)

	Revenue	Government Expenditure			Current Surplus	Overall Surplus
		Total	Current	Development		
1975	3392	2652	2302	350	1090	740
1976	3483	3295	2738	557	745	188
1977	3886	3408	2700	708	1186	478
1978	4310	4050	3293	757	1017	260
1979	4908	4279	3383	896	1525	629
1980	6223	5910	4638	1272	1585	313
1981	7888	7582	5829	1753	2059	306
1982	9926	8419	6637	1782	3289	1507
1983	11867	7795	5726	2069	6141	4072
1984	11702	8283	6034	2249	5668	3419
1985P	12124	10597	6678	3919	5446	1527

	Revenue	Statutory Boards Expenditure			Current Surplus	Overall Surplus
		Total	Current	Development		
1975	1215	2282	943	1339	272	-1067
1976	1982	2864	1257	1607	725	-882
1977	2254	3157	1419	1738	835	-903
1978	2841	3147	1628	1519	1213	-306
1979	3203	3453	1927	1526	1276	-250
1980	4369	4646	2547	2099	1822	-277
1981	5252	6032	3050	2982	2202	-780
1982	6185	8245	3538	4707	2647	-2060
1983	6393	9024	3885	5139	2508	-2631
1984	10025	9671	4402	5269	5623	354
1985P	10531	9634	4925	4709	6606	897

	Revenue	Public Sector Expenditure			Current Surplus	Overall Surplus
		Total	Current	Development		
1975	4607	4934	3245	1689	1362	-327
1976	5465	6159	3995	2164	1470	-694
1977	6140	6565	4119	2446	2021	-425
1978	7151	7197	4921	2276	2230	-46
1979	8111	7732	5310	2422	2801	379
1980	10592	10556	7185	3371	3407	36
1981	13140	13614	8879	4735	4261	-474
1982	16111	16664	10175	6489	5936	-553
1983	18260	16819	9611	7208	8649	1441
1984	21727	17954	10436	7518	11291	3773
1985P	22655	20231	11603	8628	11052	2424

Source: Ministry of Trade and Industry, *Economic Survey of Singapore, 1985*. Refer also to the notes on p. 34.

states are major actors in the determination of the development process. And the orientations and dynamics of states' economic policies are themselves the result of the politics underlying the formation and management of a given state in its relationship to society.⁴² In other words, for most developmental states, and Singapore is no exception, their relationship to the international economy is, above all, an instrument to shape their national polity.⁴³

In line with this research perspective, we will first underline the main areas of economic intervention of the Singaporean state. Then we will introduce a brief analysis of the political origins of this state, with emphasis on the basic issues that the nation-building process had to tackle. Finally, we will try to show the connection between nation-building, problem-solving, and economic policies on the basis of the social and political interests at stake in the process.

4.1 The forms of state intervention in the economy.

On the surface the role of the public sector in the Singaporean economy does not appear to be an overwhelmingly strong one.⁴⁴ Table 11 illustrates this point. The share of the public sector expenditure in the GNP is a moderate 20.8%, and the number of public employees, although important, is not staggering: 19.5% of the workforce. However, public sector revenue together with budget surpluses account for 43.5% of GNP, much higher than in other NICs.

But the real influence of government in Singapore's economy manifests itself more importantly in other ways, creating and shaping the conditions for development, and ultimately guiding it, promoting it and harnessing it.⁴⁵ For the sake of clarity, and at the risk of being schematic, we can distinguish seven main modes of government intervention in Singapore's economy:

1) The first one concerns the provision of industrial and business infrastructure: industrial estates, reclaimed land, port and air transportation facilities, telecommunications, auxiliary services for business transactions, and the like, as we have already pointed out in this paper. The competitive price of these facilities has to be emphasized, as well as the effectiveness of their maintenance and of their management. Without the provision of such infrastructure, entirely built, financed, and managed by the government and its statutory boards, Singapore's economy simply would not exist.

2) Secondly, the government has actively intervened in creating favorable conditions for private investment, via fiscal and regulatory policies, and industrial relations, as described in the previous section.

3) Third, government's fiscal policy, through the combination of a surplus budget, CPF's intermediation role, and MAS' regulatory actions on the foreign exchange rate, has actually subordinated the entire working of public finance to the principle of monetary stability and low inflation, thus providing the basic ground for predictable investment patterns.⁴⁶ Of course, monetary and fiscal policies are major

TABLE 11

Measurements of the Role of Government in the
Economy of Singapore, Korea and Taiwan in 1984
(Current prices, in per cent)

<i>Classification</i>	<i>Singapore</i>	<i>South Korea</i>	<i>Taiwan</i>
1. Government revenue plus current surpluses of government enterprises/GNP	43.5 ^a	18.4	22.9
2. Government revenue/GNP	29.4	17.1	18.0
3. Government expenditure/GNP	20.8	17.3 ^b	22.7
4. Current government expenditures/GNP	15.2	10.0	16.6
5. Government development expenditures/GNP	5.6	7.3	6.1
6. Public sector gross saving/gross national saving	64.0 ^c	28.8	12.7
7. Public gross domestic fixed capital formation/total gross domestic fixed capital formation	33.4 ^d	17.6	42.7
8. Government consumption/total consumption	19.9	14.8	24.4

^a Government revenues plus current surpluses of seven major statutory boards, but excludes undistributed profits of public enterprises.

^b Excludes other special accounts separately funded, which amounted to 3.7% of GNP in 1984.

^c Current surplus of government plus current surpluses of seven major statutory boards, but excludes undistributed profits of public enterprises.

^d If measured in 1968 prices it would be 22.6%.

SOURCES: Ministry of Trade and Industry, *Economic Survey of Singapore 1985*; Major Statistics of Korean Economy 1985; and *Taiwan Statistical Data Book 1985*.

instruments of macroeconomic management for all governments in the world, and in this sense there is nothing special about Singapore. Yet, what is significant is that the overarching principles guiding fiscal and monetary policies directly reflect government's strategic decisions about developmental goals (e.g., low inflation), to allow for foreign capital inflows; use of CPF contributions limited to government's priority on public housing and home ownership, etc. In addition, the government has systematically used development expenditures as countercyclical stimulants, to pump the economy out of recessions (e.g. in 1974-75) generally through public housing construction and works in urban infrastructure.⁴⁷ In this sense, traditional Keynesianism has combined with policies aimed at fostering international competitiveness in the Singapore government's economic policies.⁴⁸

4) Fourthly, the government is also actively engaged in direct productive investment, on both the international and domestic fronts.⁴⁹ Internationally the Government of Singapore Investment Corporation invests a sizable share of government surpluses in a diversity of stocks in several sectors and in many countries. Although specific information on those investments is not public, they are believed to be very large and strategically targeted around two basic criteria: access to privileged knowledge and contacts in the international financial networks; and safe investments with satisfactory levels of return. Although the arguments on this matter are necessarily a bit speculative it is significant to notice that, apparently,

the criteria for investment are more strategic than strictly profit-making, although money-losing operations are certainly not allowed. The main reason for these investments abroad is the government's feeling about the vulnerability of the Singapore economy. Only by diversifying its assets and further interpenetrating Singapore with the core financial and industrial networks of the advanced economies can the government expect to overcome the catastrophic consequences of a dramatic shrinkage of world trade and internationalized production that could damage Singapore's nodal role in an open economy. Thus, GIC's investments are an insurance policy aiming at building up Singapore's financial power as the future "Switzerland of Asia."

Besides GIC's foreign ventures, the government has also invested heavily in about 490 private companies in Singapore. Some of the investments result from original industrial projects that were intended to dynamize certain sectors of the economy. Others were the consequence of profitable investment opportunities seen in Singapore. And others are related to strategic imperatives of a different kind. This is the case of the quite important defense industries, of the maritime communications (Neptune Orient Lines) and of air transportation (Singapore Airlines). These investments are managed by the three government-controlled holdings that we cited, Temasek Holdings Private Ltd. being by far the most important. Chart 6 details the extent and importance of Temasek-managed private investments in Singapore. However, decisions about investment policy are hardly in the hands of Temasek's management, which

The government's giant hand in business



Graphics by PAULINE CHAI, Research by VALERIE LEE and LOONG SWEE THIN

The 450 companies owned or backed by the government are led by three holding companies, Temasek Holdings Pte Ltd, Singa Holdings Co Pte Ltd and M&D Holdings Pte Ltd.

48% of the government has been assets worth \$10 billion in 280 companies which employ some 50,000 workers (1984 figures).

AVIATION/TRANSPORTATION

SINGAPORE AIRLINES (SIA) LTD
The national carrier
Gov't share: 100%
Peak: \$110.00
Div: 10.00

FINANCIAL SERVICES

SINGAPORE AIRWAYS SERVICES (SAS) LTD
Involved in the maintenance and replacement of aircraft, manufacture of aircraft equipment, parts and components
Gov't share: 100%
Peak: \$22.00
Div: 2.00

ONE BANK LTD
Provides commercial banking and financial services
Gov't share: 100%
Peak: \$11.00
Div: 1.00

FARMING

PERHAT INDUSTRIES (SIAM) LTD
Involved in pig farming and related activities like primary management consultancy and has joint venture in pig breeding, meat processing etc.
Gov't share: 100%
Peak: \$1.00
Div: 0.00

GOVERNMENT OF SINGAPORE IN-VESTMENT CORPORATION PTE LTD
A fund management company for the Singapore Government.
Gov't share: 100%
Peak: \$150.00
Div: 15.00

HOUSING & CONSTRUCTION

CONCRETEWORK TECHNOLOGY (CT) LTD
A building construction firm
Gov't share: 100%
Peak: \$10.00
Div: 1.00

DEVELOPMENT & CONSTRUCTION (D&C) LTD
A property management firm dealing with residential and commercial properties
Gov't share: 100%
Peak: \$1.00
Div: 0.00

INDUSTRIAL DEVELOPMENT & CONSTRUCTION CORPORATION (IDCC) LTD
Planning & construction
Gov't share: 100%
Peak: 0.00
Div: 0.00

MANUFACTURING

SHOUBH POWERS (S) LTD
Manufactures electrical and electronic goods
Gov't share: 100%
Peak: \$10.00
Div: 1.00

INDUSTRIAL DEVELOPMENT & CONSTRUCTION CORPORATION (IDCC) LTD
Manufactures electrical and electronic goods
Gov't share: 100%
Peak: \$10.00
Div: 1.00

MANUFACTURING

ASIA ELECTRICAL INDUSTRIES LTD
Radio, television and sound equipment
Gov't share: 100%
Peak: \$10.00
Div: 1.00

ALFA (SINGAPORE) COMPANY OF SINGAPORE (S) LTD
Manufactures and assembles for items and spare parts
Gov't share: 100%
Peak: \$10.00
Div: 1.00

CONDOR (S) PTE LTD
Manufactures and assembles for items and spare parts
Gov't share: 100%
Peak: \$10.00
Div: 1.00

MANUFACTURING

RESEARCH DEVELOPMENT & CONSTRUCTION CORPORATION (RDC) LTD
A construction material supplier and civil engineering contractor
Gov't share: 100%
Peak: \$10.00
Div: 1.00

SMALL DEVELOPMENT & MANAGEMENT (SDM) LTD
Involved in the development and management of property and residential facilities
Gov't share: 100%
Peak: \$10.00
Div: 1.00

MANUFACTURING

DATA SURE PTE LTD
Marketing of computers
Gov't share: 100%
Peak: \$10.00
Div: 1.00

UNITED INDUSTRIAL CORPORATION (UIC) LTD
Involved in chemical and related products, property-related business and banking
Gov't share: 100%
Peak: \$10.00
Div: 1.00

TRADING

WISDOM LTD
An international trading company with interests in investment, manufacturing, service and high tech areas.
Gov't share: 100%
Peak: \$10.00
Div: 1.00

NATIONAL OILMAN EXCHANGE LTD
Provides services in the bulk buying and storage of kerosene, fuel oil and other petroleum products
Gov't share: 100%
Peak: \$10.00
Div: 1.00

FASTING SINGAPORE FINANCIAL (SFF) LTD
Involved in the storage of petroleum and commodity services
Gov't share: 100%
Peak: \$10.00
Div: 1.00

TOURISM/RECREATION

SINGAPORE TOURIST SERVICES (STS) LTD
A travel agency and a tourist attraction which is now also popular for the people.
Gov't share: 100%
Peak: \$10.00
Div: 1.00

THE PETERLIN COMPANY SINGAPORE (P) LTD
Production plastic tubes such as polyethylene and polypropylene
Gov't share: 100%
Peak: \$10.00
Div: 1.00

SHIP REPAIR & SHIPPING

SHIP REPAIR & SHIPBUILDING (SR&S) LTD
Ship repair and shipbuilding
Gov't share: 100%
Peak: \$10.00
Div: 1.00

SINGAPORE SHIPBUILDING & ENGINEERING (SSE) LTD
Manufactures and assembles for items and spare parts
Gov't share: 100%
Peak: \$10.00
Div: 1.00

SHIPPING/MARINE SERVICES (SMS) LTD
Stores and operates 100 cargo vessels
Gov't share: 100%
Peak: \$10.00
Div: 1.00

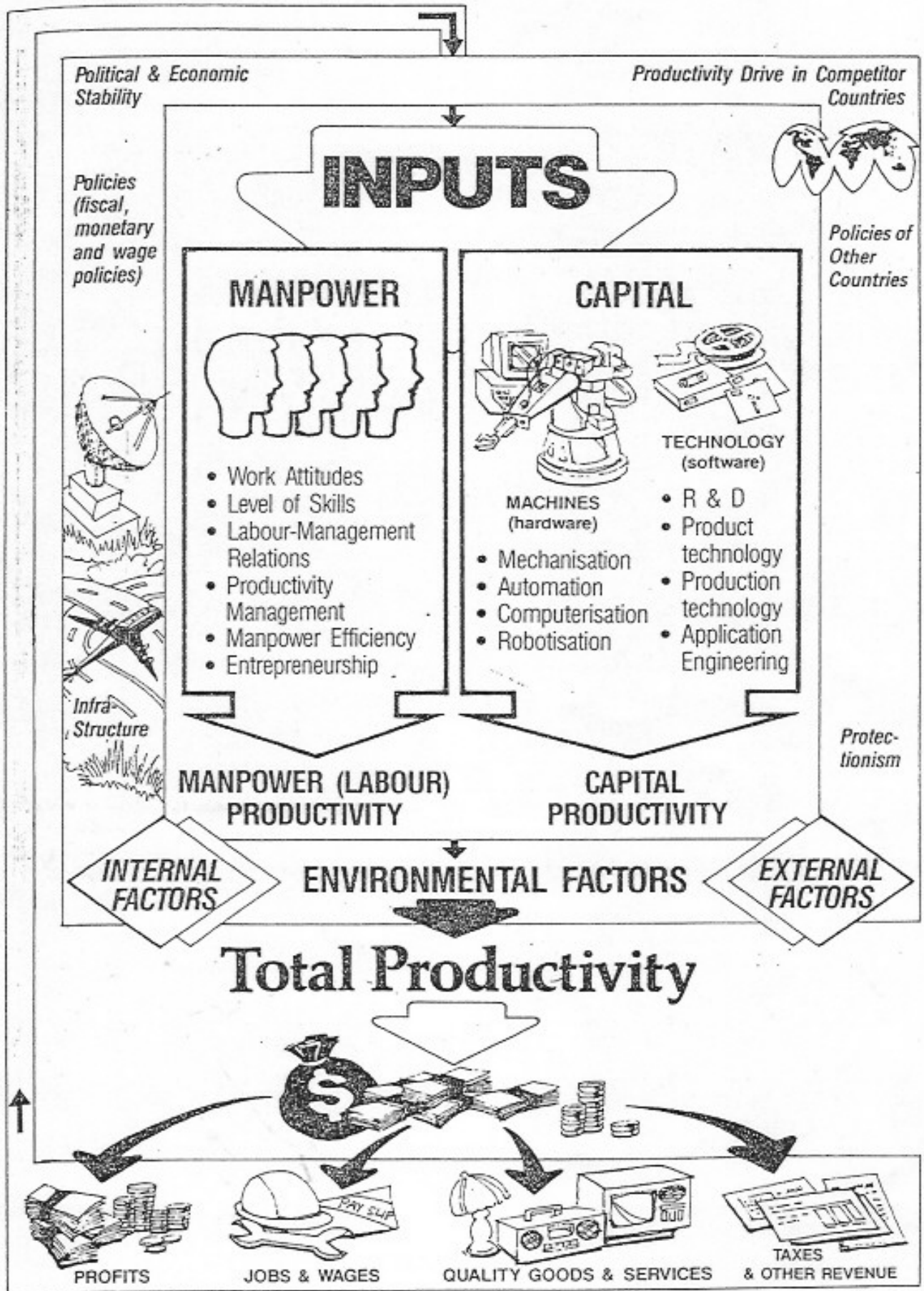
seems to be mainly a coordinating, administrative body. In terms of the overall investment policy, it is the top level of government that decides. In terms of each company, decisions are generally left to the management of each firm, so that they are not reserved, in general, if they fail to make profits. For instance, a major paper mill company owned by the government was allowed to go bankrupt. Thus, Singapore has avoided, by and large, bearing the burden of an unprofitable public industrial sector, while still being able to greatly influence the economy through a dynamic presence of public investment in the marketplace.

5) A fifth series of measures through which the government guides and stimulates the economy consists in a number of institutions and programs aimed at stimulating economic productivity, technological development, and manpower training to be able to provide Singapore with a competitive edge. Although some of these institutions were set up fifteen years ago, their role has been enhanced recently, coinciding with the launching of the Productivity Movement in 1981, a policy that we will examine below within the framework of the restructuring process of the Singapore economy. The overall institutional network covering all aspects of productivity and development is so complex and wide-ranging that the description of the system's workings would require a whole report of its own. Let us simply state the main areas and institutions involved in the process, as an illustration of the government's determination to upgrade the basis for economic development. The National Productivity

Board coordinates different programs within what is called a "total approach to productivity." Chart 7, although naive in its graphics and labels, expresses quite well the underlying philosophy, subsequently implemented through financial schemes, training programs, social campaigns, management guidance, and legal incentives for companies engaged in training personnel and upgrading their equipment. One of the key programs of NPB is focused on the retraining of at least a portion of the unskilled workforce (two-thirds of Singapore's labor) so that it can meet the new technological requirements of an upgraded economy. Thus, the Skills Development Fund operates training centers catering to the needs of the industries and provides financial incentives for companies willing to retrain their workers. Japanese participation in these programs is to be noticed (as a matter of fact a grant from Japan helped to construct the new high-rise NPB building).

Concerning the shift to high technology, there is a variety of efforts, some of them carried on by semi-autonomous statutory boards, some directed by the Ministry of Trade and Industry (MTI), and its strong development policy arm, the Economic Development Board (EDB). Thus, the SISIR (Singapore Institute of Standards and Industrial Research) deals with enhancing the technological basis of industrial productivity. The National Computer Board (NCB) specializes in training and research in information technology. The Science Council is responsible for stimulating industrial- and commercial-directed R&D activities, in connection with the National University of Singapore (NUS)

The Total Approach to Productivity



and the Nanyang Technological Institute (NTI), as well as some major international corporations. For instance, an Institute of Systems Science was established in 1981 at NUS, in a partnership with IBM, focusing first on education and training in computer sciences, and in a second stage in designing systems for public administration, office automation, and Chinese language software.

Another Information Technology Institute is also being set up by NCB. The Science Council has created a Science Park to house R&D institutions and R&D centers of private companies, which includes a Software Technology Center and an Institute of Molecular Biology. Another interesting scheme concerns joint ventures between the Singapore government and foreign governments and companies to set up training institutes that provide skilled workers and middle-level technicians.

There are three major vocational training institutes co-funded and co-managed by Singapore and foreign governments: the German Singapore Institute, specializing in mechanical engineering; the French Singapore Institute, specializing in electronics; and the Japan Singapore Institute, specializing in training electronics maintenance personnel, with particular emphasis on "mechatronics." In addition other training institutes were established since 1972 in cooperation with Tata and with Philips. The interesting point is that none of these institutes caters exclusively to companies of the sponsoring country. Although they have privileged access to the technology and commercial networks of these countries (indeed, the students

learn each country's language), the institutes' graduates go into Singapore's general labor pool, thus upgrading the overall skills level of labor. About 5,000 skilled workers and technicians have already graduated from these two- to three-year programs, and the current graduation rate is about 800 per year. These institutes also house special advanced training programs in cooperation with particular companies, a scheme in which several U.S. companies actively participate. Thus, Hewlett-Packard and Computer Vision have set up CAD/CAM training centers in the German Singapore Institute and Mentor Graphics runs an IC design training program in the French Singapore Institute. The institutes also offer application courses for university engineering students, to familiarize them with actual production tools. Emphasis in the programs is heavily on industrial automation, robotics, and "mechatronics."

Finally, in the more recent period, a new effort has been made by the Economic Development Board to support small businesses in Singapore, for reasons that we will discuss below. A Small Enterprise Bureau (SEB) was set up in 1986, in cooperation with other government institutions, to provide financial support, information, and training programs for companies with less than fifty employees. Much of the program is geared toward improving the quality and efficiency of manufacturing firms subcontracting from multinational corporations, and some of the schemes are actually administered jointly with the multinational corporations, for instance with ATT or Hewlett-Packard. The goals are to upgrade the quality of

suppliers, thus making possible the transfer of some of the operations performed by MNCs in Singapore to the local companies, to nurture the development of a local manufacturing base according to production patterns in which Singapore-based exports are already well established. American companies appear to be keen on these arrangements, which allow the introduction of "just-in-time" production management methods.

This government initiative, translated into a constellation of programs and institutions, is the driving force behind the deliberate effort to take Singapore through stages of development at a fast pace.⁵⁰

6) Besides economic regulation and government intervention on the supply side of economic development, Singapore has also a significant "sui generis" welfare state. There are no welfare payments, and no unemployment insurance, although there is low unemployment, and the high rate of labor force participation and persistence of strong family ties enables the family structure to cope with most of the victims of economic recessions. Retirement at the age of 55 is provided for from mandatory contributions from employees and employers, but there are some doubts about the ability of a fully funded, individualized system to provide for the real needs of low-income retirees. In fact the government is also counting on family ties to absorb the shock of a rapidly aging population.

The real extent of the welfare state in Singapore includes housing, health, and education. Primary education is almost universal and paid for at a low, nominal fee. Secondary

education is also free and expanding rapidly. However, its provision is restricted to those children able to pass an examination at the end of primary school, a procedure that epitomizes Singapore's meritocratic system. University education (of superior quality at the undergraduate level) remains the domain of a meritocratic elite. Health care is of moderate-to-good quality and provided almost free for "class C" people (low-income). Classes "B" and "A" have to pay higher fees, although since 1985 they can use their CPR contributions to pay for hospitalization costs. However, people can decide that they are "class C" and pay a nominal fee, without control of their income, provided that they accept the standard conditions of public health care, certainly lower than the technological level of Singapore. Yet the system clearly exceeds in quality and affordability any other in the ASEAN region and in most of Asia. In terms of housing, 85% of the population lives in public housing (70% in home-owned flats) at affordable prices. Although these are high-density, high-rise living quarters, they are well provided in terms of facilities, organized on the basis of self-sustained New Towns.⁵¹ Housing units are provided at a cost estimated to be substantially lower (as much as 40% lower) than equivalent accommodation in the private sector (although comparison is difficult), mainly on the basis of the low cost of land purchased by the Housing Development Board, and of the economies of scale achieved by a comprehensive program that clears land, designs buildings, produces its own construction materials, contracts and

supervises the builders, and manages and maintains the housing estates. HDB is actually the manager of Singapore's everyday life.

Government provision of collective consumption goods and services also includes open-air activities, cultural and recreational facilities, and institutional support for social life through the community centers that exist in most neighborhoods and particularly in the new towns.⁵²

By decisively intervening in the process of social consumption the government provides the material basis for raising the standard of living in spite of low direct wages for the majority of the population (about 70% of Singaporean workers still earn less than US\$400 per month). By so doing, the state also shapes the pattern of social life and exercises its control and guidance vis-a-vis the people, a matter with considerable policy implications.⁵³

7) Yet, as important as all the forms and spheres of economic intervention by the government may be, the most significant action is its ability and its determination to set the goals of development for Singapore, and to go after such goals with a deliberate set of implementation policies, in one of the most stunning showcases of strategic planning in recent history.⁵⁴ Economic development was but an instrument, albeit the most important one, of nation-building. And the successive models of development pursued by the government of Singapore, as well as the stages through which different policies went on, were largely determined by adaptive reactions of the PAP

government to changing circumstances in the international environment as well as in domestic politics. Because of the intertwining of politics, policies, and economic development in Singapore we must now proceed to a summary discussion of the political origins of the Singaporean state, as well as of the process through which it confronted a series of particular challenges on the road to national development. The actual characteristics of Singapore's economic model can only be understood as the multidimensional result of this political and social process.

4.2 The political foundations of economic development in Singapore.

There are a number of fundamental elements without which it is impossible to understand the Singapore experience, both in terms of its historical specificity and in terms of the broader lessons it can offer for development theory.⁵⁵

The first of these elements is that the Singaporean state emerged as the outcome of a powerful, militant, and popular anti-colonialist movement. The movement fought for the independence of Malaysia (including a special status for Singapore) as early as the mid-1940s, in the wake of the decolonization movement after World War II.⁵⁶ The Chinese-speaking students of Singapore, with considerable admiration for the national achievements of the Chinese communists, and the trade unions, were the main social forces of the independence movement, backed from behind the scenes by the Malaysian

Communist Party and its powerful militia formed during the anti-Japanese resistance.⁵⁷ The anti-colonial movement had three main political components: the Labour Front, the Left within the British system, elected to the colonial government in 1954; the Communists, originally the strongest and best organized force, but fundamentally handicapped by the difficulty of expressing openly their policies given the geopolitical conditions, their repression by the British forces, and their subsequent choice of pursuing armed struggle in line with the Chinese example; and a "third way," represented by the People's Action Party, founded by Lee Kuan Yew, shortly after his return from his law studies at Oxford, in 1954. The PAP defined itself as a democratic socialist party and practiced for many years a de facto alliance with the communists, outside the party, and with left-wing militants within the PAP itself.⁵⁸ The PAP, at least in its origins, was clearly a left-wing party, self-declared socialist, that gradually assumed the leadership of a national movement, to become a populist-nationalist party always looking for grassroots support and, simultaneously, like all populist parties, trying to create institutions able to preserve its control over the popular masses.⁵⁹ This is a fact too often overlooked by contemporary critics of the Singapore government that tend to identify it with a typical dictatorship without considering its popular and anti-colonial origins. Such origins are particularly important to explain the current state and the process of economic development, because the same leadership, the same persons still operate the system.⁶⁰ As a matter of

fact, Lee Kuan Yew made his first political reputation as a lawyer defending labor unions in their collective bargaining, and student activists repressed by the colonial government. In the electoral campaign that led to the election of a PAP government with Lee Kuan Yew as Prime Minister, in 1959, it appears that its opponents of the Labour Front received financial support from U.S. sources and from the anti-communist KuoMingTang circles, fearful of the left-wing inclinations of the PAP.⁶¹ Shortly after the PAP's electoral victory, a major power struggle took place within the party between its "democratic socialist" and "pro-communist" wings, focusing on the issue of the merger with Malaysia, which was supported by Lee Kuan Yew. With the government under his control, Lee Kuan Yew succeeded in expelling the "pro-communists" from the PAP, after which the left of the party formed a new political party, the Barisan Socialis. The struggle shifted then to the labor movement, with serious confrontations between the government and the left-wing Singapore Trade Unions Council (STUC), eventually leading to the detention of labor leaders and the de-registration of the entire STUC.

Thus, in spite of the repression of the Left in the 1960s, the popular origins of the PAP, its socialist ideology, and its political legitimacy as the spearhead of the national liberation movement are key elements to understanding the characteristics of the Singaporean state and of its development policies. PAP leadership always felt mandated with the historical mission of building Singapore as a nation, and to do it for the well-being

of its people, whatever the distortions and social conflicts that grew up during the complex process of implementing this national design. In this sense, to understand Singapore it is indispensable to consider it as a showcase of a national liberation movement institutionalized in a nationalistic, strong state that believes it cannot afford to make any concessions to either external or internal enemies in its struggle for survival in a merciless world.⁶² While this has been the approach of many Third World nationalist governments to the issues of development, the Singapore case stands in a class by itself on two grounds: its pragmatic adaptation to a changing environment⁶³; and its success in the implementation of its development policies.⁶⁴ Let us consider these two elements.

A) "Survival" is a word that appears again and again both in the texts of the Singapore leaders and in the conversations with officials when they refer to the origins of their policies during the 1960s. In their view (and one has to concede a great degree of realism to their perception) by the mid-1960s it was not clear at all that Singapore could survive as a viable social, economic, and political entity. Three major traumatizations that can all be traced back to the period of the early 1960s explain the shape and orientation of the Singaporean state and of its developmental policies:

1) The first traumatization concerns the national identity of Singapore. PAP's policy always presupposed that only a merger with the Federation of Malaysia could make the island a viable economic entity. The difficulties encountered in the

total).⁶⁶ Furthermore, the Chinese themselves were fragmented in a variety of dialect, clan, and family groups, based upon their provincial and regional origins in China, and consolidated in Singapore through business associations and social organizations, generally localized in territorially specific areas.⁶⁷ To create a society collectively mobilized for development was a formidable task which the government had to confront.

3) Finally, the PAP also went through a major political traumatism: its relationship with the communists and the pro-communist political militants.⁶⁸ It was a very close relationship that made a major impact on the PAP's own structure, organization and tactics. Its leaders were convinced that there was a serious possibility for Singapore (rather than Malaysia) being taken over by a communist movement that could link up with the strong communist influence in Indonesia, in the shadow of the Chinese Communist Party, for whom many Singaporean political militants had a nationalistic admiration. PAP leadership learned its policies side by side with the pro-communist, admired their commitment and effectiveness, yet diverged in goals and international alignments, so they decided to fight communism with the same determination they would expect their adversaries to fight them.

Thus the Republic of Singapore came reluctantly into existence in 1965, unsure of her national identity, skeptical of her economic viability, fearful of destructive ethnic communalism, and obsessed with the political threat of communism

and social unrest. To tackle simultaneously all these issues resulting from the traumas of its short, turbulent history, the PAP built a strong state and put it to work through the implementation of a number of policies of which economic development was the pivotal force.⁶⁹

The main instruments for the implementation of these policies can be summarized as follows:

a) A solid, effective, strong state apparatus, that presents three salient features:⁷⁰

- Tight control and deliberate guidance exercised at the top by a small group of proven, trusted political leaders, with strong internal cohesion, long-term personal relationships, and shared acceptance of the undisputed national leadership of Prime Minister Lee Kuan Yew.⁷¹

- Establishment of a powerful and professional public service, modeled after the British Malaysian Foreign Civil Service, but with much tighter control on corruption and unruly practices.⁷² A special anti-corruption unit, with extensive powers, was attached to the Prime Minister's Office and is credited with having set Singapore in a class by itself in the developing world with regard to "clean government" practices. Furthermore, meritocracy was established as the basic logic for recruitment, promotion, and rewards, so that government service in Singapore attracts and selects the best of the society, and rewards them so highly that both their effectiveness and their loyalty are ensured. It follows that any action considered disloyal provokes hefty explicit and implicit sanctions.

- Relentless effort of police surveillance and repression against communism or any activities judged to be "subversive" by the government. Some of the repressive instruments include remnants of the British colonial system, including the Internal Security Act, still used in 1987, under which persons suspected of "subversive activities" can be detained indefinitely without trial.⁷³

b) Establishment of a series of mechanisms ensuring political legitimacy, social integration, and social control in the relationship between people and the party-state, constructing what some analysts have labelled a hegemonic state.⁷⁴

The important characteristic of these mechanisms is that they articulate social reform, social organization, and social control, to actually achieve at the same time political legitimation and political domination. In other words, the state actually delivers cherished goods and services to the people, organizes them, and channels and represents their demands, while keeping specific interest groups and individuals under the overall guidance of policy decisions to which the government gives national priority.

These are the mechanisms that explain Singapore's political stability, expressed by the fact that the PAP has won all elections since 1959, without resorting to electoral fraud. Only in 1981 was the opposition party (the Workers' Party) able to win one seat, which became three in the 1984 election.

Key elements of these integrative social policies seem to be:

- The public housing program, basically organized in the form of new towns, and aimed at promoting home-ownership. It addressed the terrible housing conditions in which Singaporeans were living in the 1960s promptly and effectively, and was given high political priority. Singapore's public housing program⁷⁵, which in 25 years built 500,000 housing units to house 85% of the population, and constructed 15 fully equipped new towns, is the most successful housing program in the world, in spite of its shortcomings in urban quality and the criticisms addressed to the bureaucratization of its management.

- A network of community-based organizations and supporting public facilities, directly run from the Prime Minister's office: People's Associations linked to the PAP; Residents' Committees representing residents of the housing estates; Citizens' Consultative Committees (CCCs), organizing citizen participation; and Community Centers, providing facilities and organized activities, while controlling and guiding such activities.⁷⁶

- A number of programs and campaigns, some of which are often labelled in Singapore as "social engineering," aimed at transforming the culture, habits, and social practices of the population for the general well-being and the achievement of national development.⁷⁷ Examples are the birth control campaign, and, later, the incentive for educated women to have children; the campaign to speak Mandarin, in order to unify the

Chinese culture above all dialects, while opening up potential markets in information services in relationship to China; the "National Productivity Movement," launched in 1981; and the recent Housing Development Board policy granting priority for flats to members of families residing nearby. This program preserves the extended family structure, enabling it to care for the elderly, effectively addressing the serious problem posed for Singapore by its rapidly aging population. The overall line of policy guidance is that the process of development is a multi-dimensional one and that society can and must be remodeled by the state in order to strive for superior standards of living and better forms of social relationships.

Still, the decisive tool for social improvement, and the fundamental basis for Singapore to exist as a viable, indeed thriving entity, was (and is) fast economic development. Ultimately, that was the main challenge undertaken by the PAP, via the political stability and the social integration achieved through the instruments we have described. Yet, for such a small, resourceless country, it was not an easy path to walk.

4.3. The process of economic development

The sequence of economic development in Singapore was given a false start: the first (and only) Development Plan of 1961, on the basis of the foreseen merger with Malaysia, established a traditional import-substitution policy to set up the basis for industrialization. This tool of development was prescribed by the socialist ideology of the PAP, against the traditional

entrepot economy, dependent upon external sources and organized around business networks that were difficult to control.⁷⁸

In 1965 the drive toward industrialization seemed to be an impossible dream with no domestic market, without natural resources and with little capital. Thus, the only option left to Singapore was to sell herself as a convenient productive location for international capital. The industries responding to this appeal represented a mix of sunset and sunrise: steel mills, shipyards, oil refineries, electronics. But in fact, in the first stage of development they were not selected by Singapore. Given the desperate situation the government would eagerly welcome any investor able to create jobs and foster the industrialization process. The incentives and conditions we have described in some detail provided the ground for the multinationalization of Singapore on the basis of the overall trends of the world economy. Thus, for instance, electronics located in Singapore because the mid-1960s was a moment of accelerated in the expansion of the semiconductor industry--an industry characterized by its propensity for a spatial division of labor along its stages of production, with low-skill, assembly operations offshored very early by most American companies.⁷⁹ Singapore's business environment and its good transportation and communication facilities gave her an advantage over other locations. The process of industrialization got a robust start: between 1968 (date of the arrival of Singapore's first electronics company, National

Semiconductors) and 1972, total manufacturing output, exports, and employment grew at an average annual rate of about 23%.

Once basic growth was underway, economic strategy started to play a role, basically along four lines:⁸⁰

- A deliberate effort at diversifying the economy to make it less vulnerable to international downturns. The main decision on this level was to support Singapore's potential as an international business center, both by creating basic infrastructure (telecommunications, business services, office space, air transportation) and by designing and promoting a number of financial instruments (including the Asian dollar market).

- Management of recessions (in 1974-75) and the crises of different industries, particularly in shipbuilding and oil, moving into ship repair activities and investing in specialty oil refining.

- Targeting and selecting industries and companies around the world, particularly in electronics and finance, and luring them to Singapore, so that their presence would add credibility to Singapore as a location for other companies.

- And, at the end of the 1970s, the government was able to pursue a higher stage of development, characterized by capital-intensive rather than labor-intensive industries and increasing competitiveness in high value-added goods and services:⁸¹

Singapore would enhance the quality of its labor and reach, by 1990, the level of GDP per capita that Japan had in the late 1970s, achieving at last the status of a truly developed

country. Just ten years after her independence Singapore was already striving to surpass Britain's level of development. One could not find a better expression of the relationship between political nationalism and economic development. From this perspective the multinationals were (and are) one of the instruments of achieving Singapore's national interests, at least as the PAP views them. But by 1979 the government envisaged a need to accelerate the pace of growth, and to raise international regard for Singapore beyond its role in the world economy, as assigned by multinational capital. The developmental state was no longer satisfied with merely benefiting from a subordinate position in the new international division of labor, but felt strong enough to attempt to modify it, or, at least, to considerably improve its position in it. As experience was about to show, that was not an easy task even for a most determined and well-organized economic policy-making machine. Nation-building in an international economy is, above all, a political process, but a process that must cope with the limits of economic realities.

5. Singapore's Great Leap Forward and Its Aftermath: from Restructuring to Crisis, to Restructuring?

In 1979, after two decades of sustained, fast economic growth, on the basis of healthy public finances and balance of payments, and counting on social and political stability, Singapore felt ready to move forward to the next stage of development. In a bold decision, exemplary of a state-guided

economy, a 10-year Economic Development Plan for the Eighties was formulated, with the mobilizing goal of achieving by 1990 the per capita GNP of about US\$8,000 (at 1978 current prices), which is the same standard of living that Japan was enjoying at the moment of the elaboration of the plan, in 1978.⁸² But the interesting aspect of the Plan was the strategy through which this ambitious goal was to be achieved: a drastic restructuring of the productive sector to improve Singapore's position in the international division of labor. Three main explicit economic targets were set up:⁸³

a) A substantially higher rate of growth of economic productivity, at around 6-8% per year in the 1980s, up from the 3% annual growth of the late 1970s.

b) An upgrading of the manufacturing sector moving from low-skilled, low-value production to high-valued products and industries, with a more-skilled, better-paid labor force.

c) a reinforcement of the role of advanced services in the economy, particularly in business services, transportation and communications, enhancing Singapore's role as an international services and headquarters center.

In order to achieve these economic objectives a number of policies were devised and implemented. The most spectacular was a substantial rise in wages, sponsored by the National Wages Council, amounting to an across-the-board increase of 20% in 3 years (1979-81) while keeping inflation low, thus effectively increasing living standards, and encouraging companies to move away from low-wage, low-skill jobs into higher value products.

A National Productivity Movement was launched in 1981, with emphasis on psychological motivation, cultural change, and management-labor cooperation during the first stage of the program.⁸⁴ Information technologies were to be supported both in terms of training and research and in terms of fiscal and institutional incentives for companies producing and using these technologies. A more selective, targeted policy to attract investment to Singapore emphasized the government's preference for information-intensive industries.

Another major goal was to accelerate Singapore's shift from manufacturing to advanced services, partly because of the need for diversifying the economy, partly also because it was a way of enhancing productivity. Indeed, business services had the highest proportion of educated labor force, yet productivity was substantially lower than in other sectors, including commerce. To achieve this structural shift, particular attention was to be given to telecommunications and transportation infrastructure, as well as to the building of new facilities and office space. Furthermore, from 1982 on, after a boom in property prices in 1979-81, there was a more discrete, but determined effort to bring down office rentals, and to control real estate speculation, which was taking a toll on the profitability of advanced services organizations locating in Singapore. New financial instruments were created and flexibility was added to an already substantially free business environment.

Along with the new technological and economic frontiers to be reached, public policy remained committed to maintaining the

traditional objectives of social peace, political security, and monetary stability. Thus, the public housing program was to be accelerated and the latest new towns would receive greater attention than the first ones in terms of their environmental quality. To provide for this expanded program, CPF contributions were to be raised, up to their maximum level of 50% of wages (25% for employees, 25% for employers) in 1984. Construction expenditures were also to continue playing their countercyclical role in keeping the economy afloat in case of a world-induced recession, and they actually did so quite effectively during the slowdown of 1982-83. Defense expenditures had also to be kept at their high level. Yet all these public expenditures in construction, defense, education and research should respect the traditional restraints of low inflation, equilibrium (or surplus) of the public budget, and substantial foreign currency reserves. Thus, priority targets put aside, the government would increase its share of domestic savings without reintroducing them into the economy, to avoid inflationary pressures, a particularly delicate matter at the very moment when wages were increasing.

How well did the new strategy work? The performance of the economy in 1980-84 provides a tentative, although quite complex, answer.⁸⁵ First of all, real GDP growth accelerated at an average of 8.5% per year, within the target bracket; productivity substantially increased its pace of growth, from 3.2% per annum in 1975-79 to an average 4.9% in 1980-84. This growth performance is particularly impressive considering

sluggish demand in the U.S. in 1980-82 and in Europe for the whole 1980-84 period. However, a higher than usual share of growth during that period (about 40%, against 28% in the preceding years) was contributed by domestic demand, and particularly by the construction sector, which grew at 24% per annum in 1981-84 (a staggering 47% per annum for residential construction) and raised its share of GDP to 29%, up from 14% in 1978. In 1984, US\$6.5 billion or 63% of total capital formation was in construction, mainly for residential and commercial buildings. Thus, although productivity did grow substantially, its impact on overall growth would have been negligible, except for construction-induced investment, given the slowdown of growth of exports to 5% per annum in 1980-84 (far below the 11% per annum average of the other Asian NICs in the same period). Real wages did rise substantially, in line with productivity as expected in 1979-81; they rose much faster than productivity growth in 1982-84 (see Table 12). Given the sharp increase of CPF contributions, and other employers' contributions (Skills Development Fund in particular), total labor costs grew at over three times the rate of productivity growth, undermining profitability. Overall, unit labor costs increased by 40% in the 1979-84 period, well exceeding the benefits of increased productivity. Labor share of GDP increased from 40% in 1979 to 46% in 1984. Thus, Singapore lost competitiveness vis-a-vis other Asian NICs, deteriorating its competitive position in 1979-84 by 50% against Hong Kong, 15% against Taiwan, and 35% against Korea. Exports to the European Community went down from

Table 12

Wages, Total Labor Costs and Productivity, 1973-1985

	Average Monthly Earnings		Total Labor Costs		Real Productivity Growth
	<u>Nominal</u>	<u>Real^a</u>	<u>Nominal</u>	<u>Real^b</u>	
Av 1973-78	9.7	1.7	9.1	1.2	2.7
Av 1979-81	11.9	4.7	14.4	7.4	4.8
Av 1982-84	11.2	8.3	12.5	12.8	4.3
1985	3.0	2.5	-0.2	-0.5	3.0

^a CPI is used as the deflator.

^b A separate deflator that measures the product price of each sector used.

Source: Department of Statistics, Ministry of Labor.

a 26% per annum rate of growth in 1976-80 to a meager 1% in 1981-84. Thus, the immediate test of the new economic strategy offered very mixed results. While productivity increased, wages and labor costs did so at a faster pace. Sectoral diversification could not absorb the changing patterns of demand in the world economy, and export growth fell far behind past performance--and behind the performance of Singapore's most direct competitors.

Only the penetration of the U.S. market saved Singapore's performance during the early 1980s. Foreign capital inflows kept the balance of payments afloat, and the strong growth in output and productivity of the advanced services sector (see Table 13) helped the economy to resist the 1980-82 world recession. However, it was the construction sector that pumped the economy artificially in 1981-84. When it became obvious that a major property glut had been created, Singapore entered the major economic crisis of her short life as an independent nation.

In 1985, after 20 years of high-paced growth, Singapore's real GDP declined by 1.7%. Unemployment reached 6.5%, and only eased to about 5% because of the repatriation of foreign workers. Domestic non-oil exports also declined by 3%, industrial output decreased by 8%, and domestic demand also fell by 3%, mainly as a consequence of the necessary slowdown in construction activity. The recession lasted well into 1986, with an overall growth rate for the year of 1.9%, and only recovered in 1987, in which a 6% rate of GDP growth was

expected. The 1985-86 recession came as a shock to a government that had overcome the stage of struggling for survival to carry Singapore toward fulfillment of a promised destiny as a center in the new international economy. A stern reassessment of the 1980s performance, as well as of the strategy behind the new economic policies, was conducted by an Economic Committee appointed by the Ministry of Trade and Industry in cooperation with the entire cabinet and representatives of the public and private sectors of the economy. The Committee produced a report, published in 1986, which is quite a remarkable document in terms of its examination of Singapore's position vis-a-vis the world economy. It bluntly states the limits of government policies as well as the new directions necessary to guide the country out of the crisis.⁸⁶ The crisis was recognized as the symptom of some structural imbalance, requiring a new restructuring process that would modify the excessively triumphant policies of the 1979-81 period.

A number of factors causing the recession have been identified, by the government as well as by outside experts. They generally distinguish between external and internal factors. Given the openness and vulnerability of Singapore's economy, it is normal to consider external factors, somewhat beyond control, as key sources of economic slumps. Slower rates of growth in the U.S. in 1985, together with a moderate performance in Europe, had a negative effect on NIC markets. However, this must be qualified, since the U.S. economy actually was in worse shape in 1980-82, still affecting Singapore's

Table 13
Sectoral Performance

	Value-added Per Worker At 1968 Factor Cost (\$)			Productivity Growth At 1968 Factor Cost (%)	
	1975	1980	1984	Average 1975-79	Average 1980-84
Financial & Business Services	26,800	24,700	30,100	-0.5	6.5
Transport & Communication	11,900	20,600	30,300	9.3	10.2
Manufacturing	7,600	9,000	11,200	4.3	5.9
Commerce	12,000	11,400	12,500	-1.7	2.8
Construction	n.a.	6,500	8,200	n.a.	6.1

Source: Department of Statistics.

performance to a lesser extent than in 1985. The major factor was the slump in U.S. electronics in 1984-85, which hurt the main manufacturing sector in Singapore. The other major international factor, the decline in oil-related and marine industries, with the collapse of oil prices in 1985, also affected Singapore through its peculiar manufacturing structure. Finally, the slump in the ASEAN region, also linked to lower oil prices, undercut some of the commerce and service activity in Singapore, as well as her exports to the region. The basic point remains that the Singapore economy, being more internationalized than any other industrialized economy, and more sectorally dependent than the other NICs, links its dynamism to the overall pattern of growth of the world economy.

Thus, the economy should have gone into a slump as early as 1981-82, together with its main export markets and capital sources. Trying to escape the recession and to maintain the high rate of growth, the government's high-productivity strategy only delayed, then deepened the crisis. So, ultimately, domestic factors seem to be responsible for the severity of the 1985 economic shock, as is indicated by the fact that the other three Asian NICs suffered a much less serious slowdown in 1985 and rebounded out of it much faster (see Charts 8 and 9).

There seem to be three main domestic factors underlying the 1985 crisis. First, it seems undeniable that the rapid increase in labor costs, far exceeding productivity growth, cut down profitability and undermined competitiveness vis-a-vis other NICs. The rate of return on capital in the private sector

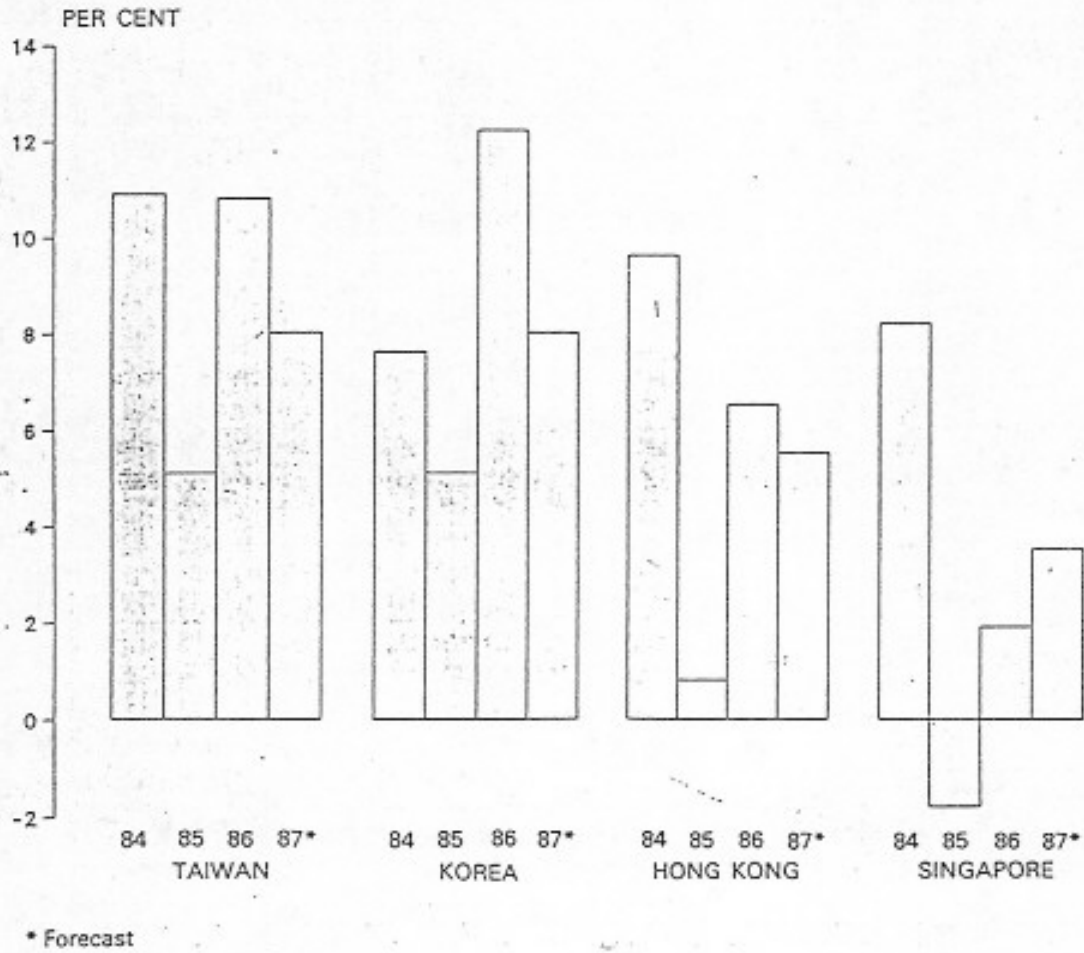
declined from 22% in 1980 to 18% in 1984. This decline was particularly severe in manufacturing, from 33% in 1980 to 16.5% in 1984, only slightly higher than the OECD average of 16%. However the rise of labor costs, and its differential rate with productivity growth has to be understood in a more disaggregated analysis. Contributions to CPF and other government funds accounted for 21.5% of the increase in remunerations in 1980-84. CPF contributions were, on the one hand, accumulated, and on the other hand, used for housing purchases. So government macro-policy in these two key areas is directly responsible for over 21.5% of the increase in wages. Since productivity growth would have allowed for about 25% increase in real wages over 5 years (to keep the same pace in both trends) it follows that about 46% of increases in labor costs can be accounted for without referring to excessive wage increase. Furthermore, Lee (Tsao) Yuan has put forward what we believe is a very strong argument: to calculate the evolution of relative unit labor costs vis-a-vis the international economy where Singapore operates, we have to adjust for exchange rates. Only then can we measure relative competitiveness, and not by comparing rates of wage increase in percentage terms between countries. When calculated in domestic currencies unit labor costs in Singapore rose at a lower rate than in Hong Kong, Korea, and Taiwan in 1981-84 (see Table 14). Yet the linkage of the Singapore dollar with the U.S. dollar appreciated its currency against those of the other NICs, moving Singapore's dollar upward and making its wages less competitive. Thus, a substantial part of the loss in competitiveness and

process until the merger in 1963, the political and ethnic crises in 1964, and the subsequent expulsion of Singapore from the Federation, left the small island nation at the moment of its independence in August 1965 with a fundamental doubt about its chances of survival cut off from resources and surrounded by hostility.⁶⁵ Furthermore, the hostility of Indonesia to the Federation of Malaysia between 1963 and 1966 interrupted trade with Singapore and wrecked much of its entrepot economy (in a process similar to the crisis of the trade economy in Hong Kong after the Chinese revolution). To make things worse, Britain's closure of her major military installations in Singapore in 1968-71 undermined the economy (they represented 20% of GDP and 6% of employment) and increased the feeling of insecurity of the new-born republic threatened by her much more populated neighbors, in a Southeast Asian region shaken by the war in Indochina.

2) The second major traumatism relates to the social viability of Singapore as a multi-ethnic society. The racial riots between Chinese and Malays, and the threatening attitude of Malaysia and Indonesia toward their Chinese minorities had clearly shown the possibility of the disintegration of Singapore under the tensions between its significant Malay and Indian (mainly Tamil) minorities and the Chinese majority. Recent events in Sri Lanka show the reality of the Singaporean fears of the potential for racial disruption. The government was faced with the task of integrating different ethnic groups under the majority rule of the Chinese population (about 75% of the

CHART 8

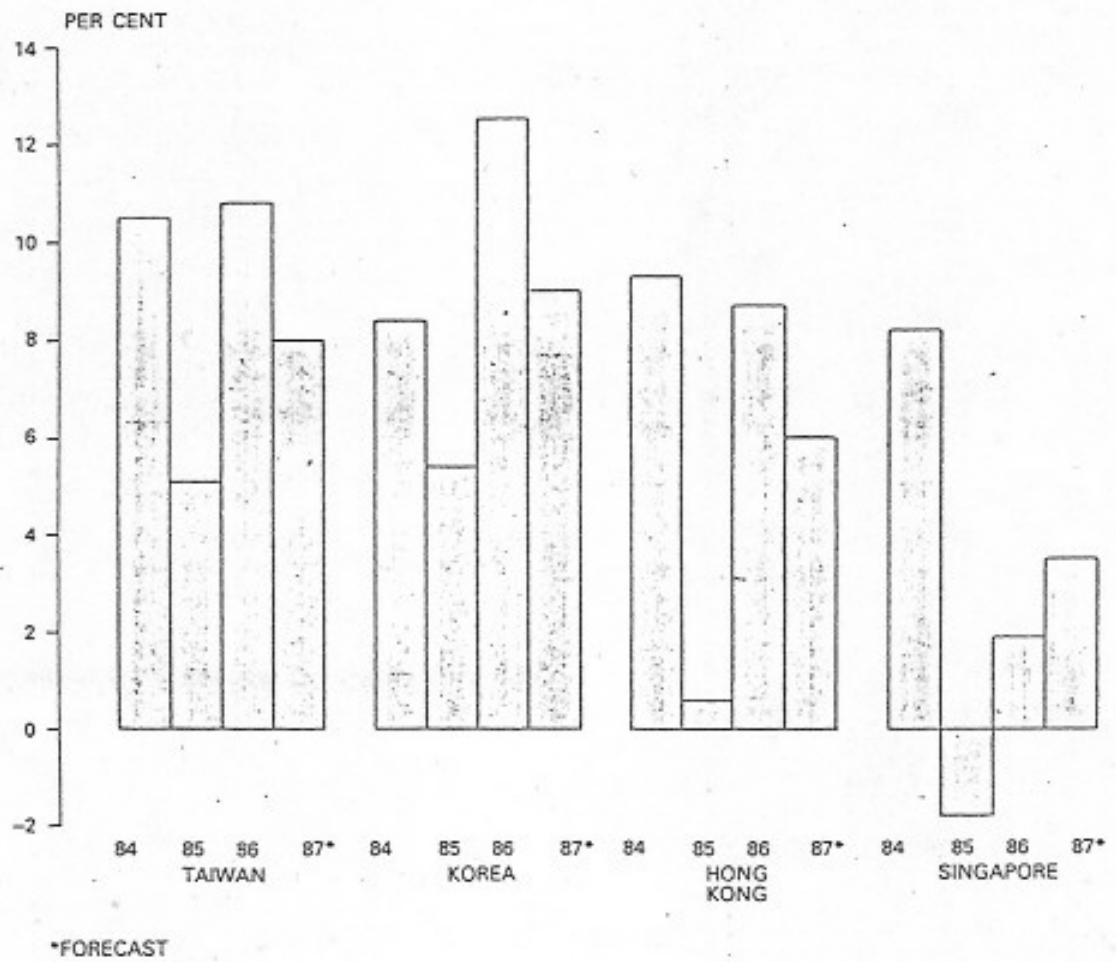
CHANGES IN REAL GDP/GNP OF ASIAN NICs



Source: Government of Singapore, Ministry of Trade & Industry

CHART 9

ECONOMIC GROWTH IN SELECTED NICs



Source: Government of Singapore, Ministry of Trade & Industry

Relative Labor Cost and Exchange Rate Changes,
Singapore vis-a-vis the Other Asian NICs

Rates of Change (in percent) in
Relative Unit Labor Costs in Domestic Currencies

	<u>S'pore/Hong Kong</u>		<u>S'pore/Korea</u>		<u>S'pore/Taiwan</u>	
1978	-12.6		-16.4		2.7	
1979	-2.2		-12.8		-8.7	
1980	-0.9		-10.6		-8.4	
1981	2.2	2.5	2.2	2.5	-9.0	-8.8
1982	14.0	12.0	8.0	6.1	10.7	8.8
1983	1.1	4.6	7.7	11.5	6.4	10.2
1984	-1.1	1.2	8.5	10.9	-1.6	0.6
Average 1981-84	4.1	5.1	6.6	7.7	1.6	2.7

Rates of Change (in percent) in Exchange Rates

	<u>HK\$/S\$</u>	<u>100won/S\$</u>	<u>Taiwan\$/S\$</u>
1978	7.9	7.3	4.6
1979	11.5	4.6	1.7
1980	1.2	27.5	1.5
1981	13.7	13.6	3.7
1982	7.2	6.0	4.8
1983	21.2	7.4	3.7
1984	6.6	3.0	-2.1
Average 1981-84	12.2	7.5	2.5

profitability relates to the government's fiscal and monetary policies, a point that we will consider below. In addition, the expansion of the labor-intensive construction industry tightened up labor markets, pushing up wages for unskilled workers beyond the guideline levels of the National Wages Council.

A fundamental element of the mismatch between productivity growth and wage increases relates to the relatively slow diffusion of productivity in some sectors (see Table 15). Most of the productivity performance came from the business services and transportation and communications sectors, while construction did much worse, and manufacturing did not substantially alter its historical level, except in 1984. Much of the problem seems to lie in the fact that the new productivity policies seem to start from the assumption that basic increases in productivity would come as a result of the structural transformation of the economy toward higher-value sectors. However, as Chart 10 shows, when we decompose productivity growth into its two components, shift effect and productivity effect, it is the latter (productivity improvement within sectors) that is responsible for almost all productivity increases. Relying on the productivity effect implies, fundamentally, a re-skilling of the manufacturing labor force. Productivity gains could not, however, be the result of higher wages or of a productivity attitude, if there were no ready supply of skilled workers, or if multinational companies were not prepared to upgrade their production lines, generating demand for such skilled labor. Higher wages can only be the

result of the upscaling of the economy, not its determining factor.

This is where the shortcomings of Singapore's educational system and R&D expenditures contradict the expectations of its government, while the backwardness of the domestic sectors in manufacturing and commerce limit the spreading of productivity outside the multinationalized sector. As a result, investment in new machinery did not follow, and the limited increase in productivity was in fact remarkable, witnessing workers' great motivation and given the low level of capital improvement and the lack of workers' training.

The second immediate cause of the crisis relates to the construction slump, which, after overbuilding in 1980-84, came to a halt in 1985, contracting by 13.9% in 1985 and by an additional 25.3% in 1986; thus real output fell in 1987 to 64% of its rate in 1984. Although most of the recession is attributable to the private sector it seems that overbuilding by the public sector, not only in residential space but in commercial space as well, has been the major trigger of the crisis, a crisis that clearly puts an end to the rapid expansion of the public housing program. How could such overbuilding have happened? We can speculate on three major factors behind Singapore's recent building follies: the use of the public housing programs as a countercyclical device, in a most traditional Keynesian approach; the government interest in pursuing the policy of social integration through home ownership in well-organized new towns, as a major element of social

TABLE 15

Real GDP Per Worker (at 1963 factor cost)

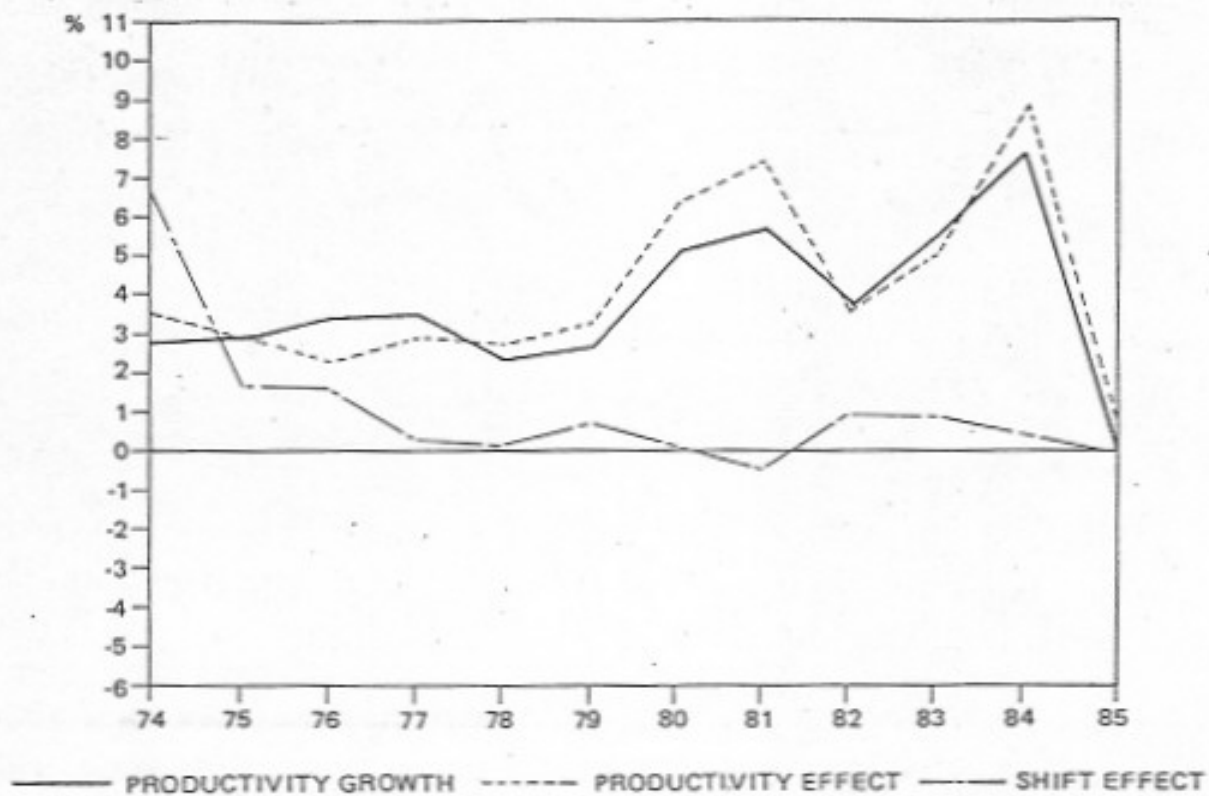
Sector	1975	1980	1983	1984	1985	1st Half 86*
	Real GDP per Worker (\$)					
Overall Economy	9,650	11,376	13,136	14,133	14,123	See Note 2
Manufacturing	7,631	9,307	9,474	10,382	10,555	
Construction	13,073	10,511	15,074	14,658	12,200	
Commerce	12,009	12,829	13,837	14,660	14,093	
Transport & Communications	11,884	19,072	24,374	28,851	31,098	
Financial & Business Services	26,770	27,353	33,864	36,479	37,510	
Others	6,072	7,527	8,826	9,338	9,450	
	Annual Growth Rate (%)					
Overall Economy	2.8	5.0	5.4	7.6	-0.1	6.3
Manufacturing	5.3	4.9	5.7	9.6	1.7	9.3
Construction	26.0	3.6	10.7	-2.8	-16.8	2.1
Commerce	-9.2	3.6	-0.1	5.9	-3.9	4.4
Transport & Communications	9.2	10.6	6.3	18.4	7.8	11.8
Financial & Business Services	3.4	11.4	6.6	7.7	2.8	7.4
Others	5.0	2.2	5.6	5.8	1.2	N.A.

Sources: Department of Statistics, Monthly Digest of Statistics, various issues
 Ministry of Labour, Singapore Yearbook of Labour Statistics, various issues
 Ministry of Trade and Industry

- Note: 1 Others include Other Services; Agriculture and Fishing; Mining and Quarrying; and Utilities
 2 1st Half 86 employment figures were not available from any published source. The growth rates for 1st Half 86, compared to 1st Half 85, were obtained from the Ministry of Trade and Industry
 3 N.A. = Not Available
 4 * preliminary

CHART 10

Annual Productivity Growth, Productivity Effect and Shift Effect



Source: Department of Statistics, Monthly Digest of Statistics, various issues

engineering to create the new Singaporean identity; and the autonomous logic of HDB, a remarkably efficient machine, that became too powerful and too insulated from the economy and from the society, so it was unable to deviate from its own building plans, regardless of the business cycle.⁸⁷ To some extent, the flexibility required in the public sector by the new economic policies never reached some statutory boards, thus creating contradictions of policies and management within the system of public bureaucracies.

These contradictions appear also to be at the roots of the third internal factor that is often identified as having contributed to the 1985 crisis: the liquidity squeeze. Without entering into an excessively technical discussion, let us simply say that while the construction slump and the contraction in exports seemed to have demanded a more relaxed monetary policy to stimulate the economy, the government did not respond, but kept its conservative fiscal policy, and focused on maintaining the exchange rate, thus further depressing the economy. However, what has been pointed out as a mistake of macro-policy management seems to us to be the almost necessary consequence of some basic premises of the overall economic policy. On the one hand, liquidity withdrawal from the economy, in the form of higher CPF contributions, seemed to be necessary to: a) finance in a non-inflationary way the statutory boards' development expenditures, particularly in construction and urban infrastructure (e.g., the new rapid transit system, MRT, being built in the 1980s at a cost of US\$2.5 billion); b) continue to

finance government's investments overseas, as the position of public finance in the international economy was increased.⁸⁸

On the other hand, in terms of investment, any sudden reinjection of the government surpluses into the domestic economy could have ignited inflation and depreciated the Singapore dollar. In fact, the systematic intervention of the government of Singapore in the financial markets to sustain the exchange rate on a parity with the U.S. dollar is the basis of all monetary policy in Singapore. This is not so much related to an export strategy, since, recently, it has made Singapore's products more expensive in her European and Japanese markets, which together account for a larger share of exports than does the U.S. The main reason for the obsession with the stability of the exchange rate relates precisely to the strategy of making Singapore a major headquarters center organized around a core of financial and commercial services, a strategy that requires stability of currency and of financial flows. Thus, the strategy emphasizing development of advanced services comes to contradict the strategy of winning world shares of commodity markets through a dynamic, sometimes unstable, industrial economy. The Singapore dollar is meeting the same contradiction that brought the U.S. dollar to its crisis after being used simultaneously for many years as an instrument of international exchange (requiring stability) and as an instrument of accumulation (requiring flexibility).

The convergence of these domestic factors, aggravating the fluctuations of the world economy, shook up the foundations of

the buoyant Singapore economy and revealed the structural limits of the NICs experience. Which are these limits, as revealed by the initial failure of "Singapore's Great Leap Forward"?

First of all, economies fundamentally dependent upon their external sector remain highly vulnerable to the fluctuations of the world economy, most of which are beyond the control of individual economies' policies and efforts. The specter of protectionism rising in such a context could definitely ruin the NICs' drive into the international economy, particularly for Singapore, which is substantially more dependent than others upon her external sector. The policies of sectoral diversification and diversification of export markets in order to prevent excessive vulnerability proved to be of only limited effect in the 1985 crisis, because of the linkages between sectors and the trend toward simultaneous fluctuations in different regions of the world economy. It follows that there are serious limits in the export-driven strategy, reinforcing the role of domestic markets in the accumulation process as the economies mature. Singapore's insistence on maintaining an exceptionally high savings rate at the expense of domestic consumption increases the dependency on the world economy, therefore enhancing its vulnerability. Here again, what is a source of strength for the economy (high savings, allowing for high investment and high growth) also decreases its flexibility, betting everything on the struggle for world market shares for a long period of time.

Secondly, the technological upgrading of the local productive basis is not a simple process, even for such a determined government as Singapore's. It meets strong external obstacles because of the increasing reluctance of foreign companies to proceed along the lines of technology transfer, or technological training, which can feed the competition down the line. Also, productivity increases do not result mainly from productivity campaigns, but require major investments in education, manpower training, and research and development, all areas in which Singapore, until now, falls far behind the OECD countries and the other Asian NICs (see Chart 11). A key question is why this developmental state neglected such a fundamental area. A tentative answer could be that it was precisely the model of development adopted, namely relying entirely on foreign multinationals for development, that contributed to the lower technological level of Singapore vis-a-vis its NIC competitors. This would indicate a negative role of multinationals in fostering technological development. However, this is not entirely true since other countries with less presence of multinationals (e.g., Indonesia, Malaysia) exhibit a much lower technological level. The point remains that to upgrade from low-skilled labor to higher value-added products is not an easy road, and is one that demands much higher investment efforts, as well as compensations offered to the multinationals to participate in such efforts. Since the early 1980s Singapore has been moving fast in upgrading her educational and research potential. Some achievements have taken place. SGS has started

role of education and skills in the development process, CPF contributions can be used for housing but not for education. This is clearly a remainder from the period of primitive accumulation in the 1960s, and a contrary policy in a situation in which 85% of the population is now in public housing and the property market has collapsed. An element to consider is that countercyclical policies require investment in non-productive sectors, such as housing, while human capital investments tend to have a longer period to yield. Namely, while the government embarked on a longer-term vision of the development strategy, many of its policies still maintained the pragmatic, short-term approach of the survival stage.

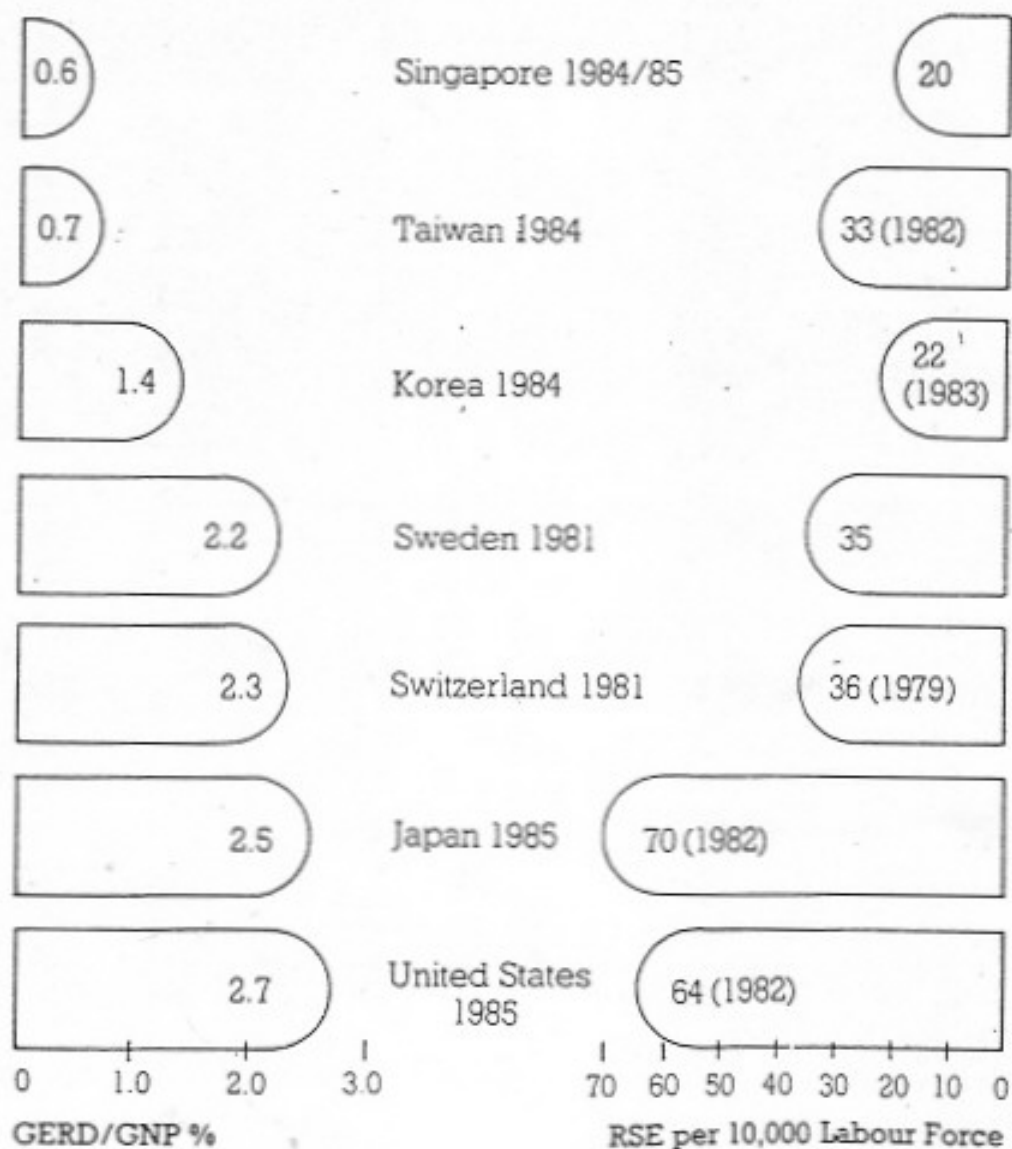
A fourth limit revealed by the crisis appears to relate to the institutions themselves. Public bureaucracies endowed with almost unchecked power have become quasi-autonomous entities amassing considerable resources and expertise, and actually accomplishing so much that they have generated their own legitimation system. Yet, a certain division of labor within the government has structurally conditioned a divergent evolution within the government institutions. Those agencies that had to deal with the external system (basically with the world economy and the multinational corporations) became flexible and adaptive, increasingly responsive to the changing conditions. Those bureaucracies dealing with the internal system, and ultimately geared toward the local population stressed performance of their own plans over responsiveness to changing demands and values of a society undergoing a drastic

CHART 11

Indicators of Technological Policy

Proportion of Research & Development Expenditures on GNP

Researchers, Scientists, and Engineers in the Labor Force



Source: Government of Singapore, Department of Statistics.

wafer diffusion production for the first time in Southeast Asia. AMD established in 1984 an advanced testing factory, fully computerized, and is negotiating to create a Design Center. Hewlett-Packard is establishing an R&D center. IBM supports a Systems Research Institute. ATT has agreed to train Singaporean engineers in advanced technology in the U.S. The Japanese, German, and French Joint Institutes with the Singaporean government are upgrading their training programs. Thus, there is an upward movement underway, but not necessarily on the scale and with the speed that would clearly place Singapore on an equal footing, not with Europe but at least with Korea.

The third limit encountered along Singapore's development process was the contradiction between different requirements, and the policies designed to implement them. We already cited the problem represented by the monetary policy focusing on the stability of the exchange rate, making the government unable to use it as an instrument of stimulation. Further, the link between the Singapore dollar and the U.S. dollar, partly due to the need to preserve the stability of the Asian dollar market, provoked the Singapore dollar to follow the U.S. dollar in its erratic course, actually undermining competitiveness in the 1984-85 period, although the fall of the dollar is now helping Singapore in a bizarre turn of events, linking Reagan's deficits to Singapore's electronics exports to Europe.

Other policy contradictions stem from the mixing of different management styles and historical timing within the Singapore government. Thus, while the government insists on the

process of cultural change. As a result, not only did they become insulated from the overall social evolution of Singapore but they increasingly entered into contradiction with the agencies managing the modernization process. Behind the inadequacies and contradictions revealed by the mismatching of policies during the 1980s lies a more basic conflict between technocracy and bureaucracy.

As a result of the processes presented here, and on the basis of the 1986 report of the Economic Committee, the government of Singapore engaged itself in a new, major process of economic restructuring that was picking up steam in 1987 at the moment of our research. These policies are another proof of the decisive pragmatism of the Singapore government and of its unbreakable will to foster economic development, and to succeed in the international scene at any cost. The main elements of this restructuring process, which we will simply enumerate without entering into their analysis or evaluation, are the following:

a) A cost-cutting strategy has been adopted, primarily aimed at reducing labor costs and enhancing profitability. The CPF contribution for employers have been reduced from 25% to 10% of the wages (not so for employees); wages have been frozen for two years; and further wage increases will be on a flexible, decentralized basis, dependent upon productivity as examined company-by-company.

b) Construction activities have been drastically slowed down, probably changing allocation of government-controlled savings.

c) Corporate taxes have been reduced and fiscal incentives for capital investment have been increased.

d) The drive toward high technology industries and advanced services has been intensified. R&D expenditures have been increased by 50% and new targets for enrollment in engineering, computer sciences, and business school aim at a 40% increase in graduates in five years. However, while trying to achieve a higher technological level, Singapore wants to maintain its competitive edge as a low-cost country, sacrificing if necessary some of its potential standard of living to international competitiveness. Since such an attitude is truly representative of the essence of the developmental state, its explicit formulation deserves quotation: "Singapore's future position in the global economy, therefore, is to be as economically developed as the West, and yet more competitive. . . . While aspiring to become a developed economy, we cannot pay higher wages than an OECD country. In the pursuit of higher-wage, higher-skill industries, we will be constrained by several benchmarks--we have to price ourselves below the developed nations and not too far ahead of our competitors, such as South Korea and Taiwan."⁸⁹

e) New potential foreign investors are now better targeted on the basis of selected lines of products and technology.

f) Local businesses are being promoted, particularly as subcontractors in the manufacturing sector.

g) Government's shares of most public companies are being divested, and a number of these companies are undergoing privatization. Singaporeans will be able to use their CPF funds to buy shares, thus stimulating domestic investment.

h) The labor force must expand in order to lower wages while increasing domestic demand through multiple wage-earners in each household. This could be achieved by increasing women's participation rate in the labor force beyond their 52% rate currently, maintaining foreign workers for some time, and raising retirement age above the current level of 55 years.

i) The realm of service activities will expand to provide high-value services, e.g., financial consulting, tourism development, city planning, aviation repair and maintenance, etc. Singapore sees herself, in addition to being an international headquarters city, as the provider of information-intensive services at a competitive price around the Asian region.

j) New markets, particularly in China, are being opened through joint ventures with the PRC, so that Singapore can assume the role of intermediary between international capital and know-how and the Chinese market. Promoting Mandarin-speaking capabilities is but a tool of such a far-reaching strategy.

Thus, to some extent, Singapore seems to have accepted a less rapid improvement of its relative position in the

international division of labor than it foresaw a few years ago. Standards of living will remain lower than hoped for. Public works and services will be scaled down. And a more systematic, step-by-step approach is being taken to enhance education and research capabilities, based on the realization that technology transfer cannot happen on the basis of the MNCs' good will, or as a fast result of the productivity propaganda. A more modest, cautious attitude prevails in the circles of the Singapore government in 1987. The shock of 1985 was a rude awakening to the realities of the world economy. Thus Singapore withdrew, retracted, rethought, restructured herself. But it is clear that the great design of development has not been abandoned. In the ever-changing international division of labor, what seems to be unalterable is Singapore's determination to gain ground with every shift in the global hierarchy. Her successes and failures offer precious lessons for the world process of development, lessons that it seems useful to summarize in concluding this text.

6. Conclusion: Lessons for World Development

Singapore's experience of economic development is admittedly a unique one because of the country's small size and complete openness to the international economy. However there are a number of key mechanisms that, when analyzed against the background of other development processes, as well as in relationship to general theory, offer a number of important lessons.

a) The main fact of the Singapore experience, with considerable implications for development theory and policies, is the primacy of the state in laying the ground for economic growth and actually guiding the overall process, in a variety of ways (not all recorded in the standard statistics) that we have described in this paper with some detail. This provides evidence to counter the economic ideology that equates openness of the economy with a passive "laissez-faire" state. Singapore's development is, above anything else, a political process, decided upon and guided by a strong government determined to overcome its underdeveloped status in the international economy. Similar fundamental roles of the state in recent spectacular processes of development in the world economy have been identified for Japan (by Chalmers Johnson)⁹⁰, and for the successful experiences of Korea⁹¹, Taiwan⁹², and even, contrary to false perceptions, Hong Kong.⁹³ Thus, at a very fundamental level, the Asian NICs in general, and Singapore in particular, vindicate the determining role of the state in achieving rapid development, and in modifying substantially the position of dependent economies in the international division of labor. This does not mean that the state must embrace the whole economy or that market mechanisms and free enterprise do not play a substantial role. The experience of purely statist economies in the Third World shows the economic paralysis inherent in centralized economies cut off from international exchange. It is in the dynamic combination of a nation-based state and an internationally oriented market economy that

emerges as the basic formula for achieving development in our world. It is such a state, intervening in the international economy on behalf of the national interest, that is called the developmental state.

It is perhaps because the U.S. government is unable to play such a developmental role that we observe the economic decline of America. Its economy cannot be reduced to the strategies of private firms, despite renewed statements of this obsolete ideology. The U.S. decline can also be perceived in the evolution of Singapore's role in international links, from being an offshore location for American companies, to increasingly becoming a launching position for European companies in Asia and for Japanese companies in their global restructuring process.

b) A second lesson concerns the emergence of new nodal points in the global economy, which shift from subordinate positions to regional headquarters status by being interconnected to networks of decision-making, gradually carving niches on the basis of the competitive advantage provided by their newness and by government-enforced flexibility. Singapore could only achieve its current status as a regional business center, sculpted in spectacularly cold neo-modern architecture, because of the growing interpenetration of the world economy, in which only a few nodal points reach out to the entire planet. For capital flows and financial institutions in perpetual search for fiscal heavens and all-flexible institutional environments, Singapore has become a privileged hub, increasingly competitive with the major Asian centers: Tokyo (too dependent on Japan's

global responsibilities and thus, subjected to strong regulations) and Hong Kong (too uncertain of its political status). The emergence of Singapore as a major business center also underscores the crucial role of telecommunications and international transportation in determining each city's and country's role in the global economy. Only because Singapore, on the basis of its privileged location, built the best telecommunications infrastructure in Asia outside Japan was she able to reach her headquarters status, which also required the establishment of adequate air connections, including its modern airport. Telecommunications and air transportation structure the new spatial arrangements of the informational economy.

c) The role of multinational corporations, on the basis of the Singapore experience, is also full of intriguing lessons. On the one hand, it is clear that, contrary to the simplistic assumption of radical ideologies, multinational corporations are largely responsible for the development of Singapore, not only through their investments and exports, but through their multiplier effects on the economy as a whole. As Linda Lim and Pang Eng Fong write in conclusion to their study: "Our case study indicates that the indirect employment effect of MNEs is fairly large, and has been increasing over the years. Equally important, MNEs have played a significant role in promoting the growth of local suppliers. Indeed, their role in improving the performance and technical capabilities of local suppliers is larger than that of the government which sensibly has not tried to force MNEs to buy a minimum proportion of their inputs

locally, or to protect locally owned industries by tariffs and quotas. Such protection would have deterred MNEs from assisting local firms to expand and improve themselves."⁹⁴ To be sure, these positive effects have been achieved on the basis of worker over-exploitation, in the Marxian sense, particularly in electronics, with young women working in harsh conditions damaging to their health. However, that is the human cost of industrial work and capital accumulation, both in capitalism and in state-planned societies. We do not know of any historical exception to this rule, until the maturity of the economy and an organization of workers succeeds in obtaining better working conditions and higher wages, on the basis of higher productivity and more equitable income distribution.

On the other hand, excessive dependence on multinational corporations (as is the case in Singapore, unlike in Korea, Taiwan and Hong Kong) makes it more difficult to jump to the higher stage of technological development and economic autonomy, as revealed by the difficulties encountered by Singapore's productivity drive in the 1980s. Unless there is an autonomous, government-led effort in education and R&D, the multinationals will improve the quality of their productive lines only to a limited extent and according to the pace required by their parent company, not necessarily coincident with the host economy. Furthermore, any recession in the major markets of the OECD is directly reflected in the local economy without any mediation through the multinational companies linkages. Therefore, the more an economy relies on a mixture of

multinationals and local businesses (as diversified as possible) the more it will adapt successfully to the variations of the world economy. In this sense, Hong Kong and Taiwan, with a much larger basis of small businesses, and Korea, with large Korean companies, appear much better equipped than Singapore to cope with international fluctuations. Small businesses appear to be a key to economic success even in a very open economy. Instead of sectoral diversification, as practiced in Singapore, it is organizational diversification that seems to ensure against unfavorable international changes, in another test of the superior performance of horizontal networks versus vertical corporate structures.

In any case, it is quite apparent from the Singapore experience that the multinational corporations are not "relocating back North," and are unlikely to do so in spite of the lower dollar (for U.S. corporations) and of the new possibilities offered by automation. In fact, in Singapore they are still coming in, as in the case of Control Data, which announced in June 1987 the opening of a new disk drive factory. Automation is taking place in Singapore. Other locations in Malaysia, the Philippines and Thailand keep the large, assembly factories, while Singapore upgrades (slightly, slowly) its operation. Furthermore, now the Japanese are being pushed toward productive decentralization by a rampant yen and by the need to diversify locationally to fight protectionism in the U.S. and Europe. On the other hand, European firms are increasingly discovering the wonders of offshoring and Singapore

continues to be the most competitive place. In sum, industrial decentralization from the North continues its path, although with increasingly selective hierarchization of locations.

d) The fourth lesson is a controversial one. Socio-political stability appears essential for a rapid development process, but such stability cannot be equated with dictatorship. For one thing, the world is full of authoritarian regimes (some stable, most rather unstable) that have actually wrecked their economies, even heavily indebted their countries to build up useless armies or fuel fanatic wars, with the complacency of the superpowers. Thus, authoritarianism is not the explanatory factor. Social stability resulting from political legitimation is the relevant feature, as was shown in Latin America when democracies in the 1980s received the internal and external support to repair the economic damage done by dictatorships in the 1970s. We could even hypothesize that successful economic development processes can be reversed by social instability if there is no basis for political legitimation, once society has become complex enough and conscious enough, as is demonstrated in the case of Korea. In spite of ideological cliches, although clearly authoritarian, Singapore is not a dictatorship but a hegemonic state, in the Gramscian sense, as analyzed by John Clammer.⁹⁵ Namely, it is based not simply on coercion, but also on consensus. Questions about the means through which the consensus of the majority is achieved are left open to research. Thus, to some extent, it is not the coercion of a government that is needed for successful economic growth, but the stability

obtained through the hegemonic capacity of a state to mobilize, and control, the population around its development goals.

e) Finally, the economic crisis of Singapore in 1985-86, the rampant monetary crisis of Taiwan, the political crisis of Korea in 1987, the nervousness of the Hong Kong stock market, all seem to signal a turning point in the NICs' saga, indeed in the evolution of the international economy. It is America's turn to go into a major restructuring process, accepting the necessity of living at the level of her means, if the two twin mega-deficits are to be restored, thus saving the world economy. In such a foreseeable economic situation, increasing competition is going to take place in the key OECD markets, with more and more players with technologically enhanced productive capacity fighting for the precious shares of a proportionally shrinking market. Protectionism could be used as a weapon to increase competition without being able to turn back the clock of the internationalization process. If so, it would hurt the standards of living of the NICs competitors, not their competitiveness, since for them it is a matter of survival. They will adapt prices (and wages) at a lower level, making up for the higher tariffs. In the ensuing zero-sum dirty game, everybody will lose. The solution to the unthinkable equation is outside Ohmae's "Triad Power:"⁹⁶ it is in the vast areas of this planet where human needs are unmet, resources unexploited, and markets untapped.

A redirection of capital and technology toward these areas (China, India, Brazil, Indonesia, Nigeria, Mexico, etc.) in a

concerted effort of governments, private corporations, and international institutions, could simultaneously incorporate most of the humankind into the process of development and broaden the horizons of the accumulation process to limits commensurate with today's productive forces.⁹⁷ In this process, countries like Singapore could be key economic and organizational mediators. Enlisting the NICs in a new frontier of concerted development--instead of resisting their renewed, desperate assault by barricading our crumbling Bastille--could be a promising avenue to explore in a last attempt to avoid economic retrenchment and social disintegration. An open economy could then, perhaps, blossom into an open society.

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Appendix A

List of Interviews and Meetings Conducted in Singapore, in the Summer of 1987, related to the study on economic development and public policy in the Pacific Rim. (All interviews and meetings were conducted by M. Castells.)

- 1) Meeting with the Economic Development Board: Mr. Philip Yeo, Chairman; Mr. Tam Chin Nam, General Manager; Mr. David Lim, Head, Operations Planning Division; Ms. Khoo Seok Liu, Head, Policy and Planning Division.
- 2) Mr. Hwang, Deputy Chairman of Temasek Holdings; Chairman of INTRACO.
- 3) Dr. Tan Kong Yam, Director, Economic Research Unit, Ministry of Trade and Industry
- 4) Dr. Teh Kok Peng, Director, Economic Department, Monetary Authority of Singapore
- 5) Mr. Henry Heng Jee Kwang, Deputy Administrator, Skills Development Fund, National productivity Board.
- 6) Ms. Cheung Yan Hong, Head, R&D Section, National productivity Board.
- 7) Mr. Fong Teng Kee, Head, General Assistance Department, and Mr. Patrick Yang Pah Tsing, Assistant Head, Planning and Coordination, Small Enterprises Bureau, Economic Development Board.
- 8) Mr. Ooi Inn Bok, Deputy Director, German-Singapore Institute.
- 9) Mr. Pakir Singh, Executive Director, SHATEC Training Center.
- 10) Mr. Si Hoe Kok Sing, Senior Director, Planning; and Mrs. Tam-Lai Siew York, Head, Planning, Jurong Town Corporation.
- 11) Mr. Vincent Yip, Executive Director; Dr. Nawdrawn, Assistant Head, R&D; Ms. Coreen Ooi, Research Officer; Science Council and Science Park.
- 12) Mr. Loh Swee Seng, Chief Planner, Planning Department.
- 13) Mr. Bruno Wildermuth, Planning Manager, MRT.
- 14) Mr. William Lim, planner and planning consultant.

- 15) - 16) - 17) - 18) Visit of 4 new towns, interviews with Presidents of Resident Committees, with Managers of Housing Development Board Offices, and with Housing Development Board Planners.
- 19) Interview and visit to AMD company (Mr. Chuck Stitler and Mr. Victor S.K. Foo).
- 20) Mr. Frank Tamru, Pacific Biomedical company.
- 21) Meeting with Professor Amina Tyabji, Department of Economics, National University of Singapore.
- 22) Meeting with Professor Peter S.J. Chen, Department of Sociology, National University of Singapore.
- 23) Meeting with Professor Aline Wong, Department of Sociology, N. U. S., and M.P., Parliament of Singapore.
- 24) Meeting with Professor Chua Beng Huat, Department of Sociology, National University of Singapore