THE SINGAPORE ECONOMY AND ITS DEVELOPMENT PROBLEMS

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I

THE SINGAPORE ECONOMY is a rich rapid growing city state complex based on manufacturing, trade, and other services. Between 1966 and 1972, its gross domestic product at current prices grew at an annual average rate of growth of 13.9 per cent as compared to a GNP growth of 5.5 per cent annually for Malaysia, 6.4 per cent for Indonesia, 7.1 per cent for Thailand, 5.9 per cent for Philippines, all of which are its regional neighbors.[1] The Singapore per capita GDP of U.S.$1,207 in 1972 is more than that of all the other countries put together. Per capita GDP in 1972 of the other countries is as follows: Malaysia U.S.$394, Philippines U.S.$195, Thailand U.S.$183, and Indonesia U.S.$71 [1, p. 13].

TABLE I
GROSS DOMESTIC PRODUCT BY INDUSTRIAL ORIGIN

	1960	1966	1970	1972
Percentage distribution				
Agriculture & fishing	6.1	4.5	3.0	2.8
Manufacturing	9.2	14.5	20.2	23.5
Construction	2.0	3.8	5.3	7.5
Electricity, gas & water services	2.3	2.2	2.5	2.4
Wholesale and retail trade	31.8	26.1	30.5	27.1
(a) Entrepot trade	(18.6)	(10.4)	(12.1)	(9.5)
(b) Domestic trade	(13.2)	(15.7)	(18.4)	(17.6)
Ownership of dwellings	4.5	4.2	3.6	4.9
Government services	5.2	7.3	6.9	6.6
Other services, including:	38.9	37.4	28.0	25.2
(a) Military	(13.6)	(16.3)	(7.4)	(2.8)
(b) Tourism	(1.5)	(2.5)	(4.9)	(5.4)
(c) Banking & insurance	(1.7)	(1.8)	(1.7)	(2.1)
(d) Other	(22.1)	(16.8)	(14.0)	(14.9)
Total	100.0	100.0	100.0	100.0
GDP at current prices in S$ million	2,046	3,365	5,657	7,322
Population, in millions	1.63	1.93	2.07	2.15
Per Capita GDP (S$)	1,255	1,744	2,733	3,405

Sources: Various issues of [10]; [9, 1973].
Note: All figures are at current prices and at factor cost.

1 GNP data for Singapore is not officially published as the balance of payments coverage for net factor income from abroad is not adequate. GNP data for the Southeast Asian countries named are from [1], while the breakdown of GDP for Singapore is in Table I.

Although Singapore has always been an affluent city relative to the region, even as a British colony,[2] the characteristic of rapid growth is only a recent phenomenon, dating from the industrialization policy of the People's Action party, winner of the 1959 elections, under an internal self-government constitution provided by the British government. Through the years of negotiation for merger into Malaysia which finally took place in 1963, followed by separation in 1965, industrial land development and infrastructure provision continued unabated so that when large amounts of foreign investment came into Singapore in the late sixties, the manufacturing sector overtook the entrepot trade sector to become the dominant pacesetter for the economy. Over 1966–72, the share of the manufacturing sector in gross domestic product rose from 14.5 per cent to 23.5 per cent due to very rapid growth (Table I). Over 1960–72, value added in manufacturing grew by 20.3 per cent annually but in 1966–72 this increased to 23.4 per cent annually. While economic factors had a lot to do with this remarkable performance, the continued government of the People's Action party undoubtedly played an important role as only with long-term stability can the return on substantial capital needed by manufacturing be assured.

In order to assess the current state of the economy, it is necessary to review first the future of manufacturing, secondly the regional prospects for stability and development and thirdly the resource availabilities of the economy. In so doing, it is not possible to avoid comments on the relationship between Singapore and the industrial countries of the West and Japan, for it is these countries which have poured in the technology and expertise found so abundantly in Singapore today. Singapore faces many problems in future development and in order to put emphasis in the appropriate avenues from now on, a country like Japan can do more than what she has been doing in the past.

II

In the early sixties, the major manufacturing industries were largely labor-intensive, directed towards the home market or the potential Malaysian market (Singapore was part of Malaysia during 1963–65 but at that time there was the promise of the reduction in tariff barriers between the other Malaysian states and Singapore) and with local capital participation. Now, Singapore manufacturing industries are largely oriented towards exports and high quality products and the major firms are substantially foreign owned. Overall, some 40 per cent of domestic manufactures is exported and among pioneer companies, exports account for just under two-thirds of their output [9, 1973, p. 454]. In 1972, about half of Singapore domestic exports went to developed countries as compared to less than one-fifth six years ago. The policy of attracting multi-national concerns was started in 1968 and was explained in earlier Budget Statements as follows:

2 Professor T. H. Silcock writing in 1959 put Singapore income per capita at about double that of the Federation of Malaya, which in turn had the highest income per capita in Asia, except for Israel and Hong Kong [7].

> It is crucial that reputable international companies, especially those interested in long-term growth, should continue to find Singapore an efficient base with an overall investment climate that is hospitable and conducive towards long-term growth. [9, 1971]

> We have made long and strenuous efforts to attract foreign investment into Singapore, but not because we need the money. The high level of our overseas assets knows that we have more money than we can usefully spend in Singapore. We welcome foreign investors for the two things they bring with them—technology and markets. . . . An open door policy is one which at least ensures rapid growth right from the start. . . . It would be wrong for us to resent the flow of management personnel, engineers and technicians from abroad. On the contrary, we could regard them as blazing the trail for the new industries which we do not have the knowledge and technology to set up ourselves. [9, 1970]

In contrast to the early sixties, the industrial pattern is dominated by a few major industries. In terms of value added, the electric machinery industry ranked the highest with 20.6 per cent of the total, followed closely by petroleum refining (17.5 per cent) and transport equipment (which includes shipbuilding and shiprepairing) with 14.9 per cent of total value added (Table II). The more traditional industries, namely food, beverages, and tobacco, jointly accounted for only 9.4 per cent.

TABLE II
STRUCTURE OF INDUSTRIAL PRODUCTION, 1972
(Establishments Engaging Ten or More Workers)

	Output (S$ Million)	Value Added (S$ Million)	No. of Workers	No. of Establishments
Food manufacturing	541.0	96.2	9,656	232
Beverage & cigarettes	169.9	58.9	3,292	29
Textiles & wearing apparel	361.7	113.2	31,542	245
Sawmills, wood & cork production except furniture	248.6	72.2	14,273	215
Printing	129.1	66.8	7,886	168
Petrol refineries	1,661.5	288.3	2,647	9
Fabricated metal products	237.3	83.0	9,573	168
Electrical machinery	688.1	298.7	34,389	90
Transport equipment	520.1	245.3	24,089	96
Other manufacturing	855.6	323.5	36,486	664
Manufacturing proper	5,412.9	1,646.1	173,833	1,916
Rubber processing	432.3	20.1	3,738	25
Granite quarrying	20.3	17.4	1,304	17
Manufacturing & quarrying	5,865.5	1,683.6	178,875	1,958

Source: [8].

The result of the manufacturing upsurge through concentrating on large international concerns has been an increase in manufacturing employment from 58,000 in 1967 to 174,000 in 1972, a threefold increase. In terms of employment, electrical machinery and transport equipment featured prominently, together with textiles and to a lesser extent, lumber and sawmilling. The growth in manpower requirements of manufacturing coincided with the growth of construction, another labor-intensive activity, which, according to Table I, doubled its share in GDP from 3.8

to 7.5 per cent. In 1967 the British government announced the accelerated withdrawal of their armed forces from Singapore and in the ensuing years the Singapore government attempted to counter the expected income recession and enlarged unemployment by further expenditures on its own and incentive measures for private building in urban renewal sites. On the manufacturing side, the government consolidated economic incentives into a new act offering generous export concessions and enacted the Employment Act to hold down wages and other labor benefits.

The unexpected success of these measures led to a manpower shortage which was relieved by the importation of labor from Malaysia. There are no official figures on the number of work permits currently issued[3] but in a speech in early 1972, the minister for defence (currently also the deputy prime minister) mentioned that in 1971, there were more than forty thousand Malaysian workers and that in 1972 the figure was likely to be around sixty thousand.[4] This would put the proportion of foreign workers at about 10 per cent.

The aggregate figures on Singapore labor force and employment (Table III) still show 5 per cent unemployment but this arises either from the inadequacy of Singaporeans to take on the semi-skilled jobs found in the fast growing technologically-oriented industries or their unwillingness to take on physically unpleasant jobs in building, public health cleansing, and so on. The dilemma facing Singapore manufacturing today is that it finds itself increasingly reliant on foreign labor, but the growth of the social infrastructure was designed to cater for Singapore citizen demand needs only. The minister pointed out that by current growth trends, in 1978 about 120,000 new workers would need to enter the manufacturing industry, of which Singapore could provide only 40,000. It was unlikely however that Singapore would have the capacity to absorb the other 80,000 foreign workers, with their attendant requirements for housing, education for their dependents, and other personal needs. In 1972 there were 557,000 in the age-group 10–19, not all of whom would be able to enter productive employment in the next decade, since

TABLE III
LABOR FORCE AND UNEMPLOYMENT

(1,000)

	1965	1970	1972
Working-age population (15–64 years)	1,006	1,200	1,287
Labor force	557	693	751
Persons employed	509	651	715
Persons unemployed	48	42	36
Percentage of unemployed	8.7	6.0	4.8
Participation rates	55.4	57.7	58.4

Source: [9, 1973].

3 Work permits are necessary for non-Singapore citizens working in Singapore at less than S$750 a month: those earning more require a professional visit pass. The work permit system was first introduced in 1965.

4 Quoted in a report on his speech in the *Straits Times*, March 20, 1972, the morning daily English newspaper in Singapore.

many of the females will end up as home-makers and some of the males will pursue tertiary studies, after compulsory military training for all males at age eighteen.

Another potential source of difficulty in Singapore manufacturing is the great dependence on female labor. From 17,848 female employees according to the 1967 Census of Industrial Production (CIP),[5] the 1971 figure increased to 62,131, a 350 per cent jump which enlarged the female share of the manufacturing labor force from 31 to 44 per cent. CIP data in 1972 is not yet available but the present share is believed to be almost 50 per cent. The very rapid growth of the manufacturing sector in recent years with the attendant extensive labor requirements has been made possible by drawing on supply from Malaysia and from female school-leavers. Both these types of labor are amenable to discipline and low wages and this is reflected in the relative stability of average remuneration per workman (both male and female) which was $2,360 in 1967 and $2,661 in 1971.

The fact that there is still some unemployment in Singapore (4.8 per cent in 1972) suggests that there is a hard core of city dwellers accustomed to the comforts of urban life but unable to adapt to the rigid requirements of manufacturing activity set by the relatively large size of establishments. The Malaysian and female sources of labor supply are not likely to be so dependable as in the recent past: for one thing, the Malaysian economy, with the current commodity boom, is expected to grow by 22 per cent in 1973[6] and the Malaysians in Singapore may be attracted back by the lower cost of living there. The female component of the labor force is made up of young Singaporeans in their late teens or early twenties and as they get married, and have children, they will temporarily withdraw from the labor market. Given the dispersal of nuclear families into the low-cost housing units rented or purchased from the government, such a withdrawal may be extensive and over a long period of time, unless satisfactory public child care facilities are generously provided.

Expansion of future manufacturing in Singapore will run up against the labor shortage as the importation of labor from Malaysia dries up and the rate of female participation in the labor force reaches maximum. To counter higher wage demands arising from the ancipated labor shortage, the Singapore government has established a National Productivity Board and an Industrial Training Board to emphasize future increases in productivity. Arising from the youthfulness of the labor force[7] the possibility for productivity increase is great, provided that the major employers follow an enlightened policy towards labor and remain technologically abreast with what is happening in the same fields in other parts of the world.

The population is youthful as a whole. It is apparent from Table IV that about half are less than twenty years of age. There are only 6 per cent who can be considered old (above sixty years of age) and what holds Singapore together is a young

5 This census covers only establishments with ten or more workers but with the growing scale of manufacturing activity as a whole, CIP data can be taken as representative of Singapore as a whole.

6 Malaysian finance minister budget speech as reported in the *Straits Times*, December 7, 1973.

7 Close to half of the labor force is below thirty, according to Dr. Pang Eng Fong of the Economic Research Centre in Singapore.

TABLE IV
POPULATION BY AGE GROUP

In Thousands Age-Group (in Years)	1957 Census	1970 Census	1972 Estimates
0–9	483	516	494
10–19	272	535	557
20–29	231	337	372
30–39	173	249	261
40–49	143	183	194
50–59	89	137	139
60 & over	55	118	131
	1,446	2,075	1,148
Males	763	1,062	1,098
Females	683	1,013	1,050
Rate of natural increase in population (%)	4.4	1.7	1.8

Source: [10, 1972/73].

adult component with young families, staying largely in government-built low-cost housing units and committed to Singapore as a country, having been largely born and bred in Singapore itself. Given sufficient incentives and prospects for improving themselves, the people can be organized for future effort provided regional and world circumstances are not too unfavorable.

III

Although manufacturing has surpassed entrepot trade in the value added contribution to domestic product, Singapore is even more important as a regional center than before. The official trade figures do not reveal the full pattern of external trade as trade with Indonesia is omitted. This practice started in the days when the Soekarno regime pursued a policy of confrontation towards Malaysia, of which Singapore was a part. Even with the exclusion of Indonesian trade, the official trade statistics put Singapore as the largest trading country in Southeast Asia. Inclusion of Indonesian trade would reduce the large import surplus which perennially occurs, according to an academic estimate [3].

In 1972, out of a total officially-recorded trade of S$15.7 billion, about half or S$7.8 billion was with the region, defined broadly as extending from Australia to Japan. The fast runs of modern ships and tankers, not to include the speed of aviation and telecommunications, enable Singapore to serve a bigger region than before and the fastest growing economies in postwar Asia have been in the Far East, namely Japan, South Korea, Hong Kong, and Taiwan. Singapore's trade with Western Europe was 17 per cent and with North America, 16 per cent of the total. In 1970 an academic estimate of trade with Indonesia [3] put it as S$1,300 million and if for 1972, we add on say $1,500 million to official trade figures, the proportion of regional trade as a part of total trade easily rises to more than half.

TABLE V
TRADE PATTERN: 1970, 1972

(S$ million)

	1970	1972
Total trade	12,290	15,687
Export	4,756	6,149
Import	7,354	9,538
Entrepot trade	4,775	5,230
Export	2,929	3,071
Import	1,846	2,159
Domestic-origin trade		
Domestic exports	1,827	3,078
Retained imports	5,508	7,379
Entrepot trade net earnings	683	694
As % of GDP	12.0	9.5
Principal exports		
Petroleum products	818	1,158
Crude rubber	1,162	843
Ship & aircraft stores	294	363
Office machines	41	282
Clothing (except fur)	95	223
Cotton & other woven fabrics	128	172
Electrical machinery	129	220
Telecom apparatus	36	171
Wood	164	246
Road motor vehicles	121	142
Principal imports		
Crude petroleum	437	909
Petroleum products	576	474
Nonelectric machines n.e.s.	313	527
Cotton & other woven fabrics	622	630
Crude rubber	564	477
Electrical machinery n.e.s.	215	449
Industrial machinery	296	319
Road motor vehicles	277	290
Telecommunication apparatus	109	183
Aircraft	29	166

Sources: Appendices VIII & IX of [11].

Singapore imports from the region primary commodities, foodstuffs, and raw materials for her manufactuing activity as well as textile fabrics, transport vehicles, and other manufactured goods. Her main exports to the region are what she has imported, as her entrepot trade in 1972 though on the decline, still stood at one-third of total trade, and only some exports are the output of her manufacturing establishments, such as refined petroleum products, woven fabrics, animal feeding stuffs and ships. On balance, her trade with the Far East region is in deficit, mainly because of the large deficit (S$1,500 million) with Japan. The role of the region is thus mainly that of a supplier and as a base for entrepot trade. The region has not emerged as the dominant market for Singapore domestic exports.

Domestic exports showed a remarkable performance in 1972. They grew by 26 per cent over 1971, offsetting the unimpressive growth of 3.8 per cent in entrepot trade exports [11]. With a population of only a little over 2 million and the absence of natural resource-based industries, reliance must be placed on foreign markets for Singapore exports. The major domestic export currently is petroleum products, on account of the large refining capacity built up in the sixties and still being expanded to reach 1 billion barrels daily ultimately. In 1972, export of petroleum and petroleum products went to the Republic of Vietnam, Japan, Thailand, Hong Kong, Australia, and West Malaysia, in that order of importance, all regional countries. The needs of the Indochina war explain much of the export to Vietnam and Thailand while the absence of adequate refining capacity explains Singapore exports to the other countries. Apart from petroleum, the other major domestic export to the region is textiles but even here the United States has recently replaced West Malaysia as Singapore's leading market. Similarly, the United States headed the list of export destinations for office machines, telecommunication apparatus, electrical machinery, and crude rubber and the United States and Western Europe took a large part of wood products and fixed vegetable oil. Altogether the United States and the EEC took 30 per cent of Singapore domestic exports as compared to 48 per cent for the region. Excluding petroleum exports, the United States and EEC share in domestic exports easily surpasses 50 per cent.

In the near future therefore, the region will not support the Singapore economy despite its strategic location. First, the entrepot base, on which Singapore grew up as a port, is shrinking in relative terms. In absolute dollar figures, entrepot trade has grown from S$4,775 to S$5,230 million over 1970–72 but its earnings as a percentage of GDP has fallen from 12.0 per cent to 9.5 per cent. Over the past few years, Singapore has continued to handle a good portion of the external trade of Malaysia and Indonesia, despite their avowed intentions to establish direct trading. The increased efficiency of the port and air transport facilities in Singapore will continue to ensure a place for entrepot trade but not for long, if regional countries have their way. Second, the petroleum-refining base in Singapore is dependent on regular supplies of crude and the absence of an alternative energy supply. Kuwait is the main supplier (45 per cent) of crude to Singapore, followed by Iran and Saudi Arabia. The present oil crisis will continue in some form or other for some time to come and if the war in Indochina abates and Japan develops alternative energy supplies, or its own refining capacity, then exports to Vietnam, Thailand, and Japan will fall. Although Indonesia is developing her oil resources, her output is either directly shipped to Japan which is actively assisting her development or will be refined by a new complex to be developed at Batam, an Indonesian island close to Singapore. Third, the growing textile, electrical, electronic, machine, and wood product domestic exports of Singapore are not only not being bought up in Asian markets directly but are capable of being produced in Asian countries which can supply cheaper labor and an equally good infrastructure as that of Singapore. These goods are largely being produced in Singapore by American and European multinational concerns for their own national markets, either as finished or semi-finished products. Japanese investment in Singapore has followed a different pattern, that of getting around tariff or transportation barriers or utilizing the lower-than-Japan-cost facilities in Singapore to more successfully penetrate neighboring markets. Shipbuilding and shiprepairing for example can be done more efficiently in Singapore than Japan, especially as Singapore straddles the tanker route to the Middle East. While imports from Japan of steel plate (Japan is the largest supplier to Singapore) and all types of machinery are necessary, exports to Japan are not. Consequently the annual balance of trade is continually widening in Japan's favor (it increased from $1,096 million in 1970 to $1,482 million in 1972). The region is not buying up Singapore domestic exports in sufficient quantity. Either Japan has to change her investment pattern and lower her protective barriers or Singapore resource availabilities make her a cheaper supplier to the other regional countries than their traditional suppliers. To this latter possibility, we now turn our attention.

IV

Given the possible cessation of male migration from Malaysia to Singapore and the ceiling limits of female participation in the labor force being reached, the annual increase in the labor force will be about 21,000 or about as was estimated for growth in the economically active 1967–72 period by demographic projections drawn up beginning in 1959 and published in the Singapore *State Development Plan*, 1961–64. Between 1967 and 1972, the labor force grew from 601,000 to 751,000 according to Table 9 in [9, 1973] or an average of 30,000 annually for the five year period. This was bigger than the estimates for the economically active period on account of migration from Malaysia. As mentioned earlier, crude numbers only hide the potential for productivity increases because the labor force is still largely young and untrained.

As early as 1970, Dr. Goh Keng Swee, the then minister for finance stated in Parliament that

> the problem we are likely to encounter between now and 1975 barring a recession of course, is to provide the large numbers and wide varieties of skills which the new industries will need. [9, 1970]

This point was repeated by his successor, Mr. Hon Sui Sen, in the following year's budget statement when he elaborated on the specific measures to be taken by the government:

> At higher levels of skill, for managerial and technical staff, industrial firms now find no difficulty in filling immediate requirements. As opportunities expand, increasing numbers of our graduates abroad are now returning. In the long run, of course, we have to expand our universities, the Polytechnic, Ngee Ann Technical College, and other institutions of higher learning and technical training, which we are now doing. . . .
>
> As for middle level skilled personnel, such as foremen, craftsmen and workers with specialised skills, who are equally important, we have now introduced three measures. First, we are implementing joint industry-government training programmes in cooperation with international companies who are starting sizable projects in Singapore. In such programmes, costs are shared between the government and the sponsoring firm, on condition that it will undertake to train more workers than its own requirements,

so that the surplus may be released to upgrade the general pool of skills in Singapore. . . . Secondly we will also give similar encouragement and support to the longer established firms in Singapore which have the capability and readiness to introduce joint training programmes along the same lines. Thirdly, we are intensifying the programme whereby firms are supported in sending trainees abroad to the parent plants. Such trainees have already been placed in West Germany, Switzerland, Japan and other countries. Here again, the government shoulders part of the costs, provided the training programmes meet agreed skill standards and will provide more trained workers than the firm's own requirements. [9, 1971]

Although Singapore has the highest per capita income in the region, the industrial census average remuneration per workman ($2,661 in 1971) is still below the per capita GDP ($3,064 in 1971). Despite the large increase in the labor force in recent years, the level of wages has not risen partly because of the characteristics of the new entrants (young women and foreign workers), restraints by organized labor and the operation of the Employment Act which gave more power to the employer. Data from the Central Provident Fund show that about 360,000 persons or two-thirds of the 1972 labor force earn less than $300 a month.

Pressure to raise wages has not come from the shortage of labor as such, although pressures in this direction are becoming more discernible, but from the rise in cost-of-living. The official consumer price index is quite out of date as it was drawn up

TABLE VI

CONTRIBUTORS TO THE CENTRAL PROVIDENT FUND BY WAGE LEVEL, 1972

Monthly Earnings	Number	%
Below $100	55,570	10.5
$100–200	194,688	36.8
$200–300	108,818	20.6
$300–400	59,008	11.1
$400–500	39,649	7.5
$500 and over	71,500	13.5
Total	529,233	100.0

Source: [10, 1972/73].

at a time when the per capita income in Singapore was one-third of what it is now. However, the rise in food costs particularly, is unmistakable. In the first six months of 1973, the index has moved up by 20 percentage points, which though not exceptional compared to what is happening in some major urban centers in the world, is quite serious for a country like Singapore which has been used to a great deal of stability in the past decade.

In 1972, a year of high monetary instability, Singapore with its relatively strong currency, has had inflows of speculative funds which increased domestic liquidity beyond desirable limits. The increased money supply partly contributed to the rise in prices, but the main causes were the vagaries of the weather and the sharp increases in the cost of imports following the revaluation or upward floating of some industrial countries. These events of the past are unlikely to repeat themselves in such a coincidental manner since the Monetary Authority has curbed liquidity and allowed the Singapore dollar to float upwards. Harvests in 1973 have also been better and there is promise of agreement in 1974 on the international monetary order.

Singapore however cannot hope to return to the 1960–72 period of stability when the consumer price index rose only 16 percentage points in those twelve years. Her imports from Western Europe, United States, and Japan account for 51 per cent of total 1972 recorded imports and these countries are inflating rapidly.

TABLE VII
CONSUMER PRICE INDEX

(April/May 1960=100)

	All Items	Food	Housing	Clothing	Miscellaneous
1965	105.0	105.4	105.1	101.6	105.0
1970	111.5	111.5	113.9	106.8	111.3
1973 July	149.3	170.3	125.8	125.8	126.3

Sources: [10, 1972/73] [8].

Inflation in Singapore will reduce the real value of the labor resource availability for the expectation of consequent labor cost increases can only mean lower profit margins. Although some of Singapore manufactured output goes to the United States, Western Europe, and Japan so that product price increases, already undergoing inflation in these countries, will offset the effects of inflation in Singapore, the greater danger is that high labor costs will render the Singapore goods and services destined for other markets which are not inflating, uncompetitive.

Even if a rapid crude labor force increase is possible in the near future, it would not be desirable to base long-term development on such a foundation. What is planned instead, is rapid labor training, along the lines quoted in ministerial statements, in order to increase labor capacity to move on to higher-paid jobs without waiting for cost-of-living increases or labor shortages to prompt the demand for higher wages.

Higher labor costs are not an unmitigated evil. In fact they stimulate improvements to productivity which by nature of the technological process, have to be initiated by management. A prominent economist, in surveying the development of colonial economies, has analyzed the failure of mines and plantations to become the "leading sector" in the underdeveloped countries, as being due, not to their producing primary exports as such, but to their cheap labor policy which has perpetuated the pattern of low wages and low productivity [5].

During the sixties, Singapore offered the investor and industrial entrepreneur, a labor-surplus, land-available, and stable government environment. Within a decade, the imaginative planning for industrialization succeeded [4]. Labor is no longer in surplus, but land is still available. For example, in Jurong Town, the main location for industrial activity, the total area of land prepared by the end of 1972 was 7,500 acres but a further 1,683 acres of land were under preparation as the year ended [2]. For Singapore as a whole, land reclamation is actively going on and even offshore islands are being merged into bigger units.

New resources are however being created by labor training, financial activities, building and construction, and capital equipment investment. The recent development of Singapore as a financial center is slanted towards injecting into the country's commercial and business activity, a financial resource capability not found elsewhere in Asia. The government has actively encouraged the creation of an Asian Dollar Market and the emergence of active money and bond markets. To service these markets, in addition to stimulating existing institutions towards greater modernization, the government has permitted the entry of more sophisticated banking, financial and insurance houses in Singapore. It has also revamped the securities industry and is ready with a reorganized Stock Exchange for wider, more international operations [6].

The contribution of banking and insurance in gross domestic product is still very small (2.1 per cent in 1972, see Table I). But more important is the indirect effect such a sector would have on manufacturing, transportation, and other service activities in enabling them to stand up to the various intricacies of international operations.

More tangible is the expansion in resource facilities embodied in building, construction, and capital equipment investment. Some 31 per cent of gross domestic product (GDP) now goes into fixed capital formation (Table VIII). The bulk of this fixed investment is in building and construction, but in the private sector the emphasis has now shifted into equipment investment of all sorts, rather than building and construction.

In 1967 only 14 per cent of GDP was in fixed capital formation and each year

TABLE VIII

GROSS DOMESTIC EXPENDITURE BY MAJOR CATEGORIES, 1972

	Annual Average Rate of Growth 1970–72(%)	% Change over Previous Year	1972 Estimates (S$ Million)
Private consumption	7.7	9.1	4,454
Food	5.2	5.3	1,079
Clothing	8.9	6.3	643
Transport	10.4	9.8	609
Housing	10.5	25.1	462
Public consumption	13.5	17.9	902
Gross fixed capital formation	22.5	26.0	2,288
Public sector	21.7	54.3	710
(a) Building, other construction & works			(557)
Private sector	28.8	12.1	1,578
(a) Building, other construction & works			(548)
(b) Transport equipment			(264)
(c) Machinery & equipment			(765)
GDCF as of GDE			31.2
Public sector			9.7
Private sector			21.5

Source: [9, 1973].

since then has seen an increase of at least 3 per cent of GDP. The annual average growth rate of gross fixed capital formation between 1966 and 1972 was 30 per cent as compared to 9.1 per cent for private consumption and 17.2 per cent for public consumption. While part of the capital formation can be explained by government construction expenditure and urban renewal development to counter the anticipated recession impact of British armed forces withdrawal in 1971, much of it is explained by the opening up of the economy to multinational concerns in the late sixties. Investment in petroleum refining, electrical machinery, and transport equipment industries by large foreign firms, either in joint-venture arrangements or through their own subsidiaries, was accompanied by the importation of all types of equipment. The Singapore government itself imported large amounts of transport equipment for its own shipping line (Neptune Orient lines formed in 1968) and its own airline (Singapore Airlines formed in 1972). Private sector capital formation grew at an annual average rate of 37.5 per cent between 1966 and 1972 as compared to 19.9 per cent for the public sector: the corresponding rates for the longer period of 1960–72 were 28.8 and 21.7 per cent respectively.

The visitor to Singapore today cannot fail to be impressed by the high-rise offices and shopping complexes which complement the high-rise housing efforts of the Singapore government. The users of prepared industrial land are no longer small or medium-sized industrial units but large-scale manufacturing establishments or specialized concerns seeking waterfrontage. The extent of foreign investment in recent years was revealed by the finance minister in his 1971 Budget Statement:

> In manufacturing, the leading growth sector in the Singapore economy, a record number of very large projects by well-known international companies were announced in 1970 and are now in the pipeline. The amount of such commitments in 1970 exceeds the total of all foreign investments in the manufacturing industry made in Singapore to date. At the beginning of 1971, it was estimated that the figure for total foreign direct investments in fixed assets in manufacturing industries, including approved commitments, stood at nearly $1,700 million, compared with an actual cumulative figure of $600 million at the beginning of 1970. These new projects will take two to five years to reach full production. [9, 1971]

Singapore is therefore experiencing an expansion in resource availabilities through labor training, financial diversification, building and construction, land reclamation, and the import of technology embodied in machinery and equipment. Most of this resource expansion is being undertaken by the private sector and to date the demand for services rendered by such resource capability has not fallen short of expectations.

For example the number of visitors (tourists) has increased from 409,000 for 1969 to 450,000 for the first half of 1973—a doubling, in annual rate, for four years. The large number of new hotel rooms and shopping complexes constructed in the late sixties are not likely to go to waste. Much of this increased flow of tourists has been carried by civil aircraft, whose landings from countries other than West Malaysia have increased from 8,556 for 1968 to 10,877 for only the first half of 1973. The number of ship vessels (over 75 tons n.r.t.) entering Singapore has not increased so dramatically, merely from 15,614 for all of 1968 to 9,400 for the first half of 1973. Nevertheless, the trend is quite clear, namely that Singapore is becoming an international transportation center quite independent of the state of regional entrepot trade. As a point linking up the rich countries, Japan with Europe and Australia, Singapore has great potential as a transport and telecommunication center which is now being used by massive investment in container port facilities, airport terminal, and runway amenities.

The massive expansion in real capital resources would have led to foreign exchange difficulties were it not for capital inflow and invisible earnings in the balance-of-payments. Despite the large retained imports of capital goods, the foreign exchange reserves of Singapore have steadily grown and the only way this is made consistent with the officially recorded trade deficit is through the unrecorded earnings of unrecorded trade with Indonesia, unrecorded short-term capital inflows arising out of the emergence of Singapore as a financial center and other omissions in the recorded balance-of-payments.

Efforts are now being made to improve the balance-of-payments and undoubtedly the picture as presented in Table IX will be different in a few years' time when procedures and methods for data collection and interpretation have improved. According to what can be identified in the national accounts data, as presented in

TABLE IX
TRADE AND THE BALANCE OF PAYMENTS, 1972

	(S$ million)
Exports f.o.b.	6,149
Domestic	3,078
Re-exports	3,071
Imports c.i.f.	9,538
Retained	7,379
For re-export	2,159
Total trade (excluding Indonesia)	15,687
Trade in goods balance	−3,389
Merchandise balance in b/p	−3,181
Net freight & insurance	−565
Net travel & transportation	+998
Net investment income	+193
Net government, n.i.e.	+205
Net other services	−207
Resource balance (negative sign=inflow)	−2,557
Net transfers to abroad	23
Resource surplus, as obtained through the national accounts	251
Unaccounted-for earnings due to errors and omissions, in the b/p and exclusion of Indonesian trade	2,831

Sources: [9, 1973] [11].

Table X, there is an excess of domestic savings over domestic capital formation. The rapid growth of gross domestic product coupled with the slower growth of private and public consumption has led to the phenomenal annual average growth rate of 26 per cent in domestic savings over 1966–72.

TABLE X
SAVING AND INVESTMENT IN THE NATIONAL ACCOUNTS 1972

	(S$ million)
GDP at factor cost	7,322
+ Indirect taxes	403
GDP at market prices	7,725
+ Net investment income from abroad	193
GNP at market prices	7,918
– Private consumption	4,454
– Public consumption	902
Gross national savings	2,562
Used as:	
Net transfer to abroad	23
Gross capital formation	2,288
Resource surplus or external balance on goods, services, and transfers	251

Source: [9, 1973].

The more rapid annual average growth rate of 30 per cent in capital formation has in fact trimmed down the annual excess of domestic savings over domestic capital formation, from the high figure of S$439 million in 1969 to S$251 million in 1972. Because of the large domestic savings in the economy (35 per cent of GDP in 1972) Singapore has been able to expand its real capital resources without foreign exchange difficulties.

The high proportion of domestic savings is not only due to wages lagging behind in a period of rapid growth. The government has also been, through the Central Provident Fund (CPF), pushing more private saving. Employee contributions (from those earning more than $200 a month) to the CPF were increased from 5 per cent to 6.5 per cent in September 1968 and then to 8 per cent in 1970 and 10 per cent in 1971. Employer contributions were of an equal magnitude. In 1972 the National Wages Council was formed to provide guide-lines for wage increases: in acceptance of their recommendations, the government increased the employer's contribution to 14 per cent as from July 1, 1972. One year later, this was raised to 15 per cent, with a corresponding increase of 1 per cent in the employee's contribution from 10 per cent to 11 per cent. Today, the CPF benefits by 26 per cent of the employee's salary (15 per cent from the employer and 11 per cent from the employee)[8] which in effect is compulsory saving legislated by law to safeguard the individual in old age. Consequently a high level of savings is to a large extent institutionalized. Because withdrawals from the CPF on account of death, permanent incapacity, retirement, or departure from the country in the case of foreigners, are far less than

8 For those earning $200 a month or less, no employee contribution is necessary but the employer contributes 13 per cent. Government and statutory board employees contribute 2 per cent which is over and above their normal pension or other superannuation schemes.

contributions, the funds of the CPF are invested in long-term government bonds which in turn finance much of government capital formation through the Development Fund.

V

The Singapore economy is now poised to move in new directions. It will continue to expand its resource capabilities in labor and capital. Despite its small island size, there is still land for development but obviously capital-deepening rather than mere surface capital-expansion is desirable. Land not intensively used will be redeveloped to permit a greater amount of capital to be attached to each unit of land space and labor.

The rapid growth of Singapore to its present stage of affluence has brought with it attendant problems in labor supply and labor costs. Over time, labor-intensive activities have to be phased out and be substituted by skill-intensive and service activities. In the words of the finance minister,

> by 1980 we should have reached sufficient maturity in knowhow and operational experience to be able to serve and to continue to develop our capacity as a centre for technical consultancy and management services of all kinds to the Southeast Asian region. We should thus be able to assist, if required, in quickening the pace of economic development of our neighbours, since our own experience will be of greater relevance to the geographical conditions and labour and technical capabilities of the countries in this part of the world. [6]

In order to play a new role as a technological cum management center, Singapore requires more support from the region. Firstly the region should buy more goods from Singapore. Japan is best fitted to do this as she has a higher per capita income than Singapore and Singapore manufacturers are seeking produce of more sophisticated goods requiring high worker skills and labor value added.

Secondly, Japan can help Singapore in acquiring technological and management skills. So far, the technology and management is largely embodied in the types of machines and processes used and the operation could just as well be performed anywhere else in the world as in Singapore. Singapore society is however well organized and not lacking in good leadership, present and potential. What Singapore can learn from Japan is how government and business can work together, how small business and large firms can happily coexist and complement each other and how deleterious foreign cultural influences can be kept separate from the substance of society engaged in work.

Thirdly, regional countries other than Japan can help Singapore in allowing their labor and land to be developed by capital resources available in Singapore. The specialist functions developed over a long period of time in Singapore can be happily combined with the growth and development functions emerging in the large neighboring countries of Malaysia and Indonesia, or further afield in Thailand and Indonesia. There is a tendency to look askance at what Singapore can offer, partly because of the ethnic concentration of Chinese there and partly because of her small size. However what is available in Singapore is usually the best of what can be obtained from the industrialized nations of the world as the Singapore government has tried to attract investment of many countries not just one country.

Regional countries might feel impelled to ask what Singapore can do in return. If the countries are committed to economic growth and structural change, then there is a lot Singapore can do. Her own development and structural change provide an example of what other countries can imitate, if not fully, then in partially. In specific fields, like long-cost housing, education, and industrial estate development, the techniques and procedures followed in Singapore are invaluable as a study in themselves. For the future, as specialist needs develop in the region for finance, marketing, production, and transportation advice and services, Singapore is able to supply them more expeditiously and in tune with actual needs than similar suppliers in the West or Japan. Finally, the continued economic growth of Singapore is a force for stability in the region as no great power would like to see her dominated by any other power. In this context, the future development of Singapore is consistent with the well-being of the region as a whole.

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