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## Export performance and potential of Singapore

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# Kieler Arbeitspapiere

# Kiel Working Papers

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Working Paper No. 13  
Export Performance and  
Potential of Singapore

by  
K. Bieda

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Weltwirtschaft  
Kiel

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## EXPORT PERFORMANCE AND POTENTIAL OF SINGAPORE

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### Part I: Background and Government Policies

#### 1. Singapore as an entrepot centre

The growth of Singapore as a city started only in the nineteenth century when Sir Stamford Raffles landed there in search of a commercial centre for the (British) East India Company which acquired the whole island in 1824. The island had then only a few traders and fishermen. Shortly, however, it became an important trading and also an administrative centre first for the Straits Settlement, and later also for the Malay States. For its rapid subsequent growth Singapore had literally nothing but:

- (a) a good port in a good location, on the crossroads of the seas;
- (b) "free port" status;
- (c) a higher degree of security than prevailed in the region (provided by the British power).

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All values in this paper, unless otherwise stated, are in Singapore dollars.

These meagre assets proved quite adequate to produce an important commercial centre. Until a few years ago Singapore was nothing but an entrepot trade base. Traders of many nations have found it convenient to use Singapore for receiving and handling goods in transit from, and to, all parts of the world, but especially goods moving in the region. This entrepot trade involves buying, e.g., various grades of rubber in small lots from various small producers or traders in the area, putting the lots together, grading them, packing them, and then re-exporting them to any part of the world. For many years, and even now, the local handling of those materials was slight so that the value added per dollar of sales was also slight. The volume of such trade was very high, however, and this gave the island its economic viability. The other element of this entrepot trade consisted in the practice of Singapore merchants buying manufactured goods in large lots in the advanced countries and then breaking-down these lots into small ones convenient for the small business firms in the whole of Southeast Asia, but especially the Malay Peninsula and Indonesia. The stability of the currency (to this day the currency has solid international reserves much in excess of 100 per cent of banknotes issued), law and order, "free port" status, the skills and the services of the merchants (e.g., they give credit to Indonesian buyers and sellers) have given Singapore an almost irresistible appeal as a place to buy in or to sell in, in the eyes of the traders of the region, in spite of strong attempts of the governments of the independent Malaysia and Indonesia to compel their traders to by-pass Singapore. The governments of these two countries have become jealous of Singapore's prosperity and growth (Singapore, next to Japan and Hong Kong, is the third richest country in Asia) and regarding the entrepot trade as unnecessary and even harmful to them they have been using a great variety of official means to choke that trade off. In these attempts the Malaysian and Indonesian Governments have so far been only partly successful but Singapore Government has read the long-run warning on the wall.

## 2. Inadequacy of Entrepot Trade for Singapore

In any case with the advent of its partial independence in 1959 and complete one in 1965 Singapore Government came to the view that while entrepot trade was still nice to have it was inadequate for the country. Shortly, the government decided on full-scale industrialisation. Its reasons were that the very high population growth would, with the old economic policies, result in much unemployment, and in addition could not bring a high income per gainfully occupied worker. And indeed population growth was extraordinarily high. Between 1947-57 the average annual rate was 4.3 per cent (probably close to the world record) and between 1957-62 it was a still very high 3.6 per cent. Although subsequently the population growth slackened (due to growth of education, urbanisation, government educational campaign in favour of a two-children family, changes in immigration policy, as well as changes in the age structure of population) to a rate of 2.5 per cent between 1962-66, and to 1.7 per cent in 1970, the government had good reason to continue to be concerned about the employment opportunities, because population growth bulge was (and is) still to hit the labour market. In that context the British government announced that it would close down her military bases in Singapore (large naval dockyards, airforce and army bases). These bases were giving directly large primary employment to Singapore citizens, as well as indirect, or secondary employment through the multiplier effect of expenditures of the people (local or British) on the military payroll. That announcement appeared as a disaster at the time and galvanised the government, and a responsive public, into action.

## 3. The Response of Singapore Government to the Situation

Looking back, it is possible now to argue that from an economic point of view the British withdrawal was a blessing in disguise. Coming in the context of full independence and full realization that Singapore

was all on its own it produced a marvellous economic response in Singapore's public and government. The matter of the closing down of the British naval base was quickly (and looking back, also easily) dealt with. Singapore's government took over the naval dockyards, which were run fully on commercial lines, and grew in a few years to have large commercial output. In addition, the government converted into a commercial enterprise Keppel Shipyards, formerly run as a division of the Port of Singapore Authority, which stimulated Keppel Shipyards (Pte) Ltd. (fully owned by government) into higher investment and output. The government also went into a joint venture with the Ishikawajima-Harima Heavy Industries (of Japan) to establish Jurong Shipyards on virgin soil, the newly government-established Jurong industrial estate. In a few years these created more employment and income than the British naval base ever did<sup>1</sup>.

But Singapore Government could not be sure of that progress in advance, and the population bulge was still to hit the labour market. The government therefore decided to take a large number of steps. They were intended to: increase productivity and exports directly, and to increase investment by creating a favourable investment climate for both the domestic and foreign entrepreneurs, which in turn would

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<sup>1</sup> Singapore government-owned enterprises include also other firms, e.g., INTRACO and Singapore Development Bank; they are all successful. This in the context of experience of other countries seems almost unique, and prima facie surprising. But in fact there is nothing unique, or nothing surprising about it. There is nothing intrinsically wrong in a commercial enterprise owned by government. It does not in its structure or processes differ from a privately-owned company. Both have "red tape", both have similar problems and means. What however, often distinguished a publicly-owned enterprise (of the British model) is that it is often told not to make profits, but to pursue some other objectives. Once an enterprise is told not to make profits, all sorts of slackness and abuse are easy and natural.

increase employment, exports and economic growth rate. At first the steps were concerned mainly with employment. Later the steps have aimed at export capacity and economic growth. These steps were:

- Improvement of the infra-structure,
- Establishment in 1961 of the Economic Development Board (EDB),
- Imposition in the early 1960's of tariffs on a number of products (in a hitherto "free port"),
- Income tax exemptions as an incentive to economic development (began in 1960),
- "Industrial Estates",
- Establishment of the Development Bank of Singapore Ltd., with 49 per cent government ownership (1968),
- Direct entry of the Singapore Government into many business firms,
- Establishment of the International Trading Company (INTRACO) with 30 per cent government ownership (1969),
- Establishment of the Singapore Institute of Standards and Industrial Research (SISIR).
- Improvement of industrial relations by legislation "with teeth".
- Drawing up national economic plans.

#### 4. The Improvement of the Country's Infra-structure

The government has spent large sums of money on the provision of more education, especially technical education. Under the British rule, in 1951, the number of pupils was 156,000, but in 1971 it was more than three times larger (516,513) and public expenditure on education grew almost ten times, from S\$22 million in 1951 to S\$218 million in 1971.<sup>1</sup>

The government has also been expanding public utilities, expanding the existing port, building a new port in Jurong, building a new container port, electric power plant, gas and water supply, and has provided developed industrial land. As a result new industries have a plentiful supply of all public services, and a well-educated labour force.

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<sup>1</sup> Ministry of Culture, Singapore Facts and Pictures, 1972, p. 93.

5. Economic Development Board (EDB)

The EDB was established in 1961. It is a government department whose functions are to provide direct assistance to industry and would be entrepreneurs. For this purpose it was allocated initially a sum of S\$ 100 million. It provided then industrial sites and even factory buildings, or gave loans to starting firms. By now it has passed over some of these specialised functions to the subsequently established Development Bank of Singapore and the Jurong Town Corporation, and it is limited to giving advice on such matters as, e.g., choice of site, legal formalities, financing etc. In addition, it also gives business introductions, helps to train labour and will generally give a domestic or foreign entrepreneur any assistance.

6. Protective Tariffs

Singapore arose and grew in the last 150 years chiefly thanks to its being a "free port". In the 1960's this policy was partly reversed and tariffs were imposed on a limited number of consumer goods, (e.g., shoes) but also on some producer goods. The government had great fears about job opportunities, was unsure of the effectiveness of the other policies of industrialisation, and decided to use this traditional method too. But the government was half-hearted about it even initially and decided later not to grant any new protection. In the first instance in view of the small domestic market Singapore's economic development has to be export-oriented. For the rest, the case for tariffs might be argued either as offsetting a general cost disability, or as offsetting a specific cost disability in some "desirable" industries. If a country does have a general cost disability this must reflect itself in an unfavourable balance of payments. Tariff could partially offset such a general cost disability, but devaluation would offset it more completely and more evenly, because devaluation of, say 10 per cent equals a tariff of 10 per cent on all

imports plus a subsidy of 10 per cent on all exports. Thus devaluation would be better for that case, removing "the general cost disability" in both the import-competing and the export industries.

As for any specific cost disability, in any specific "desirable" industry, the Singapore Government did not then have any preferences between industries. It was solely concerned with the creation of jobs. Although lately it has developed a preference for some industries, i.e., the modern ones with high incomes and good growth potential, the government realises that the market for such goods is abroad and therefore tariff encouragement for them is irrelevant!

#### 7. Income Tax Incentive System

Already in 1959 the government introduced temporary income tax exemptions for "pioneer firms". Subsequent acts were consolidated in the Economic Expansion Incentives (Relief from Income Tax) Act of 1970. The Act gives the Minister of Finance the power to give partial or complete exemption from income tax to the firms that in his opinion fall into the following categories:

- (a) "pioneer firms" or "pioneer products";
- (b) "expanding firms";
- (c) firms "increasing exports";
- (d) approved firms borrowing abroad for productive equipment;
- (e) approved firms paying royalties or fees for foreign technology.

##### (a) "Pioneer Status"

This is the only category of firms that qualified in fact in a significant number of cases for the income tax concession. At the end of 1971 there were 322 firms that received "pioneer status" for some of their products. Out of this total 256 firms

had some foreign equity shareholdings and 66 had none.<sup>1</sup>

The criteria for award of the status have changed. During the 1960's the government being extremely anxious to encourage investments for employment's sake was prepared to grant "pioneer status" if:

- (1) the industry did not operate on an adequate scale in Singapore, and
- (2) it had a favourable prospect.

By 1970 the government saw that investment, local and especially foreign, had come to be high and the employment problem had been solved: therefore, it decided to apply the following, additional, stricter criteria:

- (3) the company has incurred or is intending to incur a fixed capital expenditure of not less than S\$1 million (stipulated by the 1970 Act),
- (4) the company must bring and develop technological skills (this is the operative criterion of the Minister of Finance),
- (5) local value added must be high in the Minister's judgement,
- (6) the company must already have developed export markets.

This stiffening of conditions was logical under the new circumstances, however, the condition that the value added by the firm must be high was a mistaken one. Of course, the term "high local value added" has a nice sound, but in fact per se it denotes nothing desirable (unless one is a mercantilist) nor is it a good proxy for such good things as high wages or technology, or profits.<sup>2</sup> It merely means that a great deal of local resources

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<sup>1</sup> Calculated on the basis of information provided by the Government of Singapore.

<sup>2</sup> This reasoning is confirmed by an analysis of Table 7 in the Budget Speech of the Minister of Finance, March 1972, where it can be seen that a high ratio of value added in an industry does not necessarily go together with high wages or high technology.

is used, which in Singapore conditions must mean that a lot of labour is used - and the inadequacy of this criterion has been the very reason for adding the new conditions!

The "pioneer status" has received much attention and comment in the world. Its importance and its benefits have been grossly overrated. In the first instance, this privilege is nowadays given for five years (and the earlier Acts gave even shorter period of tax concessions). It should be obvious that few firms would expect their "pioneer" product to be profitable in the first five years. Thus if the product sells in the first few years at a loss and then brings slight profits in the fourth and fifth year the value of the income tax concession must be negligible. This reasoning is fully confirmed by the firms' responses to this writer's questionnaire survey (analysed later): an overwhelming majority of interviewed firms found the status of negligible financial significance and some companies surrendered the privilege as not worth the trouble. However, the psychological significance of the Economic Expansion Incentives Act may have been considerable, especially for the foreign companies who being under nationalistic attacks in many countries found in Singapore a welcome not only in words, but in what appeared real terms.

(b) "Expanding Firm"

The Economic Expansion Act provides that where a firm's capital expansion expenditure exceeds S\$10 million the Minister of Finance may give it the status of an "expanding enterprise", if he thinks it "in the public interest". The first condition above would make this incentive rarely applicable. In fact, only one firm, of national character, with government equity participation, has ever been given this status. The tax privilege for the "expanding firm" is exemption from income tax for a period up to five years for the excess of the post-expansion income over the pre-expansion income.

(c) "Export Enterprise"

The Minister of Finance may, in his discretion, grant the "export status" to a firm whose export sales "in the first export expansion" year are at least 20 per cent of its total sales and not less than S\$100,000, while in the subsequent years the first condition may be waived by the Minister. The tax exemption then applies only to the excess of export profits over a fixed sum (average annual export profits over preceding three years for old exporters; discretionary figure fixed by the Minister for new exporters). Basically the period of tax concession is fixed at five years, but for a company that also has "pioneer status" at eight years in the aggregate, and it may be extended to 15 years if the firm:

- (1) has incurred or intends to incur a fixed capital expenditure (excluding land) of S\$1,000,000,000, or
- (2) having incurred a lesser capital expenditure but not less than S\$150,000,000, if the firm is more than 50 per cent Singapore-owned.

In addition, the Minister of Finance may in his sole discretion extend the tax relief period "... for such further period as he thinks fit". By the end of 1972 the number of firms which were given "export status" was 30 (out of a total of almost 800 manufacturer-exporters). But it is unlikely that this incentive has had any influence in producing the very fast expansion of exports of Singapore. For a logical business manager an income tax relief given in respect of (increased) export income cannot be an inducement to export more. If exporting is profitable (gives income on which income tax would fall) the manager will export anyway, irrespective of whether the government does or does not give an income tax relief. If, on the other hand, the manager thinks that exporting would give no profit then the income tax exemption is irrelevant to him and therefore could not motivate him.

Theoretically speaking, there could still be the case where the manager sees fairly low profitability in exporting and a high profitability in the domestic market, then assuming the existence of a few other conditions he might give preference to the domestic market at the expense of the export market and reverse the policy with the "export status" concession. Even if this did happen it is doubtful whether that incentive would be good for the home country: the unsatisfied domestic demand would increase demand for imports! Above all, for the vast majority of Singapore manufacturers the domestic market hardly exists partly because of small population, still fairly low income, and partly because Singapore is still almost a "free port" so that the access to the domestic market is no easier than the world markets. In any case, if there were cases where the domestic market is more profitable (but our interview survey proves the opposite) a logical manager would expand his output so as to draw both the high domestic profits and the lower profits in exporting. He would do this irrespective of the income tax concession.

Briefly, the particular Singapore export incentive was a mistake. To be effective an export incentive may be linked to anything (e.g., cost of transport, or production, or advertising) but not to income. The most that the Singapore "export status" could have done was publicity that exporting is important for the country. As such it was unnecessarily expensive for the government.

(d) Tax Concessions on Interest, Royalties, Fees and Contributions to Research and Development Payable to Foreigners

Interest on loans taken abroad are, of course, subject to Singapore tax. However, if the Minister of Finance gives the loan " for the purchase of productive equipment " the status of an " approved foreign loan " then the interest payable to the foreign lender is exempted from tax. The effect of this

concession is that the foreign lender who is, of course, interested only in net payment will then accept a lower gross interest rate, which benefits the Singapore borrowing firm. The condition for this concession is that the foreign government does not increase the foreign tax imposed upon the lender because of the exemption. This provision of the Economic Expansion Incentives Act has again been little used, partly because in many cases the foreign government would offset the Singapore tax reduction by its own tax increase, and partly because sometimes such payments can be made in such a way that they do not attract any tax anyway. The Singapore tax involved here used to be 40 per cent, but in October 1972 the Singapore Government announced that the rate would be reduced to 10%. This change further reduced the significance of the concession.

A comparable tax relief can be given on payments to non-residents in respect of royalties, technical assistance fees, and contributions to the costs of research and development. For similar reasons as above these provisions have been little used.

#### 8. Industrial Estates

Singapore, like many underdeveloped countries, used to be short of industrial (serviced with utilities) land and of industrial buildings. Such condition grossly inhibits the anyway weak entrepreneurial spirit in an underdeveloped society. To deal with this problem the Singapore Government decided already in the 1950's to develop (outside the city) large areas of virgin land (in the case of Jurong involving reclamation of swampy land) as "industrial estates" to be offered for purchase or leasing, fully developed, serviced, and often with buildings, to the would-be private entrepreneurs. This development has been pushed vigorously in the last ten years and as a result industrial sites and premises can be easily had and at a reasonable price.

Singapore has now twelve "industrial estates": Jurong Town (the largest and the most developed), Kampong Ampat, Tanglin Halt, Kallang Basin, Kallang Park, Tiong Bahru, Redhill, Kranji, Senoko, St. Michael's Estate, Ayer Rajah, and Toah Payoh. Present planning includes the development of additional estates in Sembawang and Telok Blangah areas. These "industrial estates" were developed mainly on land that had no economic value before. Apart from assisting industrialisation they assist decentralisation of economic activities and of population out of the city of Singapore where the private and social costs of further growth have become very high.

#### 9. The Development Bank of Singapore

Although commercial banking is plentiful in Singapore its business criteria inherited from the British banking tradition are somewhat conventional and restricted, especially in the field of long-term lending, lending to newly-established firms and lending on the security of real estate. In addition, commercial banks tend to be excessively cautious about risky new enterprises. To supplement the ordinary banking services in those areas the Singapore Government set up in 1968 the Development Bank of Singapore Ltd. jointly owned by private shareholders (51 per cent) and the Government (49 per cent) with an authorised share capital of S\$200 million half paid up. Its functions are to provide:

- (a) long-term capital to industries on loan basis;
- (b) equity capital;
- (c) guarantees for developing firms;
- (d) technical and managerial assistance to firms (on a consultancy basis);
- (e) management of the Singapore Government's equity portfolio in over 59 companies (since 1971);
- (f) real estate development, in particular the Singapore Urban Renewal Programme.

The Development Bank normally provides loans up to 50 per cent of equipment costs, and up to 60 per cent of costs of land and buildings. It itself has several lines of credit (but almost all of them at the market rate of interest) from the Government, but against this it is supposed to take somewhat greater risks in respect to the size of the loans it gives, the nature of the enterprise, and the duration of the loan, and it charges fractionally lower rates of interest than the commercial banks do.

In 1972 the Development Bank entered the Asian Dollar Market which the Singapore Government is trying to develop. The Singapore Asian Dollar Market until then dealt only in short-term and medium-term loans. Then the Development Bank floated long-term (1972-1982) bonds denominated in U.S. dollars.

Although the Bank has been conceived as an instrument of assisting economic development it is expected to pay its own way and to make profits. The Bank is in fact making profits, but the return on capital so far has not been very high. This has been partly due to a case of bad failure of one assisted company, and partly due to the short period of the Bank's operation.

#### 10. Government's Direct Entry into Commercial and Industrial Activities

By 1971 the Singapore Government had equity shareholding in 52 companies from a very wide spectrum of economic activities<sup>1</sup>. In five of those companies: Sembawang Shipyards, Keppel Shipyards, Chartered

<sup>1</sup> See next page.

Industries (minting coins, production of small arms), Singapore Electronic Engineering, and Neptune Orient Lines the Government has 100 per cent ownership. In the remaining 47 companies the Government has a portion of shares. Irrespective of whether the government holds all the shares or has only a minority holding, it does not interfere with the running of the companies and expects them to be run on normal commercial lines and to make profit. In fact, as a rule the Singapore Government-owned enterprises make profits and some very good profits (e.g., Intraco). This in the context of the experience of other countries seems almost unique, and prima facie surprising. However, there is in principle nothing wrong with government-owned enterprises. Further, in their organizational structure and management processes

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<sup>1</sup> The names of these companies give an idea of industries involved: Asian Appraisal Pty. Ltd., Bethlehem (Singapore) Pty. Ltd., Blue Bells Fashions Pty. Ltd., Cedar Garment Factory (S) Ltd., Ceramics (M)Pty.Ltd., Chenta Rayon Co. (Singapore) Ltd., Colex (S) Pty. Ltd., Container Warehousing and Transportation(Pty.)Ltd., Copper Industries, Development Bank of Singapore Ltd., Development Bank of Singapore Finance Ltd., Development Bank of Singapore Nominees (Pty.) Ltd., Development Bank of Singapore Realty (Pty.) Ltd., Development Resources (Pty.) Ltd., Dyno Industries Singapore Pty. Ltd., Eupoc Pulp and Paper Industries, Fair Lady Fashions, Ltd., Far East Levingston Shipbuilding Ltd., Hotel Marlin Singapore Ltd., International Wood Products Ltd., Intraco Ltd., Jurong Plywood Ltd., Jurong Shipbuilders (Pty.) Ltd., Malaysian Feedmills Ltd., Marine and Contracting Services (Pty.) Ltd., National Iron and Steel Ltd., Nagai (S) Pty. Ltd., National Grain Elevator Ltd., Offshore Supply Association (SEA) Pty. Ltd., Overseas Union Enterprise Ltd., Raffles Centre (Pty.) Ltd., Shangri-La Hotel Ltd., Sigma Metal Co. (Pty.) Ltd., Singapore Factory Development Ltd., Singapore Nylon Corporation (Pty.) Ltd., Singapore Offshore Petroleum Services (Pty.) Ltd., Singapore Polymer Corporation Pty. Ltd., Singapore Takada Industries Pty. Ltd., Slag Industries (Pty.) Ltd., Starlight Timber Products Co. (Pty.)Ltd., Straits Fisheries (Pty.) Ltd., Tata Precision Industries (Pty.) Ltd., The Insurance Corporation of Singapore Ltd., Toppan Printing Co. (S) (Pty.) Ltd., Trans-Aire Electronics (S) Pty. Ltd., and Veneer Products Ltd.

independent "public corporations" do not differ from privately owned companies. Both have "red tape" and both have unavoidable bureaucratic problems. There is only one difference, that of objectives. Publicly-owned enterprises (e.g., British "public corporations") are often told not to rank profit-making high, but to pursue some other "social" objectives. Once an enterprise is told not to bother making profits all sorts of abuses and slackness are natural. The Singapore Government has had the independence of mind to drop that sacred cow and to tell the managements the equivalent of: Do what you like but make profits. You are on your own! This is the secret of the Singapore Government's success in the field of commercial enterprises. It has not entered business world because of any doctrinaire beliefs of its superiority in running business. Quite the contrary! Even in the fully-owned companies the Government has passed the management completely to commercial people. It has set up some enterprises, or in other cases just provided a nucleus of initiative, because it felt that in some cases private enterprise could not provide so much capital for a single project, or because private enterprise was too shy or cautious because of lack of experience. Examples in this category are the conversion of the vast British naval base into a most successful commercial shipyard (after the British decided to withdraw) and the equally successful conversion of Port of Singapore Authority's Shipyards into a vigorous (government-owned) commercial enterprise, Keppel Shipyards. The Government immediately on acquisition contracted out the management of these companies to a private firm. The firm, foreign one at that (Swan Hunter), had two contractual duties: to run the companies at a profit and to train local management which was to take over after a few years.

In other cases the Government seeing a worthy private enterprise trying to do something slightly above its financial means, offered to take up some shares as a means of encouraging the management in their attempt, and as a means of encouraging the market to provide finance. In these policies the Government was singularly successful. Not only did it give a powerful fillip to economic development but also it acquired a source of income for the Treasury.

11. INTRACO

This company was established at the end of 1968 on the Government's initiative, with 30 per cent Government capital as a "private company". The company is an exact imitation of the unique Japanese "general trading companies",<sup>1</sup> like the Mitsui Bussan, Mitsubishi Shoji Kaisha, etc. In October 1972 the company went "public" in order to obtain access to the Stock Exchange finance.

Intraco's main functions are:

- (a) assisting exports of Singapore products by direct sale, market research, promotion etc.;
- (b) general trading of any kind, including "triangular trading", that is, sale of non-Singapore products to non-Singapore buyers;
- (c) equity participation in manufacturing companies with export potential;
- (d) bulk buying and selling of raw materials;
- (e) financing of exports and imports;
- (f) warehousing, providing transport, marine insurance, advertising, participation in international fairs;
- (g) participation in development, ownership and management, of natural resources including minerals, fishery, forestry, estates and plantations.

The company has offices in Moscow, Sydney, Djakarta, Saigon and Duesseldorf. It plans to open offices in U.S.A., U.K., East and West Africa. It has representative offices in Amsterdam and Phnom Penh. It has traded with 40 countries. The company at first traded on the basis of a fixed commission, 10 percent on a sale. This produced some ill-will among the export producers who felt that a government-owned company ought not to make profits and therefore ought not to charge so high a commission. In fact, the company is only partly

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<sup>1</sup> For details of the structure and functions of the Japanese "general trading companies" see: K. Bieda, The Structure and Operation of the Japanese Economy, John Wiley, Sydney, 1970, Chapter 7.

government-owned and in any case the Government quite rightly expects all its companies to make profits. After this initial experience Intraco has changed its policy. It finds out what are the prices and quality of the goods available for export, finds the market for them, and then if a profitable deal is possible it buys the product from the manufacturer. This has removed the discontent and has become a resounding success. In the first full year of its operation its profits provided a return on capital of 4.3 per cent, in the second 14.3 per cent, and in the third year 26.9 per cent. The company's turnover reached S\$72 million in the third year (1971) of which exports were about two-thirds. Thus apart from making profits the company has made possible a substantial (for a company) increase in exports. Of course, from a national point of view its export figures are not large, but its record vindicates the Government's judgement and is a promise of things to come. Like its Japanese models the company has branched out into manufacturing, and transport facilities. Like in Japan in the earlier age the "general trading company" has met a strong need in the situation where a large number of small manufacturers arose, unfamiliar with conditions abroad, and unable to mount their own export effort.

12. Establishment of the Singapore Institute of Standards and Industrial Research (SISIR)

The origin of the SISIR was in the Industrial Research Unit established in 1963. In its present form the SISIR was established in 1969. It is an agency of the EDB. Its function is to give technical assistance to producers and a degree of guidance to consumers. It has two divisions:

(a) Technical Services Division (testing laboratories)

(b) Projects Division: Projects Unit

Standards Section.

The Projects Unit advises industrialists, on a consultancy basis, subject to a fee, about: control of pollution, product development, and/or process improvement. Annually about 40 firms use the Unit on control of pollution, and more than 200 firms on product and process development.

The Standards Section has two main functions:

- (a) drawing up specifications for industrial plants;
- (b) quality certification of products.

Quality certification of products takes two forms. Where the SISIR has already worked out a Singapore Standard it gives the products that meet its quality criteria the "Singapore Mark" which can be displayed by the manufacturer on the product for consumers' guidance. Where the SISIR has not yet worked out its own standard, it can award a product a "Quality Certificate" which means that the product complies with some international standard which is stated. The Government is considering the introduction of compulsory quality inspection of export products. Some writers consider quality control of exports to be very important in Japan's post-war growth of exports. This writer's interviews of a sample of manufacturer-exporters (discussed farther) showed that in the opinion of overwhelming majority of them quality control and improvement is by far the most important single factor in increasing their export sales.

Although the Government took a right step in establishing the SISIR it cannot be claimed that the Institute has had a marked effect in increasing exports of Singapore. The effects of the SISIR will show in the next decade.

### 13. Improvement of Industrial Relations

Almost all economic measures of the Government aimed basically, even if indirectly, at improvement of the general industrial investment

climate. Restoration of industrial peace was one of the measures. At the time of acquiring self-government there was a good deal of industrial unrest, some deliberately stimulated by the warring political parties. Once the People's Action Party (originally a leftist group, now to the right of centre) took over the government, it took strong steps, especially since full independence (1965), to restore industrial peace. The Parliament passed the Employment Act and the Industrial Relations Act. Since then strikes have become rare and short-lived.<sup>1</sup> The Government has the power to order employers and employees to go to compulsory arbitration. Further, workers tended to refuse overtime work precisely when the firm had an urgent contract. This was the most effective pressure by unions on the management. But the firm was then liable to lose a contract, actual or potential, to a competitor abroad. The delays are particularly costly in ship-repair business both to the customer and to the shipyard. Even merely high strike-proneness discourages business being brought to a strike-prone country, and therefore indirectly discourages investment there.

High incidence of absenteeism also produces similar effects. The legislation prohibits avoidable absenteeism, and such absenteeism is probably non-existent in Singapore. The worker is not allowed to be absent even for one day, even on a Sunday without a good excuse such as e.g., illness. If he is absent without excuse he is penalised in bonus payments and otherwise, and in bad cases may be dismissed.

Industrial relations then in Singapore are now quite different from the British pattern originally imitated.

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<sup>1</sup> See Table 1.

TABLE 1  
INDUSTRIAL STOPPAGES

| Year | Stoppages by Causes |           |              | Workers Involved | Man-Days Lost      |
|------|---------------------|-----------|--------------|------------------|--------------------|
|      | Total               | Dismissal | Wages Others |                  |                    |
| 1961 | 116                 | 25        | 44 47        | 43,584           | 410,889            |
| 1962 | 88                  | 21        | 44 23        | 6,647            | 165,124            |
| 1963 | 47                  | 16        | 17 14        | 33,004           | 388,219            |
| 1964 | 39                  | 16        | 6 17         | 3,535            | 35,908             |
| 1965 | 30                  | 8         | 16 6         | 3,374            | 45,800             |
| 1966 | 14                  | 5         | 7 2          | 1,288            | 44,762             |
| 1967 | 10                  | 6         | 2 2          | 4,491            | 41,322             |
| 1968 | 4                   | 1         | 1 2          | 172              | 11,447             |
| 1969 | -                   | -         | - -          | -                | 8,512 <sup>1</sup> |
| 1970 | 5                   | 1         | 1 3          | 1,749            | 2,514              |
| 1971 | 2                   | -         | - 2          | 1,380            | 5,449              |

1. Refers to man-days lost on account of a work-stoppage which began in 1968.

Source: Ministry of Labour

Industrial relations of the British, American or Australian pattern are now called in Singapore "the British industrial disease". The Secretary General of the Singapore National Trade Union Congress, Mr. C.V. Devan Nair warned the Singapore trade unionists against this "British disease" in a major policy speech of September 30, 1972. He then called for a "cooperative working community", and for unions "policing jobs" and "assuming responsibility for workers' job performance". Then he threatened that any union member who would not do this "... would suffer all the social and natural disadvantages resulting from his non-participation".

It would seem therefore that trade unionism and industrial relations in Singapore are in fact moving to something akin to those in the Soviet Union. Investors, however, love that situation and this has brought much foreign investment, business and employment to Singapore. To that extent peaceful industrial relations have contributed to the remarkable economic growth of Singapore in the recent years. Thus it is probable that ultimately the Singapore workers (like the Japanese ones in the past) will be better off than they would be under a more militant system. Japan outstripped the British income per head a few years ago. Singapore with the present growth rates will reach the present British income per head in a few years' time. It would thus seem that there are two diametrically opposed roads to workers' welfare.

#### 14. National Economic Planning

Singapore made up only one National Economic Plan 1961-65. It was essentially an indicative plan with implementation confined only to the public sector. The Economic Planning Unit was monitoring the performance of the economy and at the end of the period there was a review. However, during the currency of the Plan great discrepancies occurred between the Plan and the turn-out, because of such events as the Indonesian "Confrontation" (1963-1965), the break up of the Malaysian Federation (1965) and of the "common market", and the British decision to close down the economically important military bases. As a result the pragmatic Singapore Government closed down the Economic Planning Unit, and stopped making comprehensive economic plans.

Part II: Export Performance of Singapore, 1960-1971

1. Inadequacies of Trade Statistics

The official international trade statistics for Singapore over the last decade have six severe weaknesses for any serious, especially a quantitative study. Firstly, since 1964 they (and of course the U.N. statistics) exclude altogether trade with Indonesia, Singapore's probably most important trade partner, or at least the second-most important. The reasons for this official exclusion is that the Singapore Government tries very hard to avoid embarrassing the Indonesian Government. The Indonesian Government has an extremely wide and deep system of trade and foreign exchange controls which are ineffectively enforced by the government. The Indonesian Government's trade statistics (and foreign exchange transactions) include only those quantities which pass through the official permit system. The vast majority of Indonesia's trade with Singapore does not go through the Indonesian licensing system because the system of controls is so drastic that merchants have very powerful inducements to escape outside that straitjacket. If Singapore published its figures (and even its own official figures might understate the values involved) it would embarrass the Indonesian Government greatly because it would expose the inefficiency of the Indonesian controls. The bulk of trade of Indonesia with Singapore takes the form of smuggling goods out of and into Indonesia. The multiplicity of Indonesian islands and the proximity of Singapore's shores makes any controls very difficult to operate. The other feature of that unofficial trade is that it is barter: Indonesian raw-materials are swapped against manufactured goods (capital goods, consumer goods) some of which are Singapore's re-exports, and some of which are Singapore's "domestic exports". This unofficial barter trade by-passes the Indonesian import licensing, tariffs and foreign exchange controls and makes the smugglers' boat fully used on both legs of the trip.

TABLE 2

SINGAPORE'S BALANCE OF PAYMENTS, 1960 AND 1966-1971

| Categories                                 | (Million Dollars) |         |         |         |         |                    |                   |
|--|-------------------|---------|---------|---------|---------|--------------------|-------------------|
|  | 1960              | 1966    | 1967    | 1968    | 1969    | 1970<br>(1st Rev.) | 1971<br>(Prelim.) |
| <u>Exports of Goods and Services</u>       | 3,620.3           | 4,248.9 | 4,387.3 | 4,830.1 | 5,809.5 | 5,945.0            | 6,876.4           |
| Merchandise including non-monetary gold    | 2,964.6           | 3,167.8 | 3,239.5 | 3,588.6 | 4,470.5 | 4,428.3            | 5,200.0           |
| Freight and insurance                      | 23.9              | 9.1     | 15.3    | 15.7    | 21.2    | 26.5               | 22.9              |
| Travel and other transportation            | 268.4             | 399.1   | 515.7   | 629.9   | 719.5   | 857.3              | 963.9             |
| Investment income                          | 61.4              | 100.2   | 103.3   | 117.1   | 170.8   | 203.4              | 244.6             |
| Government, n.i.e.                         | 290.5             | 560.7   | 501.1   | 468.1   | 415.9   | 416.6              | 432.2             |
| Other services                             | 11.5              | 12.0    | 12.4    | 10.7    | 11.6    | 12.9               | 12.8              |
| <u>Imports of Goods and Services</u>       | 3,816.8           | 4,200.7 | 4,574.7 | 5,265.3 | 6,469.8 | 7,826.0            | 9,511.4           |
| Merchandise including non-monetary gold    | 3,497.8           | 3,824.6 | 4,148.3 | 4,759.0 | 5,862.7 | 7,047.7            | 8,539.4           |
| Freight and insurance                      | 223.9             | 231.8   | 263.6   | 314.7   | 377.5   | 466.3              | 613.6             |
| Travel and other transportation            | 42.1              | 53.0    | 60.0    | 69.5    | 90.2    | 104.8              | 121.9             |
| Investment income                          | 30.1              | 40.5    | 42.1    | 45.5    | 50.5    | 82.9               | 82.2              |
| Government, n.i.e.                         | 2.6               | 7.0     | 17.3    | 21.7    | 8.5     | 11.9               | 15.2              |
| Other services                             | 20.3              | 43.8    | 43.4    | 54.9    | 80.4    | 112.4              | 139.1             |
| Resource Balance<br>(- = inflow)           | -196.5            | 48.2    | -187.4  | -435.2  | -660.3  | -1,381.0           | -2,635.0          |
| Transfer Payments (net)                    | -48.2             | -44.9   | -39.2   | -40.9   | -39.1   | -23.6              | -26.8             |
| Private                                    | -40.2             | -39.3   | -42.8   | -48.8   | -50.0   | -63.5              | -73.5             |
| Central Government                         | -8.0              | -5.6    | 3.6     | 7.9     | 10.9    | 39.9               | 46.7              |
| Current Account Balance                    | -244.7            | 3.3     | -226.6  | -476.1  | -699.4  | -1,904.6           | -2,661.8          |
| <u>Non-Monetary Capital (net)</u>          | 22.7              | 51.2    | 113.0   | 270.9   | 173.3   | 443.9              | 461.2             |
| Private long-term (net)                    | 18                | 56      | 86      | 95      | 114     | 306                | 339               |
| Official (net)                             | 5                 | -5      | 27      | 176     | 59      | 138                | 122               |
| IBRD Loans (net)                           | -                 | 38      | 18      | 28      | 33      | 61                 | 54                |
| Drawings                                   | -                 | (39)    | (20)    | (30)    | (36)    | (66)               | (60)              |
| Repayments                                 | -                 | (-1)    | (-2)    | (-2)    | (-3)    | (-5)               | (-6)              |
| Other official                             | 5                 | -43     | 9       | 148     | 26      | 77                 | 68                |
| Balancing Item                             | 335.4             | 132.6   | 472.5   | 753.3   | 993.9   | 1,922.0            | 3,045.2           |
| Currency Payment Surplus<br>or Deficit     | 113.4             | 187.1   | 358.9   | 548.1   | 467.8   | 461.3              | 844.6             |
| Monetary Movements (net)<br>(- = increase) | -113.4            | -187.1  | -358.9  | -548.1  | -467.8  | -461.3             | -844.6            |
| IMF accounts                               | -                 | -23.1   | -       | -       | -       | -                  | -5.3              |
| Currency Board's foreign<br>assets         | -22.5             | -52.6   | -29.4   | -48.8   | -103.7  | -148.3             | -127.5            |
| Commercial banks' foreign<br>assets        | 26.7              | -34.2   | -54.7   | 115.4   | -175.4  | 103.5              | 135.7             |
| Central Government assets                  | -117.6            | -77.2   | -274.8  | -614.7  | -188.7  | -416.5             | -347.5            |

Source: Budget Speech of the Minister of Finance, March 1972.

The smuggling was given a powerful boost by President Soekarno's "Confrontation policy" against Malaysia (1963-65) as the policy imposed a complete Indonesian embargo on trade with Singapore (then a part of Malaysia). Although the embargo was removed in 1965, the existence of other controls makes smuggling a very attractive proposition. The embargo, no doubt, reduced the total volume of exchanges between the two countries although it increased the unofficial exchanges. This is the second factor making time series trade statistics rather unusable for any mathematical trend treatment.

The third factor was negotiations (1963-66) between Singapore and West Malaysia about formation of a common market and their failure. Industrialization in Singapore was temporarily quickened by the prospect of the common market, exports of some products to West Malaysia rose, and then dropped with the failure of the common market arrangements and the imposition of tariffs by West Malaysia.

Singapore's total official exports, that is entrepot exports (re-exports) plus the exports proper (called in the Singapore English "domestic exports") are shown in Table 2. An inspection, however, of Table 2 casts some doubt about the plausibility of the preceding figures representing accurately total exports. The item called "Balancing Item", normally called "Errors and Omissions" in international statistics, amounts in this Table for 1971 to over 3 billion Singapore dollars or practically a half of Singapore's total exports, or one third of the value of Singapore's imports in that year. Without this item (or what the item stands for) the Singapore balance of payments would be in a fundamental disequilibrium. This item covers handsomely the enormous deficit in Singapore's Current Account. As this "Balancing Item" is given after non-monetary capital flow and is so vast, one has to conclude, that even if one allows for the usual "errors

and omissions" the bulk of this item must stand for the (at present) very large favourable unrecorded balance of trade with Indonesia. The fact that this "Balancing Item" grew so rapidly into that extraordinary figure, since the end of the "Confrontation", and during a period of economic recovery of Indonesia from the economic mismanagement by Soekarno (see Table 2), strongly suggests the above view. Since this item reflects only the balance of trade with Indonesia it is impossible to guess the size of exports, given the fact that figures for imports from Indonesia are not published either. But what is clear is that exports (entrepot and "domestic") must be vast to give so large a net balance. Consistently with the intention to suppress Indonesian trade in the by-country statistics, commodity statistics also exclude dealings with Indonesia. Thus one can only guess what might be the composition and size of Singapore's exports to Indonesia.

There is a tendency in Singapore to think that most or much of this trade is re-exports of capital goods, but once we realise the facts of a general inflationary demand in Indonesia, and that the Indonesian import control system would favour (official) imports of capital goods, but would fall heavily on consumer goods, it is obvious that consumer goods must loom large in the smuggling. Given the fact that Singapore supplies now some capital goods and plenty of consumer goods (of the "luxury" type) it is probable that the so-called "domestic exports" of Singapore loom large in that trade.

The next qualification about the use to which the recent trade statistics of Singapore can be put arises from the fact that Singapore (like Taiwan and Japan) has greatly expanded its exports to Vietnam in the last decade, supplying both consumer goods, and materials needed by the armed forces in Vietnam (mainly petroleum products). While in 1961 Singapore's exports to Vietnam represented a little over 1 per cent of Singapore's total exports, by 1969 at S\$447.5 million they represented practically 10 per cent of Singapore's total exports (Table 3). Since then the

TABLE 3

## SINGAPORE'S TOTAL EXPORTS BY MAJOR COUNTRIES

(Million Dollars)

| Country of Destination  | 1961    | 1962    | 1963    | 1964    | 1965    | 1966    | 1967    | 1968    | 1969    | 1970    | 1971    |
|-------------------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| West Malaysia           | 886.2   | 941.5   | 1,011.1 | 925.5   | 938.6   | 907.6   | 824.8   | 756.0   | 779.4   | 688.7   | 841.8   |
| East Malaysia           | 163.4   | 171.3   | 214.3   | 233.9   | 231.7   | 287.5   | 272.5   | 267.0   | 308.4   | 351.0   | 386.6   |
| Brunei                  | 20.6    | 20.0    | 26.2    | 35.1    | 42.1    | 48.5    | 52.4    | 55.5    | 66.5    | 78.0    | 120.5   |
| Thailand                | 83.7    | 91.1    | 95.8    | 91.2    | 68.0    | 117.6   | 129.6   | 171.5   | 177.8   | 156.8   | 159.6   |
| India                   | 47.7    | 44.7    | 36.3    | 23.9    | 25.2    | 26.9    | 19.8    | 19.4    | 37.0    | 30.6    | 25.1    |
| Hong Kong               | 66.0    | 70.4    | 90.4    | 156.3   | 132.8   | 120.4   | 116.9   | 141.7   | 143.0   | 194.0   | 289.1   |
| China, People's Rep. of | 11.5    | 2.3     | 16.3    | 1.0     | 22.4    | 137.2   | 95.8    | 81.2    | 174.8   | 69.4    | 46.6    |
| Taiwan                  | 7.9     | 7.8     | 7.5     | 10.5    | 11.5    | 15.7    | 19.9    | 26.1    | 31.1    | 37.5    | 43.8    |
| Japan                   | 175.2   | 160.6   | 136.7   | 95.0    | 112.2   | 123.3   | 156.1   | 274.4   | 336.3   | 361.5   | 379.8   |
| Vietnam, Rep. of        | 39.2    | 51.6    | 63.4    | 65.5    | 112.0   | 256.4   | 305.1   | 350.2   | 447.5   | 336.6   | 392.7   |
| Australia               | 78.8    | 80.9    | 86.7    | 77.7    | 93.8    | 70.3    | 73.0    | 89.3    | 123.0   | 160.0   | 257.2   |
| United Kingdom          | 245.3   | 216.8   | 202.9   | 183.1   | 192.4   | 184.8   | 211.7   | 245.5   | 273.7   | 324.5   | 333.7   |
| France                  | 79.4    | 72.0    | 61.7    | 48.5    | 46.0    | 61.9    | 55.1    | 60.5    | 92.5    | 95.3    | 86.5    |
| West Germany            | 67.6    | 69.1    | 70.3    | 48.0    | 57.9    | 48.8    | 53.5    | 81.9    | 114.6   | 136.2   | 113.7   |
| Italy                   | 82.1    | 70.6    | 70.9    | 39.2    | 43.7    | 45.1    | 55.0    | 45.4    | 58.4    | 69.2    | 63.7    |
| Netherlands             | 52.6    | 47.7    | 54.0    | 24.9    | 34.9    | 50.3    | 62.8    | 86.3    | 67.1    | 72.0    | 69.6    |
| Spain                   | 22.5    | 28.2    | 21.4    | 16.9    | 20.8    | 22.7    | 20.5    | 23.0    | 36.1    | 46.1    | 40.5    |
| Canada                  | 33.7    | 36.1    | 32.7    | 25.7    | 26.7    | 33.9    | 33.9    | 47.9    | 61.3    | 56.8    | 63.3    |
| U.S.A.                  | 223.0   | 283.6   | 231.8   | 116.5   | 124.9   | 161.5   | 244.0   | 329.5   | 508.5   | 527.3   | 634.8   |
| U.S.S.R.                | 137.3   | 136.3   | 154.9   | 75.5    | 126.6   | 110.6   | 89.9    | 111.0   | 129.1   | 142.4   | 115.6   |
| Other Countries         | 734.8   | 814.2   | 789.2   | 478.0   | 489.6   | 544.6   | 598.2   | 627.4   | 774.6   | 821.9   | 907.1   |
| Total                   | 3,308.5 | 3,416.8 | 3,474.5 | 2,771.9 | 3,004.1 | 3,373.6 | 3,490.5 | 3,890.7 | 4,740.7 | 4,755.8 | 5,371.3 |

Source: Yearbook of Statistics: Singapore 1971/72, Department of Statistics, Singapore.

Note: Exports to Indonesia are not included in this Table, not even among the item "Other Countries".

de-escalation of military activities in Vietnam has reversed the marked growth of Singapore exports to Vietnam into a decline. The arrival of peace in Vietnam will eliminate much of this trade. Whether Singapore will become a supplier to Vietnam of capital goods for the development of that country will depend on many political conditions, but is not particularly likely.

A substantial portion of Singapore's exports does not get caught in the statistician's net because the goods involved are taken by tourists in their personal luggage for which no declaration is made. In the last ten years "tourist" expenditures are estimated to have risen from about 1.5 per cent of GDP to about 5 per cent, or to S\$300 million. Given the fact that on average the tourist stays about 3 days and assuming that on average he spends \$50-a day (\$20 room, \$ 20 meals, \$10 extras and taxis) he would spend less than \$200 on tourism proper during his stay. For over 600 thousand visitors this would give S\$120 million. Consequently the balance of their expenditures, S\$180 million, would go for manufactured goods that would be "exported" by the tourist. This figure is higher than Singapore's total exports to Thailand (S\$160 million in 1971) and somewhat lower than those to Australia (S\$ 257 million). Further, for some time one can expect a growth of this item. Recent growth has certainly been fast.

The other important omission from the official exports figures is the value of ship-repair and servicing. (The ships built are included in "Exports", but they are a very small, even though rising proportion of shipyard business). Ship-repair and servicing, on the other hand, is reported in the balance of payments statistics together with other items under "Services". But as an industry it is already a vast one and it does not differ in any essential way from manufacturing and, in addition, industry sources estimate that over 80 per cent of the work done, is for foreign shipowners, thus it must be classified as exports.

TABLE 4  
SINGAPORE'S ESTIMATED SHIP-REPAIR REVENUE  
(Mill. S- $\text{\$}$ )

|   | 1965 | 1966 | 1967 | 1968 | 1969 | 1970 | 1971 |
|---|------|------|------|------|------|------|------|
| The "Big Three";<br>Keppel, Jurong, Sembawang | 27   | 36   | 55   | 61   | 73   | 110  | 143  |
| Other than the "Big Three"                    | 14   | 15   | 17   | 19   | 24   | 31   | 40   |
| Total   | 41   | 51   | 72   | 80   | 97   | 141  | 183  |

Source: The Economist Intelligence Unit (S.E. Asia)

The Economist Intelligence Unit forecast the total revenue of ship-repair to grow to S $\text{\$}$  273 million in 1974, S $\text{\$}$  408 million in 1977 and S $\text{\$}$  535 million in 1980.

## 2. The Role of Exports in the Development Process of Singapore

Given the qualifications about the coverage of the official published statistics on exports, discussed in the preceding paragraphs, it is clear that such statistics have a limited value. Nonetheless they tend to reveal some trends which after some sort of allowance for the distortions, are of interest. The first point to make is that Singapore's tremendous growth of exports went pari passu with a tremendous growth of all economic aggregates, saving, investment, GMP and others. Tables 5 and 6 give data on this remarkable growth.

Not only that total exports of Singapore are large (when compared to GDP) but even the particular part of them, re-exports, usually called "entrepot exports" make a very large contribution to the generation of GDP.

It can be seen from the following Tables 5 and 6 that in the year 1960 (and of course, before) pure entrepot exports contributed more to GDP

TABLE 5

## GROSS DOMESTIC PRODUCT BY INDUSTRIAL SOURCE

| Industrial Origin                     | (S\$ Million) |         |         |         |         |         |         |         |         |         |         |         |
|---------------------------------------|---------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
|                                       | 1960          | 1961    | 1962    | 1963    | 1964    | 1965    | 1966    | 1967    | 1968    | 1969    | 1970    | 1971*   |
| Agriculture and fishing               | 124.0         | 135.0   | 136.0   | 146.8   | 142.0   | 139.6   | 152.8   | 146.0   | 148.2   | 154.2   | 171.2   | 188.3   |
| Manufacturing and quarrying           | 187.4         | 218.3   | 246.8   | 294.8   | 330.5   | 414.3   | 486.8   | 616.5   | 716.0   | 897.2   | 1,143.8 | 1,490.9 |
| Construction                          | 41.9          | 66.0    | 71.0    | 94.7    | 113.9   | 130.6   | 128.7   | 150.1   | 179.8   | 205.5   | 302.2   | 352.5   |
| Electricity, gas and water services   | 47.3          | 47.2    | 53.0    | 52.8    | 59.2    | 54.0    | 73.3    | 92.7    | 108.8   | 119.5   | 138.3   | 157.3   |
| Entrepot and domestic trade           | 650.1         | 703.9   | 717.8   | 859.4   | 708.1   | 722.0   | 878.7   | 998.5   | 1,308.6 | 1,547.9 | 1,742.9 | 1,909.6 |
| (a) Entrepot trade                    | 380.1         | 398.9   | 378.8   | 441.1   | 286.2   | 305.6   | 349.0   | 408.5   | 538.7   | 666.1   | 683.1   | 703.6   |
| (b) "Domestic trade"***               | 269.0         | 315.0   | 339.0   | 418.3   | 421.9   | 466.4   | 529.7   | 590.0   | 769.9   | 881.8   | 1,059.8 | 1,206.0 |
| Ownership of dwellings                | 92.6          | 101.0   | 104.0   | 110.4   | 118.1   | 128.7   | 141.5   | 152.5   | 157.2   | 184.6   | 204.1   | 240.6   |
| Government services                   | 106.6         | 144.0   | 164.0   | 189.0   | 191.0   | 214.3   | 246.4   | 264.9   | 300.3   | 321.0   | 390.0   | 452.0   |
| Other services                        | 796.1         | 824.4   | 876.8   | 935.9   | 1,037.5 | 1,189.9 | 1,257.0 | 1,270.9 | 1,328.1 | 1,402.8 | 1,582.6 | 1,680.0 |
| Gross Domestic Product at Factor Cost | 2,046.0       | 2,239.8 | 2,371.4 | 2,683.8 | 2,700.3 | 3,043.4 | 3,365.2 | 3,692.1 | 4,257.0 | 4,832.7 | 5,675.1 | 6,471.2 |

Notes: \*Figures for 1969 have been revised on latest available data in respect of the construction industry.

\*\*"Domestic trade" comprises internal trade as well as "domestic exporting". (This note is added by the present writer).

Sources: (a) Yearbook of Statistics: Singapore 1971/72, Chief Statistician, Government of Singapore.

(b) Budget Speech of the Minister of Finance, March 1972.

TABLE 6

## PERCENTAGE SHARE OF G.D.P. BY INDUSTRIAL ORIGIN, 1960-1971

| Economic Sector                       | 1960   | 1961   | 1962   | 1963   | 1964   | 1965   | 1966   | 1967   | 1968   | 1969   | 1970   | 1971<br>(Prelim.) |
|---------------------------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|-------------------|
| Gross Domestic Product At Factor Cost | 100.0  | 100.0  | 100.0  | 100.0  | 100.0  | 100.0  | 100.0  | 100.0  | 100.0  | 100.0  | 100.0  | 100.0             |
| Agriculture and fishing               | 6.1    | 6.0    | 5.8    | 5.5    | 5.3    | 4.6    | 4.5    | 4.0    | 3.5    | 3.2    | 3.0    | 2.9               |
| Manufacturing and quarrying           | 9.2    | 9.7    | 10.4   | 11.0   | 12.2   | 13.6   | 14.5   | 16.7   | 16.8   | 18.6   | 20.2   | 23.0              |
| Construction                          | 2.0    | 2.9    | 3.0    | 3.5    | 4.2    | 4.3    | 3.8    | 4.1    | 4.2    | 4.3    | 5.3    | 5.5               |
| Electricity, gas and water services   | 2.3    | 2.1    | 2.2    | 2.0    | 2.2    | 1.8    | 2.2    | 2.5    | 2.6    | 2.5    | 2.4    | 2.4               |
| Wholesale and retail trade            | 31.8   | 31.4   | 30.3   | 32.0   | 26.2   | 25.4   | 26.1   | 27.0   | 30.7   | 32.0   | 30.7   | 29.5              |
| (a) Entrepot trade                    | (18.6) | (17.4) | (16.0) | (16.4) | (10.6) | (10.4) | (10.4) | (11.0) | (12.6) | (13.8) | (12.0) | (10.9)            |
| (b) "Domestic trade"                  | (13.2) | (14.1) | (14.3) | (15.6) | (15.6) | (15.5) | (15.7) | (16.0) | (18.1) | (18.2) | (18.7) | (18.6)            |
| Ownership of dwellings                | 4.5    | 4.5    | 4.4    | 4.1    | 4.4    | 4.2    | 4.2    | 4.1    | 3.9    | 3.8    | 3.6    | 3.7               |
| Government services                   | 5.2    | 6.4    | 6.9    | 7.0    | 7.1    | 7.0    | 7.3    | 7.2    | 7.1    | 6.6    | 6.9    | 7.0               |
| Other services                        | 38.9   | 36.8   | 37.0   | 34.9   | 38.4   | 39.1   | 37.4   | 34.4   | 31.2   | 29.0   | 27.9   | 26.0              |
| of which: Military services           | 13.5   | n.a.   | n.a.   | n.a.   | n.a.   | n.a.   | 16.3   | 13.3   | 10.7   | 8.4    | 7.4    | 6.5               |
| Tourism                               | 1.5    | n.a.   | n.a.   | n.a.   | n.a.   | n.a.   | 2.5    | 3.3    | 3.4    | 4.7    | 4.9    | 5.0               |
| Banking and Insurance                 | 1.7    | n.a.   | n.a.   | n.a.   | n.a.   | n.a.   | 1.8    | 1.8    | 1.7    | 1.7    | 1.7    | 1.7               |

\*"Domestic trade" comprises internal trade as well as "domestic exporting". (This note is added by the present writer).

Sources: (a) Budget Speech of the Minister of Finance, March 1972.

(b) Yearbook of Statistics: Singapore 1971/72, Chief Statistician, Government of Singapore.

than did manufacturing and quarrying taken together. According to the Table 5 in 1964 the contribution to GDP of the entrepot trade was overtaken by the combined contribution of manufacturing and quarrying. However, two factors came to distort the trend in 1964. Firstly, 1964 was the first full year of Soekarno's "Confrontation" policy, which would have reduced somewhat Singapore's actual entrepot exports to Indonesia. The second one was purely "statistical" in the sense that an important part of entrepot trade, that is the part directed to Indonesia, was suppressed in Singapore's publications in 1964. In the Tables 5 and 6 it was, of course, only the second factor that exerted an influence, in actual developments only the first one. The "Confrontation" policy and the trade embargo on Singapore goods were discontinued in 1965 and therefore Singapore's exports to Indonesia would have picked up. After the fall of Soekarno, the Indonesian economy has recovered, and thanks to this Singapore's exports and re-exports to Indonesia would have grown fast, although still hampered somewhat by the general system of import control. Although under the circumstances one cannot be sure, it is probable that manufacturing and quarrying taken together have come to equal the contribution to GDP made by "entrepot exports" only by 1971. This feature of the Singapore economy is merely a reflection of the fact that all services continue to contribute to the GDP a great deal more than the production of goods, in particular in 1960 all services contributed 82.7 per cent of GDP and in 1971 the figure was 68.6 per cent. (Table 6).

Inspection of Table 7 shows several important developments in the field of Singapore manufacturing and exports of manufactures. The first row (A) shows a very rapid growth of "domestic exports" in the last decade. This series of figures for "domestic exports" is made up by the Government Statistics Department from export declarations. Since 1964 this series excludes exports to Indonesia. Otherwise, this series is practically all exports of all manufactures (by manufacturers or by

TABLE 7

## "DOMESTIC EXPORTS", MANUFACTURING OUTPUT AND DIRECT MANUFACTURING EXPORTS

|  | 1960  | 1961  | 1962  | 1963  | 1964  | 1965    | 1966    | 1967    | 1968    | 1969    | 1970    |
|--|-------|-------|-------|-------|-------|---------|---------|---------|---------|---------|---------|
| (A) Total "domestic exports"*(S\$ Million)                       | 217   |       | 252   | 277   | 297   | 346     | 965     | 1,111   | 1,398   | 1,675   | 1,827   |
| (B) Value of manufacturing output (S\$ Million)                  | 465.6 | 518.4 | 660.3 | 843.8 | 927.9 | 1,086.4 | 1,325.8 | 1,627.2 | 2,175.7 | 3,213.9 | 3,891.0 |
| (C) % increase in manufacturing over preceding year              | -     | 11    | 27    | 28    | 10    | 17      | 22      | 27      | 29      | 48      | 21      |
| (D) Direct exports of manufactured products (S\$ Million)        | 164.3 | 179.1 | 217.5 | 223.8 | 266.4 | 349.2   | 404.9   | 508.2   | 598.5   | 1,265.0 | 1,523.0 |
| (E) % increase in direct exports over preceding year             | -     | 9     | 21.5  | 2.9   | 19.0  | 31.1    | 16.0    | 25.5    | 17.8    | 111.4   | 20.4    |
| (F) Apparent export orientation of output ( $\frac{D}{B}$ ) %    | 35.3  | 34.5  | 32.9  | 26.5  | 28.7  | 32.1    | 30.5    | 30.1    | 27.5    | 39.4    | 38.9    |
| (G) "Unexported" manufactured output (B - D) (S\$ Million)       | 301.3 | 339.3 | 442.8 | 620.0 | 695.5 | 737.2   | 920.9   | 1,179.0 | 1,577.2 | 1,948.9 | 2,368.0 |
| (H) Plausible domestic use of manufactured goods** (S\$ Million) | 301.3 | 324   | 349   | 375   | 404   | 435     | 468     | 504     | 542     | 583     | 627     |
| (I) Change in manufactured stocks during year (S\$ Million)      |       | 0     | 1     | 8     | 12    | 10      | 13      | 9       | 9       | 84      | 31      |
| (J) Unaccounted manufactured output G - (H + I) (S\$ Million)    | 0     | 0     | 3     | 237   | 244   | 292     | 440     | 666     | 1,026   | 1,282   | 1,709   |

Notes: \*"Domestic exports" excludes bunker fuels and processed re-exports.

\*\*The assumptions for estimation of "plausible domestic use of manufactured goods" are given in the text.

Sources: Reports on the Census of Industrial Production, 1960 - 1970.

Annual Reports of the E.D.B.

Budget Speech of the Minister of Finance, March 1972.

merchants) since primary product exports are negligible, and since it excludes bunker fuels and processed re-exports.

Row B and C show the spectacular growth of manufacturing in Singapore in the last decade. These figures are based on an annual census of manufacturing production. In most of the years the increases over the preceding year were over 20 per cent, and in one year 1969, the increase was an extraordinary 48 per cent.

Rows D and E show an almost equally fast growth of "direct export" by the manufacturers. "Direct export" figures are also obtained from the annual census of manufacturing and since there is no division there by country, exports to Indonesia are not excluded in principle. But manufacturers do not participate much in the "unofficial exports" to Indonesia. This type of business is done by Singapore merchants who often do barter deals with the Indonesian merchants. The "direct export" figures of manufactured goods show, however, so great variability in the growth rate that they are suspect on that ground alone: in one year they grew by under 3 per cent and in another year they grew by an incredible 111 per cent.

Row F shows the "apparent" export-orientation of Singapore manufacturing, and since it is easy to find production and "direct export" data in the annual census of manufacturing by the I.S.I.C. breakdown it is attractive at first sight, but given the greatly incomplete coverage of the export figures in the row D, its attraction wanes. None the less it is clear enough that Singapore manufacturing is highly export-oriented, especially in view of the fact that the export data are understated.

Row G gives figures for the portion of manufactured goods that were not exported directly by the manufacturer. The very uneven growth of figures in this row (G), from 1963 to 1965 the first jump, and the second jump after 1966, suggests that the first jump is explainable by

a shift of a proportion of output that would normally have been exported openly to Indonesia into unofficial exports (from the point of view of Singapore) and smuggling into Indonesia (from the point of view of Indonesia) of embargoed Singapore goods under Soekarno's period of "Confrontation". The second jump, probably reflects economic recovery in Indonesia after 1966 and Singapore's increased capacity to supply Indonesia's needs for manufactured goods of all kinds.

In a rough attempt to gauge the possible values of these unreported exports the Table 7 row H gives estimates of "plausible domestic use" in Singapore of the "unexported" manufacturing output. An assumption was made there that in Singapore the domestic "consumption" of manufactured goods between 1960-1970 grew at the same rate as grew total private consumption expenditure, i.e., 7.6 per cent p.a. Given the facts that nutrition levels and total private educational expenditures grew very rapidly in Singapore in that period perhaps the assumption is not far wrong.

Row I of the Table 7 gives changes in stocks of finished manufactured goods held by manufacturers (from the census). Thus, in the end row J gives the portion of manufacturing output that is not accounted for, so far. Again there are two distinct periods noticeable, the "Confrontation" and the subsequent economic recovery in Indonesia. What is significant and telling is that in the "Confrontation" years 1963, 1964 and 1965 when Soekarno put an official ban on all Singapore goods the increases in stocks of finished manufactured goods held by Singapore merchants were negligible. This would suggest that Soekarno's ban did not in fact give the Singapore manufacturers much trouble. The merchants carried on their exports as usual, except that their trade became completely unofficial.

The very high values for the unaccounted for manufactured products, especially after 1966 can be explained (accounted for) mainly by the unreported Singapore exports to Indonesia, partly by the value of manufactured goods taken out of Singapore by tourists (tourism has grown rapidly) and to a much smaller extent may be due to an increase in indirect exporting by merchants.

### 3. Foreign Capital in Manufacturing and Exporting

The entry of foreign capital into manufacturing (and therefore also exporting) is a quite new phenomenon in Singapore. For many years in the past there were only a few firms with foreign shareholders. The foreign shareholders were portfolio investors, and being small and spread all over the world, did not exert any influence on the company. They were mainly in the food processing and beverage industries. The modern foreign investor in Singapore is usually a different type, an individual, or more often a company abroad who takes an active interest in the organisation of production and marketing, who provides not only capital but also some know-how.

TABLE 8  
FOREIGN CAPITAL<sup>+</sup> IN MANUFACTURING AT END OF 1970 BY COUNTRY OF ORIGIN

| Country of Origin | Foreign Capital at end of 1970<br>S\$ million | Investment Commitment at end of 1970<br>S\$ million | Total<br>S\$ Million | Country's Percentage of Total |
|-------------------|---|---|----------------------|-------------------------------|
| U.S.A.            | 383   | 422   | 805                  | 46.0                          |
| U.K.              | 199   | 95  | 294                  | 16.8                          |
| Netherlands       | 183   | 57  | 240                  | 13.7                          |
| West Germany      | 3   | 103   | 106                  | 6.1                           |
| Japan             | 68  | 20  | 88                   | 5.0                           |
| Other             | 210   | 6   | 216                  | 12.4                          |
| <b>Total</b>      | <b>1,046</b>                                  | <b>703</b>  | <b>1,749</b>         | <b>100.0</b>                  |

<sup>+</sup> Excluding land in most cases.

Source: EDB Annual Report 1970, p. 24

The Table 8 gives foreign capital holding in Singapore manufacturing at the end of 1970 as amounting to S\$1,749 million. However, more than a half of this investment was made only in 1970.<sup>1</sup> The German and Japanese investor's entry in particular is very recent and can be expected to rise in near future. The other interesting feature of this Table is that Taiwan's investment is not high enough to merit a place of its own. This surprising picture is due to the fact that investment is shown in the Table by value of capital, and not by the number of firms, managers of foreign origin or skilled workers. In the subsequent sample survey, Taiwanese investment looms large (See Part III).

TABLE 9

FOREIGN CAPITAL IN MANUFACTURING BY MAJOR INDUSTRY GROUP AT END OF 1970

| INDUSTRY                           | Foreign Capital<br>at end of 1970<br>S\$ Million | Investment<br>Commitment at<br>end of 1970<br>S\$ Million | Total Foreign<br>Capital at<br>end of 1970<br>S\$ Million | Per cent of<br>Total foreign<br>Investment in<br>all manufacturing |
|------------------------------------|--|---|---|--|
| Petroleum                          | 555  | 385   | 940   | 53.7   |
| Metals &<br>Transport<br>Equipment | 143  | 136   | 279   | 16.0   |
| Electrical &<br>Electronic         | 82   | 76  | 158   | 9.0  |
| Chemical                           | 59   | 10  | 69  | 4.0  |
| Timber, Paper,<br>Printing, Publ.  | 38   | 27  | 65  | 3.7  |
| Textiles                           | 52   | 8   | 60  | 3.4  |
| Food &<br>Beverages                | 34   | 5   | 39  | 2.2  |
| Other                              | 101  | 38  | 139   | 8.0  |
| <b>Total</b>                       | <b>1,046</b>                                     | <b>703</b>  | <b>1,749</b>  | <b>100.0</b>   |

Source: EDB Annual Report 1970, p. 25.

<sup>1</sup> EDB, Annual Report 1970, p. 24.

As the preceding Table 9 shows, more than half of the foreign investment in Singapore went into petroleum industry which is completely foreign-owned. That industry in Singapore already services much of the region and is not very likely to grow much unless it moves from refining into petro-chemicals. In "transport equipment", i.e., vehicles, foreign capital is also dominant. In shipyards, however, (not included in the Table because they are classified as providing "Services") foreign investment is small (mainly Japanese). In shipyards the Singapore Government is the main owner. Foreign capital is also strongly represented in tobacco manufacturing, non-metallic mineral products, basic metals and electronics.

A recent study<sup>1</sup> gives the data for partly and wholly foreign-owned firms in several aspects of Singapore manufacturing as follows:-

|                     |       |
|---------------------|-------|
| Number of firms     | 25.2% |
| Value of output     | 68.9% |
| Employment          | 55.3% |
| Labour remuneration | 57.5% |
| Direct exports      | 83.5% |

There are some conclusions that can, and some that cannot be drawn from the above Table. Firstly, the average foreign firm is in terms of employment, and value of output somewhat more than twice as large as the domestic-owned firm. The firm with foreign capital is slightly less labour-intensive than the fully Singapore-owned one. It cannot be concluded that, other things being equal, it pays higher wages than the ruling market rates for various skills. Its share in the total manufacturing wage bill is admittedly slightly higher than its share

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<sup>1</sup> See Chia Siow Yue, Export Performance and Foreign Manufacturing in Singapore, cyclostyled paper. Chia gives as her source "Statistics Department, Census of Industrial Production 1970". However, till the day of writing the present paper, the Statistics Department has not carried out any such study. The findings therefore must be taken as those of Mrs. Chia, not of the Statistics Department.

of labour, but in all probability it tends to employ different (higher) grades of skills. This can be easily seen from the fact that average wage bill per employee in petroleum industry, a fully-foreign owned one, but a high skill one, is higher than the national figure.<sup>1</sup> Finally, the share of "direct exports" held by companies with some foreign capital, 83.5 per cent, cannot be viewed as their true percentage share in all manufactured exports, although the true share is probably fairly high. It stands to reason that a company with a foreign parent or sister company would have an easy access to direct exporting. It is highly probable that companies with foreign capital association rely less on local trading companies (indirect exporting), and probably also have a lower share of their output sold to the foreign tourists.

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<sup>1</sup> Department of Statistics, Yearbook of Statistics, Singapore 1971/72, Tables 5.3 and 5.4.

### PART III

#### MANUFACTURER-EXPORTERS FIRM PROFILE: QUESTIONNAIRE<sup>1</sup> INTERVIEW FINDINGS

##### 1. The Nature of the Sample

For the purpose of finding out the characteristic features of Singapore manufacturer-exporters, the problems that they meet, and the pattern of their behaviour, a sample of the firms concerned was interviewed in depth by the writer. The sample, a random one, was taken out of a total of 772 manufacturer-exporters<sup>2</sup> who had applied to the Ministry of Finance for certificate that their product is of "domestic origin",<sup>3</sup> and got one. The sample was made up of 29 manufacturer-exporter firms, of which 20 had, or have "pioneer status", 9 "non-pioneer" manufacturer-exporter firms, and in addition it included 4 shipyard firms (which are in a somewhat special category and are not discussed in this section). This larger proportion of "pioneer" firms was put into the sample deliberately although the proportion is not based on any exact criterion. In 1969 "pioneer" firms represented by number of firms, about one-seventh of all manufacturer firms employing 10 workers or more, yet the value of their output was almost a half of the total manufacturing output, but correspondingly the number of their employees was also almost

<sup>1</sup>The questionnaire used was basically that prepared by Dr. J.B.Donges of the Kiel Institute with only minor alterations.

<sup>2</sup>It should be noted that the latest figure available for the number of the manufacturers is for 1970 and it amounts to 1,825 firms in total (Source: Ministry of Culture, Singapore Facts and Pictures, p. 36) but the balance either did not export at all, or did not qualify for the certificate of "domestic origin".

<sup>3</sup>"Domestic origin" is defined by the Singapore Government as a product with at least 25 per cent of value originated in Singapore. Exports of such firms are called in the Singapore English "domestic exports". Exports of products that do not meet this criterion are called "re-exports" or entrepot exports. In Singapore conditions this classification can sometimes be important.

a half of the total employment in manufacturing. The "gross value added" per employee was only slightly higher among the "pioneers" than among the "non-pioneers", on the other hand "direct" exports per employee were about 50 per cent higher among "pioneers" than among all manufacturers. Since then the "pioneer" firms would have increased their number of firms (because of new awards of the status), value of output and value of exports (because both of new entrants' activities, and because of the older entrants reaching for their maturity output). Since the award of the "pioneer status" may have some at least psychological influence, stimulating the future growth of the approved categories of industries, it would be reasonable to give stronger representation to "pioneer" firms in the sample than certainly their present number, or even present output and exports would warrant. But given the rapid growth of the "pioneer" activity (current and expected) it was impossible to find any defensible weighting for them. Thus the "pioneer" firms (still chosen at random) were given arbitrarily stronger representation. This unavoidable arbitrariness probably does not make much difference because no significant differences emerge between the "pioneers" and other firms, except for size, and export value per employee (the latter can be expected to grow as the new firms come into full swing and full use of their facilities).

Very few of the approached manufacturer-exporter firms showed reluctance to be interviewed. Those that agreed to be interviewed gave co-operation to the best of their ability, except that they were sometimes unable and sometimes unwilling to give figures on value added and the related data.

## 2. Specific Findings About Sampled Firms

### Age

As one expect from the fact that industrialisation of Singapore started from around the date of obtaining independence (1965) all the firms in the sample were of the independence vintage except for four firms which were of quite old vintage (over 20 years). Again, not very surprisingly there was not much difference in the average, or the most frequent age, of the "pioneers" and "non-pioneers" except that of the four old firms (over 20 years) three were "non-pioneers", and among "pioneers" only one was over 20 years old . The typical age would be five years or younger with three years most common, both among "pioneers" and "non-pioneers".

### The importance of "pioneer status"

The total number of firms with "pioneer status" was 322 at the end of 1971. In the sample there were 20. In the answer to the question "...whether pioneer status was important for them, that is whether without it the policy of the company would have been any different," there was the following response:

3 firms said -----"not relevant at all";

4 firms said -----"not important";

10 firms said -----"not very important";

(Two of these said that the only benefit stemming from "pioneer" status was the non-statutory, de facto, privilege of exemption from tariffs on inputs. But such exemption could have been obtained by non-pioneers too.)

The total of negativ answers about the influence of "pioneer status" was thus 17. Only three companies in the "pioneers" sample attached any importance to the status, two of them (one American, the other Taiwanese) said that without the status they might not have come and the third said that the status was "fairly important" to them. All of the three, as one would expect from the answer were fairly successful (they worked 3 shifts). One of these two firms that found the "pioneer" status important, said in justification that the Singapore Government promised them that the Government would not allow a new firm in the same industry without their permission. This was probably misunderstanding: the most the Government could have done would have been to refuse to the potential second-entrant any "pioneer status".

#### Conclusion:

Judging by the sample it is clear that "pioneer status" was an important factor in entrepreneurial decision-making only in a few isolated exceptional cases perhaps 10 per cent of the 322 pioneer firms in all. Although those few, 10 per cent, were influenced by the award of the status the influence was probably mainly psychological: the two foreign firms in the sample were influenced more by this sign of welcome than the prospect of income tax saving (in the difficult formativ first 5 years). The American firm said that their alternativ location was a European country "with bad industrial relations."

### The number of shifts worked

The number of shifts worked is an indicator of firms' profitability and demand for its product. On occasion the firms used as an excuse for the absence of a second or a third shift "the shortage of skilled labour". However, although a shortage of skilled labour is appearing in Singapore taken as a whole, not profitable single firm need go short of labour if it is prepared and able to pay a somewhat higher wage rate than the ruling one in that industry for that shift. Thus this argument of "shortage of labour" at the micro-economic level has to be reduced in most cases to shortage of adequate demand and profit margin. A textile and one fibreglass firm argued that one shift is "normal in that industry" because of problems about quality control. (In view of the very great importance of quality control, shown elsewhere in the survey, this argument appears sound.) One firm in electronic components argued that it would be cheaper for them to shift that amount of production to Malaysia rather than pay the required rates of wages for the second shift in Singapore. Those firms that had only two shifts tended to argue that "as the second shift usually ends in Singapore at 11 p.m. the third shift is very unpopular with the workers". The meaning of this would be that a very high bonus would have to be paid (S\$ 2.90) to overcome the reluctance to work the third shift.

The average number of shifts worked per firm in the whole sample of (29 firms, excluding the shipyards) (after making a rough allowance for such statements as: 2 shifts in some sections and 3 shifts in other), was almost two shifts, but while for "pioneer" firms it was slightly over two shifts on average for a firm, for non-pioneer firms

it was only 1.6 shifts per firm on average. This suggests that "pioneer" firms are more profitable and happen to have a livelier demand for their products than do the non-pioneers. If one divides the whole sample (29) into those firms with some foreign capital (24) and those without (5), the firms with foreign shareholders have a slightly higher average for the number of shifts worked (2.0 shifts), than the firms without foreign shareholders (average 1.8). The difference is slight and while it could have come by chance, it tends to suggest that firms with some foreign shareholders have a better market and perhaps better profits. There is a slight independent support for this view too in the fact that the respondents with foreign shareholders frequently admitted foreign assistance in marketing abroad.

"Non-pioneers".

Among the nine non-pioneer companies there is a noticeable pattern of stagnation in most matters, with one notable exception, however, in the matter of exports, where most companies expect a very lively growth. But it would appear that the companies are doing little to improve themselves (except for some training of workers). The companies seem to depend on the initial input of capital and know-how. Their current and expected export successes, must therefore basically depend on the cheapness of labour or some other once-and-for-all factors (more about this later). In particular, only three out of the nine non-pioneer companies made any new investment last year. Only one (of the three making new investment) made any significant effort in experimentation (referred to in Table 10 as "Research"). Only one Company out of nine spent a substantial sum of money on "research" or experimentation. It was a substantially foreign-owned one. Of the remaining

TABLE 10

## SALIENT FEATURES OF NON-"PIONEER"-STATUS FIRMS IN THE SAMPLE

| Product of Firm              | Investment last year<br>S\$ thousand | Number of Workers | Sales last year<br>S\$ million | "Research" expenditure last year<br>S\$ thousand | Book value of capital<br>S\$ thousand | Foreign Capital Share<br>% | Change in Proportion of Skilled Workers | Expected increase in export sales in next 3 years<br>% |
|------------------------------|--------------------------------------|-------------------|--------------------------------|--|---------------------------------------|----------------------------|---|--|
| Wood Products                | 0                                    | 250               | 1.9                            | 0  | 50                                    | 0                          | 0                                       | 30   |
| Shoes                        | 0                                    | 61                | 0.6                            | 0  | 90                                    | 0                          | increase                                | 10   |
| Textiles                     | new firm                             | 120               |                                | 5  |                                       | 0                          | not applicable                          | new firm   |
| Beverages, Plywood, Plastics |                                      | 2,077             | 60.0                           | 225  |                                       | 88                         | 0                                       | 25   |
| Canned Food, Beverages       | 0                                    | 250               | 6.0                            | "little"   | 1,000                                 | less than 50               | 0                                       | 0  |
| Timber Products              | 100                                  | 86                | 0.2                            | 10   | 420                                   | 62                         | 0                                       | 60   |
| Leather Belts                | new firm                             | 25                | 0.3                            | 6  | 45                                    | 100                        | increase                                | 125  |
| Aluminium Sheets             | 0                                    | 90                |                                | 0  | 2,500                                 | 99                         | increase                                | 0  |
| Electrical Appliances        | 800                                  | 150               |                                | 21   | 1,000                                 | 50                         | 0                                       | 66   |

five firms with some foreign capital two spent nothing on experimentation, and three spent trivial sums (or time). It should be noted that all of these five companies had foreign ownership at a level that could give full control. The fully domestically-owned non-pioneer firms have an even poorer record in this matter. Of the three of them, two spent nothing on experimentation, and one a trivial sum. This attitude suggests that the Singapore Government's often avowed intention of developing high-skill, modern industries, and turning Singapore into a "Switzerland of the East" may in future strike trouble, as soon as wages in Singapore pick up to the level of the developed countries.

Two out of the nine companies did not expect any increase in exports in the next three years but the remaining seven expected increases from 10 per cent to 125 per cent.

### "Pioneers"

The composite picture of a "pioneer status" company that is in exporting field, shows some unexpected features. (see Table 11). Firstly, out of the 20 "pioneers" in the sample only two companies or 10 per cent, are entirely domestically-owned, and in at least 14 cases (out of 20) it must be presumed that the company is foreign-controlled (on major issues) because the foreign shareholding amounts to 40 per cent, or more, of the capital stock. In 6 cases out of 20 exporting "pioneers" the company is 100 per cent foreign owned. It is thus clear that the Singapore Government has not insisted yet on local equity share in the capital even in the "pioneer" companies, not to mention that it has not insisted on this point for the companies at large.<sup>1</sup>

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<sup>1</sup> The government has been afraid that any such insistence might hamper to entry of foreign firms and especially those with the latest know-how (the most desirable ones). The government thinks that foreign firms would up-grade the skills of Singaporeans.

TABLE 11

## SALIENT FEATURES OF "PIONEER-STATUS" FIRMS IN THE SAMPLE

| Product of Firm                 | Investment last year<br>S\$ thousand | Number of Workers | Sales last year<br>S\$ million | "Research" expenditure last year<br>S\$ thousand | Book value of capital<br>S\$ thousand | Foreign capital share<br>% | Change in Proportion of skilled Workers | Expected increase in exports sales in next 3 years<br>% |
|---------------------------------|--------------------------------------|-------------------|--------------------------------|--|---------------------------------------|----------------------------|---|---|
| Plastic Goods                   | 0                                    | 35                | 0.3                            | 0  | 200                                   | 0                          | 0                                       | 50  |
| Soya Bean Oil and Meal          | 0                                    | 100               | 24.0                           | 0  | 1,500                                 | 0                          | 0                                       | 20  |
| Shirts                          | 500                                  | 1,900             | 12.0                           | "little"   | 3,000                                 | 8                          | increase                                | 0   |
| Fabricated Building Materials   | 0                                    | 100               | 1.2                            | 0  |                                       | 100                        | increase                                | 100   |
| Plywood, etc.                   | 1,600                                | 1,350             | 20.0                           | "little"   | 9,000                                 | 75                         | 0                                       | 40  |
| Knitted Goods                   | 0                                    | 400               | 5.0                            | 100  | 10,000                                | 50                         | 0                                       | 50  |
| Canvas                          | 0                                    | 1,000             | 6.0                            | 100  | 3,300                                 | 60                         | increase                                | 33  |
| Sulphuric Acid                  | 0                                    | 35                |                                | 0  | 300                                   | 20                         | increase                                | 20  |
| Wheat Milling                   | 0                                    | 120               | 12.0                           | "little"   | 7,000                                 | 20                         | 0                                       | 0   |
| Electronic Parts                | 0                                    | 900               |                                | 20   |                                       | 100                        | increase                                | 20  |
| Rubber Products                 | 0                                    | 135               |                                | 0  |                                       | 100                        | decrease                                | 50  |
| Timber Milling                  | new firm                             | 120               | 1.2                            | 0  | 1,700                                 | 80                         | not applicable                          | 900 (new firm)  |
| Cutlery                         | 0                                    | 450               | 1.5                            | 10   | 3,000                                 | 100                        | increase                                | 40  |
| Transistor Radios, etc.         | 500                                  | 900               | 8.4                            | 360  | 1,000                                 | 50                         | increase                                | 800   |
| Paper Personal Hygiene Articles | 3                                    | 100               | 6.5                            | 3  |                                       | 100                        | 0                                       | 0   |
| Timber Products                 | 0                                    | 300               | 2.7                            | 0  |                                       | over 50                    | 0                                       | 30  |
| Food Processed and Beverages    |                                      | 450               |                                | 30   |                                       | intl. owned                | increase                                | 25  |
| Fibreglass Products             | 50                                   | 100               |                                | 10   | 200                                   | 40                         | 0                                       | 10  |
| Wigs                            | 0                                    | 10                | 0.04                           | 0  |                                       | 100                        | 0                                       | ?   |
| Saw Sharpening Equipment        | new firm                             | 30                |                                | 0  | 750                                   | 100                        | not applicable                          | >30   |

On the basis of this sample one is entitled to think that 90 per cent of all "pioneer status" companies that export are at least partly foreign-owned, and almost 33 per cent completely foreign-owned.

This sample finding is supported by (or supports) data for all the "pioneer status" companies given to the writer informally by the Economic Research Division of the Government of Singapore. According to those data out of 322 of all "pioneer status" companies (at the end of 1971) only 62 (roughly 20 per cent) were fully Singapore-owned.<sup>1</sup>

It would be easy, however, to misconstrue the sample findings. The sample covered only the firms that do export. Its findings that the vast majority (90 per cent) of "pioneers" who export was foreign-owned merely reflected the predominance of foreign-owned companies among pioneers. It does not say that a foreign-owned company is more likely to export.<sup>2</sup> If one goes outside the sampled list of exporters into the list of all "pioneer status" firms and divides them into those completely Singapore-owned and those at least partly foreign-owned, and then one makes a check company by company against the list of exporters ("domestic origin") it transpires that there is no significant difference in the export-proneness between the domestically-owned and foreign-owned "pioneer status" firms. To be precise, among all the 322 "pioneers" 202 companies, i.e. 63 per cent did not have any exports and

<sup>1</sup> This incidentally, shows that the Singapore Government does not have any xenophobia and lives up to its "global city" slogan.

<sup>2</sup> This issue is simply left unresolved, because for this answer it would be necessary to relate the numbers of exporters among the total number of manufacturers, foreign and domestic. It is probable, however, that foreign-owned firms are much more export-prone. This writer has a complete current list of all exporters ("domestic origin") and the number of all manufacturing companies, but the list of all exporters cannot be economically divided into foreign- and domestically-owned.

among the 260 "pioneers" that have some foreign capital 159, i.e. 61 per cent were not on the list of exporters.

However, this finding about the relatively low export-proneness of "pioneers" requires further caveats. Firstly, if one could isolate the "pioneers" with a substantial foreign equity one would probably find the incidence of exporting and the level of exporting, to be very high compared to "pioneers" that are wholly Singapore-owned. Above all, the findings will have to be adjusted in future because since 1970 the Singapore Government has introduced as a criterion for granting "pioneers status" the possession of adequate foreign market connections. Thus when the last generation of "pioneers" loses its status and the new generation emerges one could expect a substantial increase in the export-proneness, and the percentage of output exported, among the new generation of "pioneers".

Table 11 also shows that the "pioneers", like the non-pioneers, have rarely added to their capital equipment in the last year, but perhaps this is more excusable in the case of the "pioneers" who had to make a substantial investment for qualifying the pioneer status. However, the "pioneers" expenditure on "research" (experimentation) is even more disappointing than that of non-pioneers. Among "pioneers" 65 per cent of firms had no experimentation of any kind (whereas among non-pioneers only 33 per cent had no experimentation). This difference is partly explainable by the fact that the incidence of foreign-capital among "pioneers" is much higher (90 %) than among non-pioneers (66 %). The firm with foreign capital has brought with it the latest foreign know-how developed by the parent company and does not yet feel the need to experiment. In fact, one or two respondents apologetically stated

that their parent firm does their research for them. However, this is not a justification good enough. The need for experimentation is not limited to technical processes only (where the parent might sometimes be adequate) it extends to the whole gamut of organisational features of the company and its marketing. In those areas the parent company could hardly help. Given the avowed and justifiable ambitions of the Singapore Government to develop industrial excellence in Singapore experimentation will need to acquire greater emphasis.

A comparison of Tables 10 and 11 shows that "pioneer status" companies are substantially larger than non-"pioneers" in terms of the labour force or the value of capital. Nine, that is almost a half of the "pioneers" have capital amounting to millions of Singapore dollars and yet of those nine firms five have no (or "little") experimentation going on. One would have thought that a newly expanding firm, with capital assets over a million of Singapore dollars, could mount some experimentation programme, and would find it profitable.

As for training the workers, the firms quantitatively speaking, perform not too badly, especially the "pioneers", where in 8 firms out of 20 the proportion of skilled workers has been increased (often, but not always, by own training).

In the field of exporting, however, the expectations of management are most lively among the "pioneers". There are only 4 firms, out of 20, that did not expect an increase in exports in the next 3 years (and in those cases there was usually an unfavourable external fortuitous check such as a foreign government decision not to reduce the tariff,

or world-wide over-production, or establishment of a competing industry in the foreign market). The typical firm in the "pioneers" group expects increases in exports in the next 3 years of 20 % or more, and 3 out of 20 firms expect increases of a multiple of the present export value.

It is interesting to note that there is a tendency among the sampled "pioneers" for low export expectations by the firm to go together with a lack of experimentation effort. Also, the very large increases in expected exports have been voiced by companies with very high share of foreign capital.

#### Degree of Export-Orientedness

An export-oriented company may be defined, admittedly in a somewhat arbitrary fashion, as one which exports say, 90 per cent or more of its output. The questionnaire inquiry shows conclusively that Singapore manufacturing is highly export-oriented. More than half of the non-"pioneer" firms in the sample were export-oriented on that definition. In fact, those companies' sales in the domestic market were confined mainly to that proportion of output that did not pass quality control, that is rejects and seconds. In the case of "pioneer" firms the proportion of the export-oriented was 9 out of 20 (with another company at 80 % almost qualifying). There were four companies in the sample which sold all their output, abroad and one or two which even began business that way. Thus Singapore provides a direct contradiction to the view of Staffan Burenstam Linder who argued that for the development of manufactured exports a substantial domestic base is essential. Indeed, in the view of

the Chairman of the Development Bank of Singapore, Singapore manufacturing firms can be divided into three categories.

- (a) Those that switched into manufacturing from old commercial activities. They do not do well.
- (b) Those other that were set up to supply the domestic market. They do not do well either.
- (c) Those that were set up to sell in export markets. They do well.

Of course, if there is a substantial domestic market, the manufacturer would be foolish to ignore it. Thus Linder observing various developed countries, that is with large domestic markets in terms of purchasing power, could not help noticing that exporting went together in the large domestic market, but this does not prove the Linder thesis.

Export, after the export drive has become even a small success, contributes so much to the general development of the country and its income that domestic market does indeed come to loom large. It should be added here that this "ex-post" effect is not something distant, but like a shadow directly chases the rising exports.

Table 12

Present and Expected Degrees of Export-Orientedness Among Non-Pioneer Firms

| Main product of the firm      | Number employees | Number of shifts worked | Age of firm years | Foreign Capital shared | Percentage of output by value exported in 1972 | Expected percentage of output value exported in 1975 |
|-------------------------------|------------------|-------------------------|-------------------|------------------------|--|--|
| Furniture components.....     | 200              | 1                       | 25                | 0                      | 100  | 100  |
| Shoes.....                    | 61               | 1                       | 8                 | 0                      | 100  | 100  |
| Knitted goods....             | 120              | 3                       | less than 1       | 50                     | 90   | 90   |
| Beverages, plywood, plastics. | 2,077            | 2-3                     | over 25           | internationally owned  | 10   | 10   |
| Food&beverages...             | 250              | 1                       | over 25           | internationally owned  | 65   | ?  |
| Sawn timber.....              | 86               | 1                       | 1                 | 62                     | 70   | 90   |
| Leather belts....             | 25               | 1                       | 1                 | 100                    | 90   | 100  |
| Aluminium sheets.....         | 30               | 1                       | 4                 | 99                     | 60   | 50   |
| Electrical appliances.....    | 150              | 1+                      | 5                 | 50                     | 33   | 30   |

TABLE 13

PRESENT AND EXPECTED DEGREES OF EXPORT-ORIENTEDNESS  
AMONG "PIONEER-STATUS" FIRMS

| Main Product of Firm         | Number of Employees | Number of Shifts Worked | Age of Firm Years | Foreign Capital Share % | % of Output by Value Exported in 1972 | Expected % of Output by Value Exported in 1975 |
|------------------------------|---------------------|-------------------------|-------------------|-------------------------|---------------------------------------|--|
| Plastic Goods                | 35                  | 3                       | 4                 | 0                       | 25                                    | 25   |
| Vegetable Oil and Meal       | 100                 | 3                       | 3                 | 0                       | 90                                    | 90   |
| Shirts                       | 1,900               | 1                       | 8                 | 8                       | 90                                    | 99   |
| Fabric, House Components     | 100                 | 2 - 3                   | 3                 | 100                     | 30                                    | 60   |
| Plywood, etc.                | 1,300               | 3                       | 6                 | 75                      | 90                                    | 90   |
| Knitted Goods                | 400                 | 1 - 3                   | 1                 | 50                      | 95                                    | 90   |
| Canvas                       | 1,000               | 3                       | 4                 | 60                      | 55                                    | 100  |
| Basic Chemicals              | 35                  | 3                       | 5                 | 20                      | 55                                    | ?  |
| Milled Wheat Products        | 120                 | 3                       | 8                 | 20                      | 33                                    | 33   |
| Electronic Components        | 900                 | 2 - 3                   | 3                 | 100                     | 90                                    | 90   |
| Rubber Products              | 135                 | 2 - 3                   | 3                 | 100                     | 70                                    | 70   |
| Sawn Timber                  | 120                 | 2                       | 1                 | 80                      | 90                                    | 99   |
| Cutlery                      | 450                 | 1+                      | 2                 | 100                     | 90                                    | 95   |
| Electric Products            | 900                 | 1                       | 3                 | 50                      | 100                                   | 100  |
| Personal Hygiene Paper Prod. | 100                 | 2                       | 7                 | 100                     | 50                                    | 50   |
| Cut Timber                   | 300                 | 3                       | 3                 | 50                      | 100                                   | ?  |
| Food and Beverages           | 450                 | 2                       | over 25           | intl.                   | 5                                     | 20   |
| Fibreglass Products          | 100                 | 1                       | 7                 | 40                      | 10                                    | 20   |
| Wigs                         | 10                  | 1                       | 5                 | 100                     | 0                                     | ?  |
| Machines for Saw Repair      | 30                  | 2                       | 1                 | 100                     | 90                                    | over 80  |

The preceding two Tables 12 and 13 show that the average export-orientedness<sup>1</sup> of all the companies in the sample is 64 % of output, but for the "non-pioneers" the percentage is slightly higher than the overall average at 69 %, whereas for the "pioneers" it is slightly lower than the average at 62 %. The "pioneers", however, have an expectation of a slight rise in their export-orientedness in the next 3 years (by 1975). These two facts of slightly lower present export-orientedness of "pioneer" firms and their expectation of a slight increase in their export-orientedness in the next few years may be connected to the fact that the average age of the company in the "non-pioneer" group is at least twice as high as the average age of a "pioneer" firm (age of firm, not of the "pioneer status"). Alternatively, or conjointly, these facts of lower export-orientedness among "pioneers" than among "non-pioneers" may be due to the fact that the "non-pioneers" suffer more from shortage of demand for their products than the "pioneers" do (witness the fact that the average number of shifts worked among "non-pioneers" is only 1.4, whereas for the "pioneers" it is 2.1).

In other words "non-pioneers", pressed by the small market for each of them, try harder to export.

<sup>1</sup> This, of course, is not the export-orientedness of all Singapore manufacturers, because the sample was taken out of exporting manufacturers.

The Country of the Foreign Investors

The number of companies with some foreign capital that got into the sample was 25 out of a total of 29 in the sample. By country of origin the source of capital was:

|               |         |
|---------------|---------|
| Hong Kong     | 8 firms |
| Taiwan        | 4 "     |
| Malaysia      | 4 "     |
| U.S.A.        | 4 "     |
| Australia     | 3 "     |
| U.K.          | 2 "     |
| Japan         | 1 "     |
| Germany       | 1 "     |
| Holland       | 1 "     |
| International | 2 "     |

(The total exceeds the number of companies with foreign capital because in some cases firms from two foreign countries made a joint investment).

In six cases of the Hong Kong and Taiwanese origin of capital the manager-entrepreneur came originally from Shanghai (before World War II the most industrialised part of China). In three cases the technique, or skilled workers came from Taiwan. (even one joint American-Dutch firm uses Taiwanese technique). The Taiwanese influence in the area of supply of skilled workers would be even larger, because some companies without any foreign capital (or some that do not export and thus did not get any representation in the sample) use Taiwanese skilled workers in training and in production.

Thus, the role of the "overseas Chinese" in the industrialisation of Singapore) must be predominant. Adding together Hong Kong, Taiwan and, say, three-quarters of Malaysia investors (who could be Chinese) gives a total of 15 firms (out of a total of 29 firms in the sample and out of this 25 with some foreign capital) financed and organised at least partly by "overseas Chinese". Thus we can say, on the basis of the samle, that the refugee capital and even more entrepreneurship from China takes a substantial part in over a half of the exporting

manufacturer firms (number of firms not value of exports) in Singapore. Compared to that, the contribution of any other single national group is quite minor.

When one compares the basic economic conditions (e.g. wage rates) of Singapore with the country of residence of this majority of foreign investors (i.e. "overseas Chinese") one must conclude that the decisive attractions of Singapore could not have been cheap wages (Taiwan, and Hong Kong have cheaper wages) or any other economic factor, but Singapore's greater political stability and security (and perhaps, compared to Taiwan, a less overwhelming system of government control).

#### Innovative Vitality

The greater vitality and growth potential of the "pioneer" firms over the "non-pioneer" is clearly reflected in the incidence of intentions to start production of a new product, or products, "in the next three years". In the case of "non-pioneers" only two firms out of nine (22 per cent) had such intention, and in the case of "pioneers" 12 out of 20 firms (60 per cent). However, the figure for "pioneers" may have been increased simply by great predominance of foreign firms in the sample (reflecting, of course, the great predominance of firms with foreign capital in the total "population" of "pioneer" firms).

Admittedly, however, among non-"pioneer" firms this greater innovative attitude of firms with some foreign capital is not shown, but the sample is so small that this could have come by accident. Be that as it may, "pioneer" firms (whatever the cause) show much greater vitality than "non-pioneer" in respect of intended product innovation. This is perhaps the only really marked difference between "pioneers" and "non-pioneers".

Export Marketing Effort of the Sampled Firms

In order to find out the circumstances, problems, and efforts of the companies in export marketing the companies were asked sets of questions in the following areas:

(a) How do the firms obtain information about export markets?

The questions put to the firms and the frequency with which firms mentioned the source of information are given below in Table 14.

TABLE 14

SOURCES OF MARKET INFORMATION<sup>1</sup>

|   |    |
|---|----|
| Through own representatives in the foreign country                                  | 20 |
| Through the representatives of Singapore Government abroad                          | 3  |
| Through participation in international fairs  | 4  |
| Through the market studies of the Trade Division (Ministry of Finance of Singapore) | 1  |
| Through foreign Chambers of Commerce of Singapore one                               | 7  |
| Direct from foreign "associated" firms or persons                                   | 35 |
| Through market research institutes  | 0  |
| In other ways (please state the source):  |    |
| Export trading company  | 2  |
| Manager's own effort or travel  | 16 |
| Foreign customers' advice   | 13 |
| Foreign director and owner  | 1  |
| Manufacturers' Association  | 1  |

<sup>1</sup>If the firm stressed the source lightly one point was given, if strongly two points were given, and if very strongly 3 points were given. Where a firm quoted only one source 3 points were given to that source anyway. Thus the figures given against the various sources of information do not reveal so much the frequency with which the source mentioned by the average firm, but rather the weight attached to the source of information by the average firm.

The preceding table reveals that foreign connection is considered to be of overwhelming importance by the vast majority of firms. The implication of this must be that firms with foreign capital are likely to do better in exporting (although to some extent the stress put on foreign connection arises from the fact that the majority of the firms in the sample and therefore presumably among exporters do in fact have some foreign capital).

Among the other sources of information the few most highly ranked are: own representatives abroad, manager's own effort from his office or travelling (16 points), foreign customer's own enquiry (13 points). The fact that the exporter-manufacturers rely so heavily on the customer approach to them is surprising (especially in an overseas Chinese setting, which is usually supposed to be highly competitive). The foreign customer's enquiry being almost as important as manager's own direct efforts and not very much less important than foreign agents of the firm, suggests that Singapore manufacturers have rightly or wrongly not yet felt the need for a strong export marketing drive. The customer is apparently responsible for discovering that Singapore offers a bargain. Thus again, as in the case of lack of attempts to make technological improvements, there is in marketing a lack of sufficiently intensive export drive. In both respects the manufacturers seem to ride on low wages and therefore low prices. In future when Singapore costs rise, and in particular as its exports move more into those non-standard products where quality and therefore salesmanship are important, there will be a need for a better marketing effort.

(b) The most important factors affecting the ability to export

In the following Table 15 the firms' responses are given again in the form of points from 0-3 where 0 means that a particular feature has within limits no influence on the ability to export, and where 3 points goes to a factor that was stressed very strongly by the firm, or was the only factor in the opinion of the firm.

It is clear from the companies' response that the managements do not think that price is the most important factor. The largest number of companies and with the strongest stress held that quality and design of the product were by far the most important. (In this connection it is important to mention that several firms stressed on their own initiative the importance of quality control, and the right decision about the choice of the quality to be produced). Price of the product came to be practically of equal importance as the delivery time. When one considers the fact that everybody in the world is indoctrinated with the ill-understood economic principle about price affecting demand, one is inclined to think that the firms' responses were influenced by this factor, and that in the absence of this (not always correct) indoctrination the number of firms stressing the importance of price might have been smaller still. In good economic theory smallish price movements affect demand only where demand is perfectly elastic and that means under perfect competition. Thus where the product is homogeneous with the products of competitors price is indeed important, but that case is very rare in manufacturing.

TABLE 15

FACTORS AFFECTING EXPORT LEVEL

|  |    |
|--|----|
| Price of the product                                     | 25 |
| Delivery time  | 22 |
| Quality and design                                       | 41 |
| Supplier's credit  | 5  |
| Capacity utilization rate                                | 0  |
| Export promotion policies of the<br>Singapore Government | 1  |
| Restrictions on export by the<br>foreign shareholder     | 1  |
| Other factors ("please state"):                          |    |
| Reputation of honesty and<br>reliability                 | 3  |
| Knowledge of what the market<br>wants                    | 1  |
| Technological improvement<br>made locally                | 3  |
| Shortage of productive capacity                          | 3  |
| Good technology  | 1  |
| Transport cost differential                              | 3  |
| Foreign associates                                       | 4  |
| Knowledge of markets                                     | 1  |
| Personal contact abroad                                  | 1  |
| Chinese language   | 1  |
| Ability of supply small lots                             | 1  |
| Ancillary service  | 1  |
| Neglect by owner-director                                | 1  |
| Tariff Preferences for L.D.C.'s                          | 2  |
| Availability of shipping                                 | 1  |
| Intraco  | 1  |

Noticeable are also the facts that only one firm mentioned the influence of government assistance (referring to a trade mission), and only two firms mentioned the Tariff Preferences.

The fact that Tariff Preferences for the Less Developed Countries were given so slight a weight is explainable by the "small print" of the "Generalized System of Preferences" (G.S.P.), by its very recent dates of implementation by the developed countries, and by the fact that as of the end of 1971 only 8 countries were actually giving the preference (E.E.C. countries, Japan and Norway; Australia has been giving a sort of very limited preference since 1966 but Singapore would hardly feel any of its benefits).<sup>1</sup>

TABLE 16

THE USE OF G.S.P. MADE BY SINGAPORE: VALUE OF EXPORTS TO  
VARIOUS COUNTRIES UNDER TARIFF CONCESSIONS  
AUGUST 1971 - JUNE 1972

| Country           | S \$ Million |
|-------------------|--------------|
| Japan             | 32           |
| West Germany      | 13           |
| France            | 12           |
| Italy             | 5            |
| Holland           | 4            |
| Belgium-Luxemburg | 2            |
| U.K.              | 5            |
| Denmark           | 2            |
| Norway            | 0.2          |
| Sweden            | 0.2          |
| Finland           | 0.07         |

Source: Government of Singapore.

<sup>1</sup> By April 1972 the following additional countries were effectively on the list: U.K., Denmark, Finland, Hungary, New Zealand, Sweden, Czechoslovakia, Switzerland, Ireland, Austria and Bulgaria.

By the "small print" of G.S.P. are meant various "domestic origin" requirements which make it very difficult, especially for Singapore, to qualify for the privilege, for example in the case of transistor radios and other electronic products, there are three-tier conditions which must be simultaneously met:

- (1) minimum domestic content of the whole product 60 %.
- (2) minimum local materials cost 50 %.
- (3) maximum 5 per cent of the cost of the whole product limit put on the imported components which are classified under the same BTN code (for electronics Code No. 85.15).

The minimum domestic content conditions might perhaps be reasonable for a large developing country like Argentina or Brazil with a great variety of resources, which could find most of its raw materials and semi-finished inputs at home. For a small country, however, like Singapore, which has to import virtually all its raw-materials (and even some water) such conditions make it excessively difficult to qualify for G.S.P.

TABLE 17

PERCENTAGES OF TOTAL SINGAPORE G.S.P.  
EXPORTS BY PRINCIPAL PRODUCTS

| <u>Principal products</u>                              | <u>%</u> |
|--|----------|
| Timber products  | 28.09    |
| Machinery parts, electrical<br>and electronic articles | 17.81    |
| Fabric, garments                                       | 14.74    |
| Metal scrap  | 12.88    |
| Wigs, footwear, umbrellas                              | 8.96     |
| Vehicle rubber parts, Diesel<br>cruiser                | 6.05     |
| Other  | 11.47    |
| <hr/>  |          |
| TOTAL  | 100.00   |

Source: Government of Singapore.

(c) What Prevented the Firms from Exporting More?

The questions and responses are given below:

|   |    |
|---|----|
| Shortage of labour  | 12 |
| Shortage of capital   | 4  |
| Difficulties in obtaining inputs  | 6  |
| Bureaucratic delays   | 0  |
| Lack of knowledge of export markets   | 10 |
| Inadequate sales network  | 13 |
| Unfair practices by domestic export firms   | 2  |
| Other reasons ("please state"):   |    |
| Difficulty in communicating with foreign buyer  | 1  |
| Foreign trade barriers  | 1  |
| Buyers' difficulty about obtaining L. of C. in advance (payment with order, time factor with big order) | 1  |
| Fault in foreign material inputs  | 1  |
| Strike in the U.K.  | 1  |
| Strike in U.S. ports  | 1  |
| "Unfair competitive practices" of Japanese firms  | 1  |
| Restriction of foreign associates   | 1  |
| Oversupply in world markets   | 1  |
| Cometition in world markets, lack of market   | 6  |
| Young firm time needed to find export markets   | 1  |
| Training-labour bottleneck  | 1  |
| Transport costs   | 1  |

These results, however, probably need some qualifications. The most frequent and the third most frequent factors mentioned, i.e., inadequate sales network, and lack of knowledge of export markets (respectively) undoubtedly play a role, especially in young companies, but they are also the kind of response that any businessman, if modest enough, would give when asked for reasons why he does not export more (especially if he cannot find any better excuse). Perhaps these two questions should not have been put into the questionnaire in their present form. In any case, it is probably legitimate, in view of these qualifications, to conclude that in fact the most important barrier to expansion of exports has almost certainly been shortage of labour. Nonetheless inadequate sales network obviously must rank very high as a barrier to expansion of exports, especially if we view this factor in the light of the responses to an earlier set of questions about the sources of information about export markets.

A corroboration of the answers of the sample respondents about shortage of labour is found in Table 18 which shows quite clearly that by 1971 labour has become scarce in Singapore and certainly much scarcer than it used to be before. A rate of unemployment of 4.8 per cent is nowadays considered low in most countries (though much depends on how various countries collect the data).

TABLE 18

LABOUR FORCE AND UNEMPLOYMENT  
IN SINGAPORE, 1965 - 1971

(Thousand)

| Year | Population <sup>+</sup> (Mid-Year) |       |         | Labour Force | Persons Employed | Persons Unemployed | Unemployed as % of Labour Force | Participation Rates (%) |
|------|------------------------------------|-------|---------|--------------|------------------|--------------------|---------------------------------|-------------------------|
|      | Persons                            | Males | Females |              |                  |                    |                                 |                         |
| 1965 | 1,005.9                            | 529.9 | 476.0   | 557          | 509              | 48                 | 8.7                             | 55.4                    |
| 1966 | 1,038.5                            | 544.3 | 494.2   | 575          | 524              | 51                 | 8.7                             | 55.4                    |
| 1967 | 1,074.7                            | 562.0 | 512.7   | 601          | 552              | 49                 | 8.1                             | 55.9                    |
| 1968 | 1,109.8                            | 579.6 | 530.2   | 626          | 580              | 46                 | 7.3                             | 56.4                    |
| 1969 | 1,147.0                            | 596.4 | 550.6   | 654          | 610              | 44                 | 6.7                             | 57.0                    |
| 1970 | 1,200.3                            | 618.1 | 582.2   | 693          | 651              | 42                 | 6.0                             | 57.7                    |
| 1971 | 1,242.3                            | 638.8 | 603.5   | 726          | 691              | 35                 | 4.8                             | 58.4                    |

<sup>+</sup> Aged 15-64 years, (not total population)

Source: Budget Speech of the Minister of Finance, March 1972.

As for the only one case of a firm admitting that restrictions of the foreign parent or associated company has been a barrier to greater exports, this must be considered a gross understatement. In answer to different questions in a different part of the questionnaire 10 firms (out of 29 in the sample) admitted the existence of a clause in the contract with the foreign company restricting the rights to export in some degree. In most of these cases the restriction referred to a region, in a few cases all exports had to be "handled" by the foreign company. We can thus assume that about one third of all exporters ("domestic content") have a degree of contractual limitation on the right to export. This contractual limitation is probably less frequently operative in fact as a barrier, but the respondents' answers in this matter are probably not reliable.

(d) What Are the Major Sources of the Firm's Export Competitiveness?

Perhaps this set of questions was not well chosen, or perhaps the respondents had not themselves formulated any clear views in this matter, but in general the answers did not provide any meaningful and plausible pattern, except that 17 respondents out of 29 admitted the importance of relatively low wages in Singapore, and 11 stressed the importance of relatively cheaper transport. Eleven companies mentioned good marketing but this explanation does not seem very plausible in view of the earlier answer about how the firms obtain information about export markets.

(e) How Useful is Government Assistance to Exporting?

The general answer here was that in fact the government does not provide any assistance to exporting. One company mentioned in a theoretical way income tax concession to "export expansion" companies. We have dealt with this matter at the beginning and it appears doubtful whether this concession has assisted exports. The government does not provide export risks insurance, or export credit. The Development Bank (partly-owned by government) does contribute to enquiry capital of many firms but not to exporting costs. And in any case several companies felt that the procedures for any assistance under the Economic Expansion Act, or from the Development Bank of Singapore were "troublesome". One company mentioned that a certificate from the Government in trade with Russia (barter, state-trading, e.g. Singapore shoes against Russian machinery) helps. Three mentioned tariff exemption on inputs, but two said they would like to get it.

A few companies complained that the Singapore Government does not issue at all any Health Certificates for foodstuffs (of the kind that the Singapore Government itself requires from foreign exporters to Singapore). This precludes them from selling in some markets. A few companies mentioned the assistance of the government with provision of sites or premises. This was a wrong answer to the particular question. The help of the government in this case was a help to the establishment of the firm not to exporting as such. If the question were put about establishment help in all probability a sizeable proportion of firms would mention advice of the E.D.B., and the provision of land and premises at reasonable price or rental. Against this, however, one or two

firms mentioned that the government (Jurong Town Corporation) expects the payment of rental for the whole year in advance. This for a brand-new company, in advance of sales, is usually difficult, and probably unnecessary. Reduction of the rental payment period, or better still, postponement of the payment date to the end of the year would have been much more helpful.

In addition, one or two companies mentioned that building approvals take extremely long time so that often the firms would suffer losses (increases of costs) unless they chance it and go on with construction on the assumption that approval would be forthcoming.

Briefly, the questionnaire-interview fully confirms the theoretical analysis of the first part of this paper to the effect that the government does not in fact assist exports directly. Such assistance as there is, is indirect, as discussed in the first part of the paper.

(f) To Which Group of Countries is the Export Effort Going to Be Directed?

Perhaps one should not be surprised that this set of questions has not produced any unexpected or any very clear-cut answer. Twenty firms plan to develop markets in industrial countries "other than West Europe", fourteen firms in West Europe, thirteen in "developing countries" and four in the Communist countries.

(g) Pricing of Exports and Provision of Credit

Thirteen companies (out of 29) admitted that they charge lower prices for exports, and one company said that it does "not wish to reveal", which presumably means that they do charge lower price for exports. Against this two companies said that they charge lower prices in Singapore. This means that the remaining fourteen companies charge the same price. One firm out of this last fourteen apparently has the most rational policy. It gave the best answer: "Price charged depends on the local elasticity of demand in the buyer's market". As for those 13 or 14 companies that do charge lower prices abroad, 5 companies specifically went to qualify the statement by adding that the lower price was due to larger size of foreign orders. It is probable that of there were time during the interview to elucidate reasons (without suggesting the answer to the respondent) that at least several other respondents would have said that the lower price to foreigner was due to larger order, quicker payment, greater security of payment, greater frequency of orders etc., but it would have been impossible to check the veracity.

As for the two firms that charge lower prices in Singapore, it is possible (but not certain) that they sell locally "seconds" only.

It would thus appear that a proportion of firms, a minimum 9 out of 29, do charge lower prices to foreign customers for the same size of order, though the other circumstances of the transaction might not be equal.

As for supply of credit by exporter only 6 companies out of 29 admitted that they give credit to foreign buyers, but it is short-term, maximum 3 months. Some companies also give credit to Singapore buyers.

(h) Efforts that the Firm Can Take to Increase Exports

|  |    |
|--|----|
| Adapting the quality and design                    | 9  |
| Improvement of service                             | 8  |
| Improvement and extension of foreign sales network | 17 |
| Increasing production capacity                     | 12 |
| Improvement of organisation of firm                | 8  |
| Any other ("please state"):                        |    |
| More workers                                       | 1  |
| Use of sub-contracting                             | 1  |
| Better machinery                                   | 1  |
| Raising more capital                               | 1  |
| Training labour                                    | 1  |

It is difficult to be sure how much weight should be attached to the frequency of particular answers in respect to what the firms think should be done to increase exports. Strictly speaking a good (and reasonably modest) manager should give a positive answer to every one of the listed factors. Only one manager (who said: "We have a High Quality Award") might be excused for thinking that for a while he need not worry about quality. Nonetheless some factors were often not mentioned. The factor that was most frequently mentioned was "improvement and extension of foreign sales network", however, this is so obvious an answer that one cannot be certain that the managers really meant to do it (and did not just say what might be expected of them). The other frequent response was "increasing production capacity". This is not only an "obvious" answer but also plausible, given the fact that many firms already work even the troublesome and expensive third shift (after 11 p.m.), which means that they are using their capacity to the full.

#### PART IV

##### CONCLUDING REMARKS

Given the state of Singapore's balance of payments accounts since 1964 it is impossible to make any quantitative forecasts of what Singapore's exports are likely to be in the future. This is not because Singapore does not have many statistical sources on foreign trade. In fact, there are two independent sources. One, essentially a balance of payments estimate, is derived from export declarations of firms. It would be good but for the fact that by an official Singapore decision it excludes trade with Indonesia, and although it is impossible to prove it with official figures it is almost certainly the case the Indonesia is at present Singapore's best customer.

One could, of course, take Indonesia's trade figures on the matter of Singapore-Indonesia trade, but the Indonesian figures fail to catch the bulk of the trade between the two countries which is smuggling goods under a barter system.

The exclusion in the balance of payments of Singapore of trade with Indonesia has, of course, produced a major problem for the statistician in making up the balance of external accounts. Given that exclusion the external accounts of Singapore would just not balance, and in addition Singapore would show a most serious, apparently fundamental disequilibrium. The statistician has found an easy way of solving his problem. He put the net balance of trade with Indonesia into the category "Errors and omissions", usually a minor item in the balance of payments of any country. In this case, however, this item is not minor, it amounts to

half of Singapore's exports (or one third of imports), thus the statistician felt compelled to rename it into the "Balancing item".

The other two major omissions from exports figures could be remedied. One is the growing export of a range of goods taken out of the country by tourists. The foreign exchange receipts from this source appear in the balance of payments partly as "services" rendered to foreigners, and partly as capital inflow. The third major omission from the figure of exports is putting the value of ship-repair for foreign owners into the category of "Services". For this one, accurate figures are available and the exclusion is purely nominal.

The other set of figures on exports (but on exports only) comes direct from the source, and an excellent one, namely the Annual Census of Manufacturing. Since the census questionnaire does not ask for the by-the-country figures, this source does not have any deliberate suppression of trade with Indonesia. But it is a well-known fact that the "unofficial" trade with Indonesia is carried out by merchants not by manufacturers. In addition, again manufacturers making their returns do not know how much of the goods is taken out by the tourists.

One should add that even if the suppressed figures were revealed making firm forecasts of future Singapore exports would, at the present stage of economic development of Singapore, be extremely hazardous. There is a discontinuity in Singapore's growth in the last 5-7 years after Singapore became independent, received several shocks, and responded magnificently to the challenge of the situation. Everything started to change rapidly in those last few years, the labour relation, the population growth, investment rate, capital inflow etc. The only prediction that one can safely make is that Singapore's exports are to grow very rapidly in the near future up to say 20 years, unless there is a major political upheaval in the area, particularly

in Indonesia. (One could say that Singapore has a vested interest in Indonesia's prosperity). After some 20 years Singapore's exports will level off because by that time the size of the labour force of Singapore will stabilize, due to the present zero-population growth policy of the government. The only other danger to Singapore's exports could come from internal political unrest in Singapore itself, but this is for some years, at least, quite unlikely because the present P.A.P. government is extremely strongly seated in the saddle, indeed viewed from the point of view of the longer-run, too strongly seated.

## APPENDIX

TABLE A1

GROWTH RATES OF GROSS DOMESTIC PRODUCT BY INDUSTRIAL ORIGIN, 1966-1971  
(AT CURRENT PRICES)

| Economic Sector                       | % Change Over Previous Year |        |        |        |        |                   | Annual Average Rate of Growth (%) |         |
|---------------------------------------|-----------------------------|--------|--------|--------|--------|-------------------|-----------------------------------|---------|
|                                       | 1966                        | 1967   | 1968   | 1969   | 1970   | 1971<br>(Prelim.) | 1960-1971                         | 1966-71 |
| Gross Domestic Product at Factor Cost | 10.6                        | 9.7    | 15.3   | 13.5   | 17.4   | 14.0              | 11.0                              | 14.0    |
| <u>Goods Sector</u>                   | 12.2                        | 18.8   | 14.4   | 20.4   | 28.7   | 25.6              | 17.3                              | 21.5    |
| Agriculture and fishing               | 9.5                         | -4.5   | 1.5    | 4.0    | 11.0   | 10.0              | 3.9                               | 4.3     |
| Manufacturing and quarrying           | 17.5                        | 26.6   | 16.1   | 25.3   | 27.5   | 30.3              | 20.7                              | 25.1    |
| Construction                          | -1.5                        | 16.6   | 19.8   | 14.3   | 47.1   | 16.6              | 21.4                              | 22.3    |
| <u>Services Sector</u>                | 10.1                        | 7.0    | 15.6   | 11.3   | 13.5   | 9.4               | 9.2                               | 11.3    |
| Electricity, gas and water services   | 35.7                        | 26.5   | 17.4   | 9.8    | 15.7   | 13.7              | 11.5                              | 16.5    |
| Wholesale and retail trade            | 13.8                        | 13.6   | 31.1   | 18.3   | 12.6   | 9.6               | 10.3                              | 16.8    |
| (a) Entrepot trade                    | (14.2)                      | (17.0) | (31.9) | (23.6) | (2.6)  | (3.0)             | 5.7                               | 15.0    |
| (b) "Domestic trade"*                 | (13.6)                      | (11.4) | (30.5) | (14.5) | (20.2) | (13.8)            | 14.6                              | 17.9    |
| Ownership of dwellings                | 9.9                         | 7.8    | 9.6    | 10.4   | 10.6   | 17.9              | 9.1                               | 11.2    |
| Government services                   | 15.0                        | 7.5    | 13.4   | 6.9    | 21.5   | 15.9              | 14.0                              | 12.9    |
| Other services                        | 5.6                         | 1.1    | 4.5    | 5.6    | 12.8   | 6.2               | 7.0                               | 6.0     |
| of which: Military services           | 5.9                         | -10.8  | -6.7   | -11.6  | 3.7    | 0.2               | 3.8                               | -5.2    |
| Tourism                               | 29.3                        | 45.9   | 19.4   | 54.9   | 22.4   | 17.2              | 23.9                              | 31.1    |
| Banking and insurance                 | 13.3                        | 6.4    | 9.5    | 14.5   | 18.1   | 15.0              | 11.4                              | 12.6    |

\*"Domestic trade" means that both internal trade and the service in exporting "domestically-made" goods.

Source: Budget Speech of the Minister of Finance, March 1972.