



**TOGETHER**  
*for a sustainable future*

## OCCASION

This publication has been made available to the public on the occasion of the 50<sup>th</sup> anniversary of the United Nations Industrial Development Organisation.



**TOGETHER**  
*for a sustainable future*

## DISCLAIMER

This document has been produced without formal United Nations editing. The designations employed and the presentation of the material in this document do not imply the expression of any opinion whatsoever on the part of the Secretariat of the United Nations Industrial Development Organization (UNIDO) concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries, or its economic system or degree of development. Designations such as “developed”, “industrialized” and “developing” are intended for statistical convenience and do not necessarily express a judgment about the stage reached by a particular country or area in the development process. Mention of firm names or commercial products does not constitute an endorsement by UNIDO.

## FAIR USE POLICY

Any part of this publication may be quoted and referenced for educational and research purposes without additional permission from UNIDO. However, those who make use of quoting and referencing this publication are requested to follow the Fair Use Policy of giving due credit to UNIDO.

## CONTACT

Please contact [publications@unido.org](mailto:publications@unido.org) for further information concerning UNIDO publications.

For more information about UNIDO, please visit us at [www.unido.org](http://www.unido.org)

08247

UNITED NATIONS INDUSTRIAL  
DEVELOPMENT ORGANIZATION

Distr.  
LIMITED

UNIDO/ICIS.79  
9 August 1978

ENGLISH

COUNTRY INDUSTRIAL DEVELOPMENT PROFILE

OF

SRI LANKA \*/

Prepared by the  
International Centre for Industrial Studies

---

\*/ This document has been reproduced without formal editing. The designations employed and the presentation of material do not imply the expression of any opinion whatsoever on the part of the Secretariat of the United Nations concerning the legal status of any country or its authorities, or concerning the delimitation of its frontiers.

id.78-5104

Table of contents

	<u>Page</u>
Preface	
Summary and conclusions	
I. The general economic background and the role of manufacturing in the economy	1
II. Structure and recent performance of the manufacturing sector	8
III. Analysis of main constraints on the development of industry	16
IV. Natural resources and prospects for resource-based industries	21
V. The institutional infrastructure for industry	30
VI. Main features of industrial development objectives and strategy	35
VII. Industrial financing	37
VIII. Policy measures and their implementation	39
IX. Possible areas for UNIDO and other external inputs	53
ANNEX I Private sector incentives - Manufactures	57
ANNEX II Ceylon Institute of Scientific and Industrial Research	61
ANNEX III Performance of selected manufactured export items 1976	63

Preface

The International Centre for Industrial Studies, Regional and Country Studies Section, has undertaken, under its 1978-1979 work programme, the preparation of a series of Country Industrial Development Profiles. These profiles are desk studies, providing statistical and economic analyses of the industry sector, its growth, present status and future prospects. It is hoped that the profiles will provide analyses of use to programming technical assistance, industrial redeployment and investment co-operation activities.

This profile on Sri Lanka is based on documents, reports and studies available at UNIDO Headquarters. No field survey has been undertaken and some of the data on industry are not up to date.

The views and comments contained in this document do not reflect those of the Government of Sri Lanka nor do they officially commit the United Nations Industrial Development Organization to any particular course of action.

Summary and conclusions

It can be stated that Sri Lanka's industrialization efforts have significantly contributed to the progress that has been made in the country during the last 15 to 20 years in providing social services and redistributing income. The fact that the society has not yet succeeded in securing its welfare objectives along with sustained economic development is perhaps due as much to the difficulty of achieving simultaneously both income redistribution and "growth" goals in Sri Lanka's special situation, as to shortcomings in economic policy management.

Industrial policy since the early 1970s has been directed towards greater use of indigenous resources so as to lessen the reliance of public and private industries on scarce foreign exchange. Protection from foreign competition has buttressed domestic industries' lack of efficiency and contributed to capacity underutilization, and their export performance has been generally poor (except for certain branches).

Policies to diminish the heavy dependence of industry on imported raw materials include programmes to foster resource-based industries such as coconut products, cotton and silk for processing and leather products.

To attract domestic and foreign investment a wide variety of fiscal inducements has been devised. Furthermore, as a major measure an export processing zone to the north of Colombo, is being established.

While having the need to increase export savings and diversity of manufacturing output as its chief policy objectives, the Government is continuing to bear in mind its responsibilities towards full employment to disperse investment throughout regions, to foster small-scale enterprises in appropriate sectors, and to adopt technologies best suited to the country's resource endowment. Indeed, it is clear from the experience of Sri Lanka - and other countries - that reliance on rapid growth is insufficient

to take care of unemployment. At the 1963-71 ratio of employment to output, output growth would have to be almost 7% annually just to absorb new entrants to the labour force. Thus what is needed is a concerted effort to make the growth process more labour-intensive through appropriate factor pricing, a more careful choice of investments and efforts to improve the working of the labour market.

In summary, it may be stated that the Sri Lanka industry's contribution to the attainment of the country's paramount objectives - employment for the rapidly growing labour force and an improved standard of living - requires an increased level of capital formation which in turn depends on the increased availability of capital goods and raw materials. This requires expanded exports and/or foreign assistance as well as progress in import substitution. There seems to be much scope for progress toward the more efficient utilization of resources and increasing production.

I. The general economic background and the role of manufacturing in the economy

1. Sri Lanka's per capita income level is relatively low; its per capita GNP was US \$160 in 1977, while the average annual real growth of GNP per capita since 1970 has been under 1%. The country's economy is predominantly agricultural, with rural activity accounting for about 40% of GDP. About 70% of the country's 14 million people live in the island's southwestern quarter, which includes 3/4 of the cultivated land and around 80% of the industry. The manufacturing sector accounted for 13.0% (est.) of the GDP in 1977, with this share growing very slightly since independence.

Table 1: Changes in GDP and its composition, 1960-77  
(at constant 1952 factor prices as per cent of GDP)

(%)	1960	1970	1975	1976	1977 (prel.)
Agriculture	38.5	34.9	32.3	31.1	32.4
Manufacturing	11.5	13.6	13.1	13.0	13.0
Mining	0.5	0.7	2.2	3.1	2.6
Construction	4.4	5.9	4.5	4.6	3.9
Services	45.1	44.9	47.9	48.2	48.1

Source: Central Bank of Ceylon

2. In the period 1970-77, the GDP rose by 3.0% per annum, while during the 1960s the average annual GDP growth recorded was 4.4%. Estimates indicate that the GDP growth 1976-77 again will be about 4.4%.

Table 2: Annual growth rates of total GDP, the agricultural and manufacturing sectors 1960-77 (based on constant 1952 factor prices)

(%)	GDP	Agriculture	Manufacturing
1960-70	4.4	3.4	6.2
1970-77 (prel.)	3.0	1.9	2.3
1976-77 (prel.)	4.4	8.8	4.4

Source: Central Bank of Ceylon

3. About 55% of all labour force participants are in the agricultural sector while manufacturing accounts for about 11%. This relationship has remained fairly constant during the last 20 years as is indicated in the following table:

Table 3: Employment by sector

of total employed	1953	1963	1970	1973	1974
Agriculture	53.0	52.9	50.7	54.9	54.9
Manufacturing	10.1	9.8	11.3	10.9	10.5
Others	36.9	37.3	38.0	34.2	34.6

Source: Department of Census and Statistics, Colombo

4. Before turning to a review of the role of the manufacturing sector in Sri Lanka's development and to the nature of possible further action in support of accelerated development, account should be taken of the efforts of Sri Lankan governments over several decades to achieve the nation's social objectives. They have included, above all, the aim of shaping a society all of whose members have an opportunity to improve their economic well-being and in which the benefits of material progress are shared by all. The fulfilment of these objectives has been sought through increased public ownership and operation of a broad range of economic activities (especially large-scale enterprises), in all major sectors, through the redistribution of income and the provision of basic social services on an extensive scale, and through efforts aimed at restricted population growth.<sup>1/</sup>

5. An appreciation of the current position of Sri Lanka's industrial development may be gained by first reviewing some of the main economic

1/ Population estimates 1963-76:

	<u>Population mid-year</u>	<u>Annual growth from previous year</u>
1963	10.7 million	2.6%
1968	12.0 million	2.48%
1973	13.1 million	1.79%
1976	13.7 million	1.63%

Source: UN Monthly Bulletin of Statistics, April 1978.



developments of the past two decades, and the circumstances underlying recent years' difficulties in the economy, especially as they have related to the balance of payments. The Government's efforts to adjust to these circumstances and to foster agricultural and industrial production and exports must also be reviewed.

6. For a considerable time after independence in 1948, the Government pursued a policy of laissez-faire towards industrialization while relying almost entirely on the agricultural and plantation sector. Indeed, the export earnings from the processing of three major commodities - tea, rubber and coconut - financed the country's entire import bill. The industrialization programme was based on a policy designed to "help the private sector to help itself".<sup>1/</sup>

7. In 1956, there was a sharp political reaction to the post-independence industrial policy and the new Government emphasized the establishment of large-scale public sector enterprises in strategic and basic industries while private enterprises, both local and foreign, were to be encouraged in consumer and intermediate goods industries. This demarcation of industries into basic and non-basic for state and private sector enterprises respectively seemed, however, not to have been established so much on a strategic growth-promoting rationale as on a pragmatic ad hoc basis. The question of a rational and quantifiable basis for the demarcation of state and private enterprises was left unresolved.<sup>2/</sup> In the 1970 Throne Speech, it was stated that "the heavy and capital goods industries and other suitable basic industries will be state-owned. Other industries will be assigned to the cooperatives and to private enterprise".

8. During the period 1956-65, the public sector expanded rapidly, supported through capital aid inputs. In 1956 the six existing state factories had a capital investment of Rs 92 million; by 1965 the then 19 state corporations together accounted for Rs 487 million. The private sector too grew at a rapid rate but primarily in less

---

1/ Six-Year Programme of Investment. Planning Secretariat, Colombo, 1954.

2/ See Dr. Neil Dias Karunaratne, Techno Economic Survey of Industrial Potential in Sri Lanka, IDB, Colombo, 1973.

essential industries due to the absence of rational guidelines for desired growth and of industrial policies in general.

9. Beginning in the early 1960s the macro-economic constraints, in particular foreign exchange scarcities,<sup>1/</sup> became more critical. The import-substituting industrialization, established behind fiscal incentives and tariff protection, and based often merely on finishing and assembly of imported semi-manufactures and components, began to show its weaknesses. The industries were producing well below capacity, due to shortages of foreign exchange for raw materials, saturation of the domestic market and their inability to compete in the international market. When, in 1965, a change of government took place, emphasis was therefore again given to private enterprise and a new industrialization strategy, giving particular attention to the promotion of medium and small-scale industries, was initiated. New industrial policies also specifically encouraged agro-processing industries, on the basis of domestic raw materials and indigenous technology. The Industrial Development Board (IDB) was established and soon became the country's central institutional force for industrial development and promotion.

10. In 1971 - after another change in government - the IDB was reconstituted and given a less ambitious role. Several other new institutions, devices and policy measures were also introduced, shifting the emphasis of industrial development once again from the private sector to the public sector. It was realized that, although the manufacturing sector had grown fairly steadily in the 1960s, a number of shortcomings in the industrial development programme were becoming more and more pronounced. Firstly, there was still the high import component - nearly 75% of all material inputs for the organized industrial sector had to be purchased abroad. Imported materials in the early 1970s represented about 2/5 of the value of industrial output, and some 30 times the foreign exchange receipts of the sector. Furthermore, the product mix did not

---

<sup>1/</sup> The effect of adverse terms of trade on the real value of Sri Lanka's export earnings has been calculated to have resulted in a loss of approximately Rs 6,700 million for the period 1960-72; the annual losses ranging from 4 to 10% of the GNP. (Source: TD/B/C.6/6, Report by the Marga Institute of Sri Lanka entitled "Major issues arising from the transfer of technology - A case study of Sri Lanka", 1975)

fit emerging demand patterns, and this contributed to the low rate of capacity utilization. Finally, the continuous high costs of production made it difficult for industries with potentially exportable products to break into the overseas markets.

11. Attempting to deal with these problems, the Government outlined in its Five-Year Plan 1972-76, a strategy comprising to a large extent a reversion to earlier industrial policies. It embraced several broad objectives. Industries with good export prospects were to be favoured; encouragement was to be given to small-scale industries and to industrial development in rural areas, and labour-intensive modes of production were to be promoted. Special emphasis was to be placed on establishing the basic industries capable of providing inputs for other industries, thus contributing to a reduction in the imports required for industrial production. Such backward linkages were to be especially exploited by the setting up of producer goods industries in the public sector.

12. There has, however, been little success overall in increasing industrial output in recent years. The share of manufacturing in GDP has, as noted earlier, declined marginally from the peak of 1970, although some increase in employment, in particular in the small-scale sector, has occurred. A reduction in employment in food, beverages and tobacco has taken place, but excluding this industry, manufacturing employment increased 16.5% during 1971-75. Activity in the organized private sector - some 2,500 relatively large-scale units - is still characterized by a large degree of excess capacity and low level of investment. Similarly, many corporations in the public sector have been beset with a variety of problems which have inhibited the full utilization of capacity. In addition to foreign exchange shortages, there has, for instance, been a failure to adjust product prices in line with increased input costs.

13. Policy initiatives in the early 1970s to promote industrial exports have been quite successful. Exports of manufactures, only Rs 57 million in 1971, increased almost five-fold in value between 1971 and 1974. In 1974 the expansion slowed down and, despite the intensified efforts of the Government, declined slightly in 1975. Exports of manufactures increased again significantly in 1976 and remained largely at same level in 1977 (see further para. 26 below).

14. Sri Lanka's industries have, no doubt, surplus capacity to meet an increase in demand when it materializes. However, although there is much idle capacity, the need for substantial investment goods imports has been growing rapidly as the obsolescence of the existing equipment and the lack of spare parts have become additional bottlenecks to increasing capacity utilization. Also, attaining higher quality standards, which is of special importance for export industries, requires adjustments and adaptations in existing plants, which in turn depend on the availability of certain imported capital goods.

15. In general it could be stated that the country's industrialization efforts have significantly contributed to the progress that has been made in Sri Lanka during the last 15 to 20 years in providing social services and redistributing income. The fact that the society has not yet succeeded in securing its welfare objectives along with sustained economic development is perhaps due as much to the difficulty of achieving simultaneously both income redistribution and "growth" goals in Sri Lanka's special situation, as to shortcomings in economic policy management. Indeed, one outcome of the advances made on the social front has been that, while they succeeded in eliminating the worst manifestations of mass poverty, they raised the aggregate demand without securing a corresponding increase in output or productivity. This rise in demand naturally exerted increased pressure on the deteriorating balance of payments.

16. Furthermore, Sri Lanka is among those countries which were most hit by the recent adverse developments in the world economy. Major efforts are being made to deal with the overwhelming fiscal problem and to adjust to world commodity price inflation which in Sri Lanka's case has meant deteriorating terms of trade, as shown in Table 4 below.

Table 4: Terms of trade, 1960-1977  
(1967 = 100)

	E x p o r t s		I m p o r t s		Terms of trade
	Volume	Price	Volume	Price	
1960	87	122	133	83	148
1964	102	111	114	105	105
1967	100	100	100	100	100
1970	102	118	102	140	84
1971	99	117	90	150	78
1972	97	118	88	158	75
1973	98	137	79	209	65
1974	85	213	56	370	58
1975	102	199	69	433	46
1976	97	239	75	383	62
1977 (prel.)	89	382	97	471	81

Source: Central Bank of Ceylon

17. As indicated in the table above a limited improvement in the terms of trade occurred in 1977, largely due to a sharp increase in the global price of tea. This made possible the introduction, in November 1977, of significant import and exchange control relaxations in respect of capital goods and other inputs to industry.

## 11. Structure and recent performance of the manufacturing sector

12. In 1974, the industrial sector employed some 408,000 persons, or about 11 per cent of the total employed labour force. Of this number, about 125,000 were employed in private sector factory processing industries such as tea, rubber and coconut processing which account for a major portion of the value-added in the sector. The private sector also includes small-scale factories or units such as textile weaving units, potteries, carpenteries, and makers of coir products. Estimates of the number of such units vary from 25,000 to 100,000. The 26 public sector corporations - contributing 23% of the value-added and 6% of the employment in manufacturing - produce a broad range of commodities, such as sugar, cotton textiles, leather products, paper, plywood, ceramics, cement, fertilizers, mineral sands, steel and hardware products.

13. The performance of the industrial sector since independence underlines the relationship between imports and production noted in Chapter I (para. 10). There are two aspects of this relationship to be noted. First is the high import content of industrial production. According to the Central Bank Review of the Economy in 1976, the cost of imported raw material accounted for 59.5% of the total cost of raw materials in the industrial sector as a whole in that year. The private sector taken separately would reveal an even higher import content. The situation in different branches of industry is indicated in Table 5 below. Secondly, most of the import substituting industries in the private sector are confined to the final stages of the manufacturing process and value-added in such industries is low. Foreign exchange savings in many such industries have been gradually eroded and even rendered negative. One reason for this is that import substitution was confined mainly to manufactures while tending to ignore raw materials and intermediate goods.

20. The still limited progress of local industries in general towards export orientation, which has prevented the industrial sector from reaching a self-supporting stage of growth, has exacerbated these two factors. The high protection afforded to local industries and the consequently diminished competition from imports inhibit these industries

Table 5: Manufacturing Survey<sup>a</sup>

Industrial Group	Number of firms	Employment ('000 persons)	Value of production (Rs mn)	Value added (Rs mn)	Daily wage (Rs)	Capacity Utilization (%)	Import content in raw material use (%)
Food, Beverages & Tobacco	158 (10.5)	23.7 (20.9)	1,715 (28.3)	701 (28.5)	26	75	37
Textiles, Wearing Apparel, & Leather Industries	602 (39.9)	30.5 (26.9)	680 (11.2)	266 (10.2)	20	56	74
Wood & Wood Products	17 (1.1)	6.5 (5.7)	129 (2.1)	78 (3.2)	24	45	43
Paper & Paper Products	58 (3.8)	6.4 (5.6)	203 (3.3)	54 (2.2)	22	58	60
Chemicals, Petroleum, Coal, Rubber & Plastic Products	220 (14.6)	14.6 (12.9)	2,336 (38.5)	937 (38.1)	32	66	94
Non-Metallic Mineral Products (except Petroleum & Coal)	72 (4.8)	12.5 (11.0)	360 (5.9)	219 (8.9)	20	76	32
Basic Metal Products	1 (-)	1.4 (1.2)	138 (2.3)	38 (1.5)	32	39	100
Fabricated Metal Products Machinery & Transport Equipment	358 (23.7)	16.5 (14.5)	474 (7.8)	153 (6.2)	22	53	83
Other Manufactured Products	22 (1.5)	1.3 (1.1)	26 (0.4)	16 (0.6)	16	45	77
T O T A L	1,508 (100.0)	113.5 (100.0)	6,061 (100.0)	2,462 (100.0)	24	64	70

a/ Figures in parentheses are percentage distribution.

Source: Central Bank of Ceylon, Review of the Economy, 1976.

from reaching the level of efficiency necessary to achieve export growth. High protection has created conditions tending to discourage attempts to combine import substitution with a substantial flow of manufactured exports.

21. The early phase of the development of manufacturing industries in Sri Lanka culminating in early 1960s was characterized by a highly import-dependent, light consumer goods type of industrial structure. The changes in Sri Lanka's industrial structure in the period from the mid-1960s conformed to the traditional pattern of industrial development with increased emergence of metalworking, engineering and chemical industries. The relative growth in different industrial sub-sectors since 1964 is shown in Table 6 on the following page.

22. The value of industrial output at current prices rose from Rs 1984.3 million in 1975 to Rs 2,473.8 million in 1976, an increase of approximately 24%. This increase is attributable partly to the increased availability of raw materials as a result of the higher foreign exchange allocations released to the private sector industries and partly to the inflationary trends in the country. Since the prices of industrial inputs in the world market in 1976 remained more or less stable, the quantum of raw materials available in 1976 was substantially higher than in 1975.

23. Investments in respect of nearly 400 new industrial units were approved in 1976, which will be financed exclusively from domestic sources. The detailed composition of these units is given in Table 7 on page 12.

24. The industry sub-group 407 (made-up garments) with 16 approved units accounted for an investment of Rs 55.5 million of the total estimated investment of Rs 80.5 million. This sub-group with 8616 employees accounted for approximately 54 per cent of total employment in projects approved in 1976. Almost all projects in this sub-group are export oriented. Of the 372 new units approved in 1976, 214 will be located in the Colombo district, 35 in the Kandy district and the balance in other districts.

25. Intersectoral linkage effects have contributed markedly to a structural change in the industrial sector. Thus, due to a construction boom, the production of materials like cement and asbestos has recently expanded rapidly. The expansion of some other sub-groups was linked up



Table 6: Growth of Industrial Production in Major Sectors 1964-1973  
Index 1970 = 100

ISIC	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	Average annual rate of growth 1964-1973
311-2											
313	74	73	73	73	82	91	100	98	97	98	3.2
314	65	70	74	82	92	97	100	105	113	112	6.2
321	62	54	62	80	90	110	100	116	103	114	7.0
322 +											
324	72	64	67	83	94	108	100	105	107	88	2.3
323											
	70	79	79	98	134	118	100	114	120	114	5.6
331	111	77	80	81	106	82	100	96	122	176	5.3
332											
	56	77	80	81	106	82	100	...	...	...	8.7 <sup>a/</sup>
341											
	54	60	80	98	111	104	100	104	119	99	7.0
351-											
352	127	122	113	124	118	105	100	104	118	107	- 1.9
355	19	37	37	38	87	81	100	159	159	149	25.7
361,											
362,	44	55	53	66	77	93	100	111	106	116	11.4
369											
371-											
372	38	50	50	94	119	123	100	134	103	64	6.0
381	60	93	89	123	152	148	100	115	95	103	6.2
390	77	77	89	90	116	127	100	257	279	158	8.3
3	62	65	66	79	91	96	100	107	112	108	6.4

<sup>a/</sup> 1964 - 1970

Source: UN Yearbook of Industrial Statistics (formerly the Growth of World Industry)

Table 7: Data on investment and employment of approved industries in 1976, by industrial sectors

Sector	Description	Total employment	Total investment (Rs. '000)	Total No. of units
401	Meat, fish, and milk products	60	490.0	01
402	Fruit and vegetable products	59	2,551.0	04
403	Confectionery, bakery & cereal products	335	1,023.0	10
404	Spirits, alcoholic beverages & aerated waters	-	-	-
405	Other food products & tobacco	288	659.9	16
406	Spinning, weaving & finishing of textiles and woven textile products	1,869	3,154.5	13
407	Manufacture of made-up garments	8,616	55,524.8	16
408	Petroleum, petroleum products and petro-chemicals	31	179.0	04
409	Salt and salt-based chemicals	-	-	-
410	Other chemical products	595	580.0	08
411	Pharmaceuticals, medical supplies & cosmetics	77	1,101.0	03
412	Soap, vegetable and animal oils and fats	1,976	5,246.7	199
413	Leather & rubber products	208	1,370.8	16
414	Manufacture of wood, paper and pulp	455	2,307.6	18
415	Clay, sand & cement products	196	1,257.0	08
416	Basic metal industries (excluding transport machinery)	109	1,233.6	09
417	Ferrous & non-ferrous metal products other than machinery	288	1,066.6	20
418	Transport equipment, spares	311	2,556.0	11
419	Electrical goods	169	197.0	12
420	Optical & photographic goods & precision products	70	129.7	04
	Grand total	15,992	80,568.2	372

Source: Ministry of Industry and Scientific Affairs, Colombo

with the vigorous agricultural development policies pursued during the mid-1960s; the expansion of chemical industries, machinery and transport equipment manufacturing, etc, arose to large extent due to demands for various industrial inputs of the agricultural sector.

26. A study of the pattern of industrial exports during the period 1972 to 1977 indicates that the efforts of the Government to expand and diversify Sri Lanka's non-traditional exports have been remarkably successful as the figures in Table 8, below, indicate.

Table 8: Value of industrial exports 1972-1977  
(US \$ million)

	1972	1973	1974	1975	1976	1977 Jan.-June
Food, beverages and tobacco	3.33	5.00	5.11	6.24	13.80	9.00
Textiles, wearing apparel and garments	1.17	3.59	4.96	4.96	9.20	6.41
Chemicals and chemical products	1.50	1.88	2.86	3.26	3.97	2.57
Wood and paper products						
Rubber and rubber products	1.17	2.34	2.71	2.27	3.64	1.63
Ceramics and porcelain ware	-	0.31	1.20	1.99	2.42	0.84
Metal products	1.50	0.63	0.30	0.43	0.23	0.11
Basic metal industries and machinery	0.33	0.94	1.05	1.70	0.56	0.45
Electrical machinery, appliances and supplies	-	-	0.45	0.43	1.44	0.07
Optical instruments, plastic goods, etc.	-	0.47	0.45	0.57	0.43	0.29
Naphta	-	3.59	12.18	11.49	11.46	4.60
Fuel oil	-	0.63	1.05	-	5.41	-
Graphite	5.83	1.72	2.56	1.70	2.04	1.28
Ilmenite	-	0.78	1.05	0.71	0.79	0.29
Rutile	-	0.31	0.45	0.99	0.52	0.40
Cement	-	-	1.95	0.71	0.02	-
Total (US \$ million)	14.50	22.19	38.35	37.45	56.93	27.94
(Rs million)	89	142	510	534	823	404

Source: Ministry of Industries and Scientific Affairs, Colombo

27. From a meagre Rs 53 million in 1970, industrial exports rose to Rs 510 million in 1974, and, after a slowdown in 1975, to Rs 823 million in 1976. A significant feature in the expansion of industrial exports during this period has been the contribution made by the food, textile, chemical, wood, leather, electrical and machinery appliance sectors. Shirts, children's and ladies' garments, other wearing apparel, canned fruit, juices, sea foods (especially shrimps, prawns and lobsters), wooden products, etc. comprised the main components of the Sri Lanka product mix which spearheaded the export drive during the last seven years.\*

28. Significant characteristics of the private sector manufacturing industries, which surfaced in the report of the 1976 survey on manufacturing industries, are the position occupied by small-scale units (with a capital investment of less than Rs 1 million in each unit), accounting for 78% of all industrial units in the country's private sector manufacturing structure and 28% of the value of output, while about 55% share of the value of output is accounted for by 181 large-scale industrial units (with a capital investment of over Rs 1 million in each), constituting 8% of the total number of industries in the private sector. These characteristics are amplified in Table 9 below.

Table 9: Value of fixed capital assets (plant and machinery)

<u>Scale of Industry</u>	<u>Establishments</u>		<u>Percentage value of output (ex-factory)</u>
	<u>Number</u>	<u>%</u>	
Over Rs 1	181	8	55.6
Less than Rs 1 million and over Rs 100,000	337	14	16.0
Less than Rs 100,000	1850	78	28.4
Total	<u>2368</u>	<u>100</u>	<u>100.0</u>

Source: Ministry of Industries and Scientific Affairs, Colombo

29. The geographical distribution of industries is very uneven. About 90% of the manufacturing output is concentrated in the Colombo area,

\* Further details on various export items in 1976 are given in Annex III.

where the high market potential together with transportation and other urban infrastructure amenities naturally constitute a big gravitational pull for the establishment of industries. As at 1974, over 72% of all approved private industrial projects, but only about 35% of public sector industrial projects, were in the Colombo area. Thus, the regional dispersal of industry (apart from very small, or cottage-type industrial units) occurred mainly through the public sector industrial corporations established in the last two decades. However, due to the absence of clear criteria for industrial location and the lack of adequate information about raw material and mineral resource inventories during the early stages of public sector development, location decisions were often not optimal ones. Granting that Sri Lanka's public industrial corporations are an effective vehicle for regional dispersal, it is clear that to derive the full benefits of these projects, the stipulation of objective economic criteria for their development is essential.

III. Analysis of main constraints on the development of industry

30. The foregoing account of the structure and recent performance of Sri Lanka's industrial sector suggests that there are a number of obstacles in the way of fuller and more competitive use of existing capacity. Many of these obstacles also attend any new industrial projects. The gravity of these can be judged from the fact that growth of real income from manufacturing has slowed down from 6.2% per year in the 1960s to an average of 2 - 3% per year in 1970-77. Central to this set of constraints has been the perpetual shortage of foreign exchange.

31. Foreign exchange shortages have seriously hampered production, investment and the development of exports for many years. Recent reports indicate that, with the exception of some improvement in foodstuff self-sufficiency, import substitution has so far made only modest headway. As a result dependence on imports for capital formation and industrial raw materials has remained large in recent years, continuing the pattern of the previous decade. In the last three years, this problem has been severely aggravated by very sharp rises in price of major import items such as basic foodstuffs, fuel and fertilizers. With little growth in volume, the limited price increases that have taken place in Sri Lanka's traditional export crops have failed to compensate for recent increases in import prices.

32. The economy's heavy dependence on imports for production and capital formation is only partly reflected by the fact that import content of gross capital formation and supply of intermediate goods is 20 per cent and 35 per cent respectively. The significance of imports to investments and production in certain industries, which supply others in turn, and which have much higher import ratios than the average, is particularly great. Bottlenecks in imported inputs for these industries would have repercussions in other industries with less direct dependence on imports.

33. Two important consequences have followed from the foreign exchange constraints. First is the low rate of capacity utilization, to which reference has been made throughout this paper. This problem, in some cases, reflects inappropriate investments in the past; it is also the result

Table 10: Trends in Import Content of Raw Materials for Selected Industries, 1965-1970

	1 9 6 5		1 9 7 0	
	local	foreign	local	foreign
Food products - preserved and canned fruit, vegetables, meat, fish	77%	23%	76%	24%
Spinning, weaving, finishing of textiles	5%	95%	13%	87%
Knitted fabrics, made up garments, etc.	26%	74%	36%	64%
Footwear & leather products	36%	64%	54%	46%
Wood and wood products	85%	15%	82%	18%
Paper and paper products	30%	70%	44%	56%
Rubber products	26%	74%	32%	68%
Ceramics	14%	86%	24%	76%
Cement, cement prod., incl. asbestos products	17%	83%	59%	41%
Fabricated metal products other than machinery and equipment	7% (1967)	93% (1967)	13%	87%
Machinery (except electrical and transport equipment)	37%	63%	19%	81%
Electrical machinery, apparatus appliances	21%	79%	20%	80%

Source: Dr. N.D. Karunaratne, "Techno Economic Survey of Industrial Potential in Sri Lanka", 1973.

of limited availability of foreign exchange needed for imports of raw materials and spare parts, although the raw materials situation since 1975 appears to have improved over the previous years. Since public sector enterprises generally have received preferential treatment in the allocation of foreign exchange, their low rate of capacity utilization seems to be due at least partly to bottlenecks in the supply of

locally produced raw materials. However, capacity utilization in the public sector units<sup>1/</sup> has remained generally low (although with some clear exceptions) at about 50 - 60%, as shown in Table 11 on page 19.

34. Low rates of capacity utilization in turn give rise to higher fixed costs per unit of output. This, of course, is one factor making the products of such enterprises unattractive. The statistics do not allow a thorough analysis of the cost structure of the subsector in manufacturing, but a rough indication of productivity is shown in Table 12 on page 20.

35. When these high unit costs are protected by tariff and non-tariff barriers, as has been the case in Sri Lanka, there is less incentive to improve efficiency. And the process feeds of itself by virtue of high and protected prices diminishing export prospects, and this in turn reduces the availability of foreign exchange with which cooperant inputs to improve capacity utilization can be bought.

36. Inadequacies of infrastructure are gradually being improved. Installed electric generating capacity rose 10% in 1976, and is sufficient to meet present demand. There are telegraph connections between the main centres on the island, and the road and railway systems are continuously being improved.

---

1/ The average rate of return from investment in the public sector corporations, at the time of the preparation of the 1972-76 Plan, was 6%. In the Plan it was envisaged that this return would rise to at least 15% by 1976, while at the same time it was noted that "this target by itself is a modest one and should by no means be interpreted as the optimum return that is eventually expected from the public sector". The Plan foresaw an increase in the output from the public sector by 100% from 1970 to 1976; about 75% thereof to be realized from greater utilization of plant and machinery already installed at the beginning of the period. Indeed, it was expected that all industries in the public sector in operation in 1971 (except steel and hardware) would have to work at full attainable capacity if they were to meet the anticipated demand in 1976. (In the case of steel, a 70% capacity utilization would satisfy the demand.) Thus, by 1976, insufficient demand would no longer hinder the efficient operation of industries in the public sector. But with capacity utilization remaining at about 50 - 60%, the financial performance has instead deteriorated to a point where net profits from the public industries have become negative.



**Table 11: Production and capacity utilization in state industrial corporations**

Corporation	Product	Unit	Production				Capacity Utilization (%) <sup>a/</sup>		
			1974	1975	1976	1977 Jan-Jun	1974	1975	1976
Ceramics	Crockery	'000 tons	2.8	2.5	2.4	1.4	96	87	54
	Sanitaryware	"	0.6	0.6	0.5	0.3	101	129	108
	Wall tiles	"	0.3	0.4	0.3	-	95	117	77
	Kaolin	"	5.8	4.1	4.3	2.6	110	74	78
	Insulators	"	0.2	0.2	0.3	0.1	67	75	107
	Bricks & tiles	mn units	20.6	24.3	26.2	10.7	87	103	111
Cement	Cement	'000 tons	466	387	416	152	63	49	53
Hardware	Machineries	'000 units	342	301	200	153	86	75	50
	Cast iron products	'000 tons	3.1	3.6	2.1	0.5	52	60	44
Mineral sands	Ilmenite	"	79.8	63.0	54.9	23.4	89	69	61
	Rutile	"	3.0	3.1	1.0	-	72	77	26
Paranthan chemicals	Caustic soda	"	0.7	0.6	0.7	0.3	50	43	49
	Chlorine	"	0.7	0.6	0.7	0.3	50	43	49
	Hydrochloric acid	"	0.5	0.4	0.6	0.3	25	21	30
Leather	Shoes	'000 pairs	248	143	168	85	72	41	49
	Chrome leather	mn sq. ft.	1.2	1.0	1.2	0.5	99	79	100
	Bark leather	'000 lbs	215	191	200	46	54	48	50
Tyre	Standard types	'000 units	171	174	181	39	96	70	n.a.
Petroleum	Petroleum products	'000 tons	1,372	1,274	1,286	615	75	73	73
	Lubricating oil	'000 gals.	3,111	3,002	3,077	1,533	74	86	79
Steel	Rolled products	'000 tons	28.9	21.2	28.3	13.8	40	30	39
	Wire products	"	5.6	7.0	6.0	3.7	47	59	50
Paper	Paper and paper board	"	17.3	18.7	17.3	9.9	76	83	77
Flour	Flour	"	85.8	96.1	130	51	99	98	106
Plywood	Plywood	mn sq ft	49.1	52.0	47.5	n.a.	45	47	43
Lanka porcelain	Porcelain table ware	'000 tons	-	.	1.4	n.a.	-	-	141
Textile	Yarn	mn lbs	10.7	12.9	10.7	4.7	45	54	45
	Cloth woven	mn yds	14.8	19.0	17.4	7.1	36	46	43
	Cloth finished	"	39.7	48.4	45.7	n.a.	54	56	62

<sup>a/</sup> Production capacity defined as installed capacity on three shifts.

Source: Ministry of Industries and Scientific Affairs, Annual Review of Activities; Central Bank of Ceylon, Review of the Economy, 1976

Table 12: Value added per person engaged in manufacturing,  
by selected manufacturing sub-sectors, 1970

ISIC		Number of persons engaged	Value added (1000 rupees)	Value added rupees per person engaged
311/ 312	Food products	12,345	79,000	6,399
313	Beverages	1,817	49,000	26,968
314	Tobacco	1,611	90,000	55,866
321/ 322	Textiles and wearing apparel	24,117	132,000	5,473
323	Leather products			
324	and footwear	3,403	24,000	7,053
331/ 332	Wood products, furniture and fixturer	2,695	17,000	6,308
341/ 342	Paper, paper products printing and publishing	4,499	31,000	6,890
351	Industrial chemicals	1,029	6,000	5,831
352	Other chemical products	6,723	85,000	12,643
353	Petroleum refineries	476	46,000	96,639
354	Petroleum and coal products	337	7,000	20,772
355	Rubber products	3,980	40,000	10,050
356	Plastic products	1,786	15,000	8,399
361	Pottery, china, etc.	1,526	13,000	8,519
362	Glass and glass products	1,046	17,000	16,252
369	Non-metal products	6,639	20,000	3,013
371	Iron and steel			
372	Non-ferrous metals	1,348	11,000	8,160
381	Metal products	6,943	46,000	6,625
382	Machinery, non-electrical	7,418	44,000	5,932
383	Electrical machinery	2,363	31,000	13,119
384	Transport equipment	2,365	22,000	9,302
385/ 390	Professional goods other industries	2,134	77,000	36,082
	TOTAL MANUFACTURING	96,600	901,000	9,327

Source: UN Yearbook of Industrial Statistics, 1974.

#### IV. Natural resources and prospects for resource-based industries

37. It was noted earlier that shortages of imported materials, stemming from balance of payments difficulties, have been a major cause of low capacity utilization and high costs in several industries. The long-term growth of the country's industry is likely to be severely constrained unless local materials can to a larger extent than hitherto be substituted for imports. Furthermore, the Government is committed to strengthening the linkages between the primary and secondary sectors, not only as a measure to stimulate economic growth but also to diffuse the benefits of industrialization more widely in the rural areas.

38. It has also been pointed out that the import content of the raw materials used in Sri Lanka's manufacturing sector is very considerable. The 1972-76 Development Plan concluded that the severe foreign exchange difficulties made it imperative that priority be given to reducing the foreign content of industrial raw materials. In the following analysis of individual product groups we have partly drawn upon Dr. Karunaratne's study.<sup>1/</sup> It shows that ample scope for increasing the domestic content of Sri Lanka's industrial inputs exists in several fields, in particular in respect of agro-based industries.

39. There is, however, one strategic issue which must first be raised in this connexion. The development of Sri Lanka's agriculture may have been unduly dominated by the three export products--tea, rubber and coconut--in the past. If such diversification were attempted too quickly, it might, however, result in a diffusion of scarce complementary resources so that the end result would be higher costs, inferior quality inputs and greater instability of supplies than at present.

##### (i) Coconut products

40. This sector comprises ancillary coconut-based industrial activity and is providing employment to a widely dispersed rural populace in the coconut growing regions. The traditional export-orientation of the sector is, so far as coir fibre and yarn products are concerned, facing declining

<sup>1/</sup> Dr. Neil Dias Karunaratne, Techno Economic Survey of Industrial Potential in Sri Lanka, IDB, Colombo, 1973.

prospects due to the emergency of competitive natural and synthetic fibres. Although the sector has ample scope for modernization, such as using new techniques in retting, the less encouraging export trends seem to have precluded their adoption. The need has been indicated for exploration of:

- possible production of bristle fibre (mattress fibre) for export markets;
- up-grading and diversification of coir yarn products for both domestic and export markets;
- establishment of factories for coir carpets, mats, cordage, bags and rope, for coir dust briquettes and for coir pith board; and
- utilization of coconut shell charcoal as filler for plastic products and possible substitute for manganese oxide in dry cell batteries.

41. The 1972-72 Development Plan stated that the expansion of industries based on coconut fibre would be a part of the programme for the small-scale sector. The Divisional Development Councils were to be called upon to play a leading role in developing the potential in the coconut-based industries.

42. The Karunaratne study notes that there exists on the other hand a substantial export demand for dessicated coconuts for confectionery and copra for animal feed, and suggests that the sector needs modernization and improved techniques for the preparation of dessicated coconut and distillation of oil for export (see also para. 52 regarding coconut oil). In addition to expanding the traditional exports in this sector, the study points at prospects for new manufacturing such as:

- production of glycerine and fatty acids\* for exports;
- production of coconut cream for local and export markets;
- granulated coconut manufacture for export; and
- manufacture of coconut-based provender and cattle feed.

43. In the 1972-76 Plan, research and development programmes are envisaged, inter alia, in respect of industrial carbon and chemicals from coconut shell.

---

\* Research on this is carried out by CISIR in collaboration with the Coconut Processing Board.

(ii) Sugar production

44. Between 1966 and 1973, annual per capita consumption of refined sugar was about 20 kg, equivalent to a total of 270,000 tons/year. During this period domestic production of refined sugar was negligible (not exceeding 10,000 tons/year), and imports ranged from 200,000 to 300,000 tons, accounting for around 10% of the total import bill. Following severe shortage of foreign exchange and high prices in 1974, imports were drastically reduced to about 43,000 tons. In 1976, 47,000 tons were imported and in 1977 96,000 tons.

45. The Sri Lanka Sugar Corporation (SLSC) is constituting a centralized planning and execution unit for all aspects of the country's sugar production and processing. Organized sugar development began in the late 1950s with the establishment of two sugar factories (and associated plantations) at Hingurana and Kantalai with a combined capacity of 38,000 tons of sugar. However, due to various problems ranging from low cane yields and low sugar content to factory breakdowns, the total output did not in any of the years 1960-72 exceed 10,000 tons, or about 25% of capacity. The SLSC undertook an extensive programme for improvement of cane cultivation and factory management resulting in an increase in the combined production from both plants from 12,000 tons in 1973 to 19,000 tons in 1974, or to about 50% of capacity.

46. The usual problem of spare parts has been present and both factories have found it necessary to establish large workshops to manufacture many of the required replacement parts. However, in the case of Kantalai, even though the workshop has been in operation for several years, some essential pieces of equipment are still lacking (according to a recent World Bank Report). With limited additions it would be possible to improve timely availability of spare parts and thus keep the factory in operation. At present, harvesting continues during periods of factory breakdowns, necessitating the prolonged stocking of cane with consequent reductions in sugar content.

47. The Asian Development Bank is currently assisting in improvements at the Hingurana project, while an IDA credit has been obtained for the Kantalai scheme.

48. While for the immediate future, emphasis is being given to better utilization of partially developed cane land and of existing factory capacity, the long-term potential for further expansion into new areas for sugar production in the dry zone (in the north and east of the island) with irrigation, may be subject to further investigations.

49. Dr. Karunaratne in his study indicated that there are also good prospects for establishing of coconut and kital jaggery manufacturing units.

(iii) Other processed food products

50. A number of possibilities for expanded industrial activity in respect of various processed food products such as the establishment of units for canned and preserved fruits (pineapples, passion fruit and mangoes) and vegetables were indicated in the Karunaratne study. The 1972-76 Plan foresaw the establishment of canning plants on a regional basis under the Divisional Development Council Programme. Such a development may necessitate a strengthening of the facilities for quality testing as well as the initiation of specific applied research projects.

51. The 1972-76 Plan foresaw a doubling of the 1971 level of production of cashew requiring expansion of existing as well as establishment of new processing centres.

(iv) Vegetable oil and fats

52. Coconut oil, being the dominant product in this sector, is produced by two large-scale public sector corporations and by about 40 smaller private oil mills. The oil production in the large-scale factories is carried out by the modern solvent process, while the other producers use the less efficient mechanical expulsion process. According to the Karunaratne study there are many opportunities for the adoption of suitable technologies and the upgrading of production.

53. Also, according to Dr. Karunaratne, there exist several other oil-bearing indigenous raw materials that could be commercially exploited for domestic and export markets such as rice bran oil, gingelly oil, groundnut oil.

54. The 1972-76 Development Plan indicated planned research on a new process for oil and protein extraction from the coconut kernel. CISIR is active on this as part of a research programme to find uses for vegetable oils currently in use and application for oils not hitherto used.

(v) Natural silk production

55. In noting that there is a firm export market for natural silk, the 1972-76 Development Plan indicated a major expansion both for production and multiplication of mulberry and silk worms, and for research and extension work in sericulture.

(vi) Cotton production

56. The 1972-76 Plan noted that in a situation where cotton has to be imported, the foreign exchange benefits of the textile industry were negligible. The production of cotton constituted accordingly an important part of the import-substitution programme. Major cotton schemes totalling 24,000 acres were foreseen in the 1972-76 Plan with a production by 1976 of 18,000 tons of cotton.<sup>1/</sup> The Plan also noted that the important by-products cotton seed and linters would be put to further industrial use.<sup>2/</sup> The excess capacity in coconut oil mills would be used to extract cotton seed oil.

(vii) Leather and leather products

57. Sri Lanka has, according to the Karunaratne study, adequate resources to meet the entire local demand for raw hides if better flaying and recovery techniques are organized. The sector could expand the capacity to import substitute in chrome leather and bark-tanned leather (in Ceylon Leather Products Corp.). Possibilities have been identified such as:

- xpansion of the footwear industry to meet growing internal demand coupled with good export prospects;
- eather products manufacturing units could be established on a regional basis to meet local demand for products like purses, belts, handbags, straps, etc.;

<sup>1/</sup> This would correspond to about 28% of the anticipated demand by that year.

<sup>2/</sup> Ref. UNIDO project SRL/74/050 (SIS) - Integrated Processing of Cotton and Cotton Seed.

- leather cloth and fashion wear production for export;
- production of sport goods for export;
- manufacture of glue from tannery wastes.<sup>1/</sup>

(viii) Rubber products

58. Export of natural rubber account for a large portion of Sri Lanka's total export trade. The local industries consume only about 2% of the value of total rubber production in the country. Intensified investigations, mainly in the form of market research and product development and design, might foster an expansion of the local rubber goods producing industry. The Karunaratne study identified the following potential rubber goods industries:

- Manufacturing of rubber footwear for the domestic market;
- Rubberized coir production for upholstery and mattresses for domestic and export markets;
- Rubber toys; and
- Rubber components for the automobile industry.

59. Dr. Karunaratne also noted that attempts at exporting rubber tyres by the state-owned Ceylon Tyre Corporation had met a good response and that there might be scope for establishing another project exclusively for exporting.

(ix) Wood products

60. Nearly 60% of Sri Lanka's surface is covered by forest, from which about 10 million cubic feet of timber are extracted annually. A further 2 million cubic feet of timber are imported. Dr. Karunaratne in his study noted that, although Sri Lanka's wood resources are capable of yielding the entire requirements of demand, due to inefficient and wasteful processing, many wood-based industries operate well below capacities because they are getting inadequate supplies of timber. Provided the methods of timber extraction are modernized and made more effective, in order to eliminate in particular present considerable waste, there seem to be good prospects for secondary wood processing industries, such as:

---

<sup>1/</sup> Ref. UNIDO project SRL/74/061 (SIS) - Industrial Manufacture of Glue from Tannery Waste.



- expansion of tea-chest manufacture (import substitution) in the public sector Ceylon Plywoods Corp. (in the Gintota factory - from 1.04 million tea chests in 1970 to 1.2 million in 1976 - and in the new Avissawella factory - 3.25 million by 1976 according to the 1972-76 Plan);
- chip board and particle board manufacture for domestic market mainly (small furniture makers, etc.);
- veneer manufacture for export (as well as domestic use);
- manufacture of railway and bus-bodies (domestic);
- manufacture of knock-down furniture for export (incl. carved furniture);
- manufacture of wooden textile accessories (shuttles, bobbins, etc. for domestic use);
- production of wooden packaging materials (other than tea chests);
- manufacture of matchsticks to meet expanding local demand;
- manufacture of forest products like tannin (of wattle) for the leather industry, eucalyptus oil, oil resins, gums, etc.<sup>1/</sup>

(x) Paper pulp

61. The 1972-76 Development Plan envisaged a programme for the development of kenaf, its fibre being a good substitute for jute in the manufacture of gunny bags. The potential use of kenaf for long fibre paper pulp (as substitute for conifers and bamboo) would also be explored.<sup>2/</sup> Development efforts would also be directed to the possible use of sunhemp for high quality paper pulp. Other potential materials include rubber wood<sup>3/</sup> and bagasse. Specific applied research programmes were to be initiated for the development of these fibres for paper making.

62. At present the manufacture of several grades of paper using rice (paddy) straw is carried out by the Eastern Paper Mills Corporation. The Corporation has been intensifying its experimental activities to break into

---

<sup>1/</sup> Research on this is carried out by CISIR.

<sup>2/</sup> Ref. UNIDO project UNIDO SRL/74/059 (SIS) - Development of Kenaf Cultivation and Industrial Processing of Pulp.

<sup>3/</sup> Research on this is going on at CISIR. Furthermore, it may be noted that a large potential export market would seem to exist for rubber wood chips as raw material for paper pulp.

new indigenous fibrous raw materials and has been successful in respect of several wood varieties. New species of trees for pulp and paper are being successfully cultivated on a large scale. Two pulp and paper mills are operating, producing about 20,000 tons (representing about 30% of the country's total demand) and a third is planned in the North-Central Province with a capacity of 91,000 tons/year. It may also be mentioned that a newsprint mill based on eucalyptus with a rated capacity of 30,000 tons/year has been identified as a feasible potential project.

(ii) Mineral resources and products

63. Sri Lanka possesses iron ore deposits which so far have been exploited only to limited extent. Development is now under way (through bilateral aid) on the basis of backward integration to raw materials processing.

64. Important deposits of titaniferous heavy mineral beach sands are being exploited; ilmenite concentrate is being produced and exported while the Government is seeking ways and means of increasing the added value and export potential of titanium products, to be produced from this raw material. Since 1970 UNIDO has been assisting the Government in the elaboration of technological alternatives for the utilization of ilmenitic concentrates; industrial scale electrosmelting tests at a plant in the USSR have been undertaken.

65. Of greatest significance are the graphite deposits found over a wide area in the southwestern part of the island. As early as 1968 it was noted in the Government publication "Ceylon Investment Guide", that the country was the world's leading graphite producer, with practically the entire output of around 10,000 tons being exported as crude graphite (plumbago) "while little so far had been done to exploit this valuable natural asset for local manufactures."<sup>1/</sup>

66. Salt is produced by solar evaporation and further large-scale development programmes are being coordinated with the development of salt-based chemical industries.

---

<sup>1/</sup> Dr. Karunaratne notes that the possibilities for developing local industries, using graphite, like crucibles, carbon rods, etc., should be investigated.

67. CISIR has been carrying out development work on the preparation of triple super phosphate from rock phosphate.
68. CISIR is also conducting a programme on the analysis and evaluation of local raw materials (such as mica) for use in the indigenous electronics and allied industries.
69. Other raw materials of importance as local industry inputs are various clays, kaolin, quartz, feldspar and silica sands. Thus, the Karunaratne study indicates import substitution prospects with respect to the manufacture of sheet glass and notes further that the Sri Lankan ceramics industry has reached a standard that permits prospecting for export markets for ceramic ware specializing in oriental motifs and design. Other potential products include sanitary ware, wall tiles, decorative glass, salt glazed sewer pipes and ceramic insulators.
70. The structural clay products sector covers, in addition to the public sector National Small Industries Corporation's five modern brick and tile factories, kilns in the rural areas which are providing important supplementary incomes in the agricultural off-season. The Karunaratne study indicates potential new products involving:
- the devising of new techniques of manufacturing products such as clay roofing and re-inforced clay tiles<sup>1/</sup> in order to compete with asbestos (which is based on imported materials);
  - manufacturing of refractories and fire clay bricks for use in industrial kilns.
71. The Karunaratne study also indicates some further new possibilities among cement products:
- cement and concrete pipes to replace cast iron sewer and drainage pipes;
  - telephone and telegraphic poles (might also be made of wood) and re-inforced railway sleepers;
  - prefabricated building blocks.

---

<sup>1/</sup> Research is being carried out by the State Engineering Corporation.

V. The institutional infrastructure for industry

72. Sri Lanka has a reasonably well developed institutional machinery which provides a wide range of services in support of the industrialization effort. It has proved to be relatively flexible in adjusting itself to the changes in industrial strategy and policy emphasis which have occurred during the last two decades.

73. In preparation for the current development effort and in order to streamline the machinery for planning, the Ministry of Planning and Economic Affairs has been merged with the Ministry of Finance. This is intended to ease problems of coordinating the capital budget and foreign exchange management with the general budgetary process. The enlarged ministry is responsible for preparing a medium-term investment programme by the autumn of 1978. A newly constituted Committee of Development Secretaries under the chairmanship of the Cabinet Secretariat coordinates decisions on the capital budget and will review progress on the preparation of projects and sector plans. A review of sector programmes and policies is being undertaken by nine ministries with the assistance of the Ministry of Finance and Planning. Consideration of foreign investments is carried out by the Foreign Investment Advisory Committee. Before being considered by the inter-ministerial committee, industrial project proposals are screened by the Ministry of Industries.

74. The availability of basic data will be a vital factor in project evaluation and the setting up of an information bank for this purpose is planned. However, just as important is the establishment of quantifiable and empirically testable planning goals. Although deficient, the statistical base that is available for industrial programming could, it is believed, be used at sector level to evolve quantifiable guidelines for the best allocation of scarce capital and foreign exchange resources and for the identification of those sectors that offer the largest scope for private enterprise.

75. A "one-stop" investors' service is to be established in connexion with the promotion of foreign investment to the export processing zone (see para. 79 below). Foreign investors will have all their requirements met by a single authority, removing the need for potential investors to shuttle between numerous ministries and government agencies for investment approvals and services.

76. Investors will also have recourse to higher authorities in the event of any disagreement. In the case of a dispute arising out of an agreement between GCEC (see para. 79) and the investor, the dispute will be referred to arbitration by the International Centre for Settlement of Industrial Disputes. The other important safeguard is the provision of government-to-government guarantees to the investor against arbitrary action by the host country. Already such agreements for the protection and promotion of foreign investment in Sri Lanka have been signed with the US and the Federal Republic of Germany, and a similar agreement with Britain is under negotiation. Sri Lanka also has double taxation relief agreements with the Federal Republic of Germany, Japan, Sweden, Norway, Denmark, Malaysia, India and Pakistan. Similar agreements, subject to ratification, have been negotiated with Britain, US, France, Canada, Poland and Czechoslovakia.

77. The Industrial Development Board, established in 1966, as a statutory body under the Ministry of Industries, is playing a vital role in particular in the support and promotion of small industries development. Specifically, it undertakes feasibility studies for small industrial projects and provides technical services to such projects. The IDB is also responsible for the development of industrial estates; in fact it commenced its operations in 1966, by taking over the Industrial Estate at Ekala which had been set up in 1960 to provide custom-built factories, infrastructure and service facilities to support small-scale industrial enterprise.

78. Responsibility for different aspects of the country's export drive is diffused amongst several Ministries. The production programmes for export are the concerns of the Ministries of Industries, Agriculture and Plantations; commercial policy and trade promotion fall within the Ministry of Trade; promotional functions connected with tea and coconut remain with the Ministry of Plantation; export incentives, <sup>1/</sup> customs facilities and exchange control measures are the concern of the Ministry of Finance; while overall export targets and the crucial role in planning and managing the foreign trade sector rests with the Ministry of Planning.

---

<sup>1/</sup> See Annex I.

The coordinating role is entrusted to an Export Promotion Council composed of the Ministries concerned and serviced by the Export Promotion Secretariat. Implementation of Government policy, however, has been carried out through existing machinery with the cooperation of the public and private sectors of the economy. In its development programme high priority was given to the development and diversification of the non-traditional export sector - the industrial sector being one of the principal areas in this programme of export development. A separate Export Promotion and Development Division was set up in October 1971 as the focal point of efforts of the Ministry of Industries to formulate and implement a strategy aimed at stimulating and aiding industrialists in Sri Lanka to enter overseas markets and to achieve export targets for manufactures and semi-manufactures.

79. A single legal authority, the Greater Colombo Economic Commission (GCEC) is being set up to develop a 200 sq. mile export processing area at Katunayake, near Colombo airport. The Free Trade Zone Law has, however, yet to appear. A blue print for the area, being termed Investment Promotion Zone (IPZ), has recently been prepared, under UNIDO contract, by experts from the Shannon Free Trade Zone. The GCEC has jurisdiction not only over its geographical area but also over licensed enterprises located anywhere in the country.

80. The National Institute of Management (NIM), initially called the Management Development and Productivity Centre, was established in April 1968 as a part of the Industrial Development Board. In October 1971, in accordance with the recommendations of a Committee appointed by the Ministry of Industries and Scientific Affairs to study the working of the Industrial Development Board, it was detached from the Board and continued to function as an independent agency under the Ministry. In 1972, the Centre was re-named, with Cabinet approval, the National Institute of Management

81. The objectives of the NIM are as follows:

- (a) to develop management consultancy as a professional service to industrial and commercial organizations in both the public and private sectors;
- (b) to provide training in and application of modern management techniques, planning and control systems;
- (c) to initiate research into management problems as they exist in the socio-cultural environment in Sri Lanka;

(d) to assist in the future training of managers so as to improve the practices of management at corporate level in association with the University of Sri Lanka; and

(e) to work in cooperation with other Institutions set up with similar objectives, like the Academy of Administrative Studies, Cooperative Management Services Centre, Agrarian Training and Research Institute, etc.

82. NIE has recently completed the initial phases of a multi-country research programme on the Performance of Public Enterprises (Asia) funded by the International Development Research Centre of Canada. The macro programme comprised a study of the emergence and growth of public enterprises in Sri Lanka, and their organizational structures and control mechanism production, capital formation and savings, and the structure of inter-dependency and employment in public enterprises. Parallel with the macro study the action programme on the micro area was also initiated with a study of the Ceylon Cement Corporation.

83. The National Science Council, established in 1968, coordinates and promotes research activities in Sri Lanka. For instance, it is responsible for coordinating the country's preparation for the United Nations Conference on Science and Technology for Development. The Council has been appointed by the Minister of Industries and Scientific Affairs as the coordinating agency for the working programme on Scientific and Technical Cooperation Agreement between Sri Lanka and India. Eighteen areas for joint research projects have been identified.

84. The multi-disciplinary Ceylon Institute of Scientific and Industrial Research (CISIR) was established in 1955 to further the country's industrialization efforts through applied research and technology development and adaptation. Its attention has been concentrated on research into indigenous materials utilization, although considerable work on, for instance, the development of appropriate technologies has also taken place. <sup>1/</sup>

85. The National Engineering Research and Development Centre of Sri Lanka was established in 1974. It has amongst its objectives the function of carrying out and promoting research and innovations in the technological

---

<sup>1/</sup> Further details regarding the work of CISIR are given in Annex II.

field and the task of developing the results up to and including commercialization. The NERD Centre is, for instance, carrying out consultancy in electrical and mechanical work in a number of new projects involving design and development of a specialized nature. Another important function of the NERD Centre is stated as follows in the 1972-1976 Plan: "Further, this institution will in future examine the technical details of new projects in the industrial sector with a view primarily to determining the possibilities of local manufacture of components items in such projects". In coordinating with the Ministry of Industries and Scientific Affairs the NERD Centre has made a start on this aspect and has planned systematically to expand its capabilities to meet the requirement in relation to all major new projects. Preliminary proposals have been considered for a 6-year development programme of work to enable the NERD Centre to realize its objectives fully.

86. A further objective of the NERD Centre is "to examine direct and indirect mechanisms of technology transfer..." and to ensure by adoption and adaptation the choice of technologies that would be consistent with the country's resource endowments and national planning objectives". In addition to collaboration with industries in the public sector the NERD Centre has been able to establish links with various important industrial and engineering establishments in the private sector. This has enabled the accumulation of knowledge and data pertaining to various fields of the industry needing technological development. The data is also vital from the point of view of formulation of plans and policy especially with regard to strengthening the engineering capability of the country.

87. Note should also be made of the various agricultural research bodies, whose work in developing suitable raw materials is of greatest importance for the agro-based processing industries. These bodies include the Central Agricultural Research Institute, the Rubber Research Institute, the Tea Research Institute and the Coconut Research Institute.

88. The Sri Lanka Bureau of Standards, established in 1965, prepares standards for manufactured products and a standardization marking scheme is being introduced. According to the Country Programme 1972-1976 Background Paper, the facilities for testing of products and inspection of quality are not adequate.



VI. Main features of industrial development objectives and strategy

89. In the past, as noted earlier, the industrial development strategy was for a long period geared towards import substitution, in some cases without much attention to economic efficiency and comparative advantage. These industries tended to be capital intensive and were based on the use of imported raw materials and foreign technology. The outward looking development strategy now called for will require some re-orientation of the production structure towards fuller consistency with the factor endowments of the country.

90. In the words of the government, its main policy objective is to "encourage export-led industrial development in preference to import-substitution oriented industrial development that has characterized the period since the late 1950s, since the latter has proved to be both uneconomic and incapable of generating employment".<sup>1/</sup> While the precise policy framework designed to bring about this restructuring is still in the process of formulation, some elements in the package are already clear. The main beneficiary of import liberalization is intended to be the industrial sector. The shift away from quantitative import restrictions greatly reduces the administrative burden of import licensing and eases the task of business planning. Easier availability of imported raw materials, spares and machinery will ease one major constraint on capacity utilization; the elimination of most price controls will remove another. The new Tariff Commission provides an opportunity to construct an improved tariff structure now that the two-tier exchange rate has been abolished. Finally, a Greater Colombo Economic Commission is being established to administer, inter alia, an export processing zone, designed to provide domestic and foreign investors with strong incentives for efficient export production.

91. These policy initiatives are yet to be integrated into a viable medium-term industrial strategy.<sup>2/</sup> Further action is needed to devise a system of incentives designed to ensure that "export-led industrial

---

<sup>1/</sup> Government of Sri Lanka "Greater Colombo Economic Rehabilitation Area", 1 November 1977.

<sup>2/</sup> A comprehensive survey of key issues was undertaken by a World Bank industrial sector mission visiting Sri Lanka in March/April 1978. The report of the mission is, however, not yet available.

development" will come about to improve the efficiency of public enterprises to make them financially and economically viable; and to encourage small industries with a view to greater employment generation and more balanced regional development. The pattern of output, inputs and technology used should take full advantage of the abundant supply of educated labour, and of the various raw material resources of the country. Also, international competition could, no doubt, bring about improvements in the quality of products.

22. A necessary condition for such long-term growth is a significant investment programme for infrastructural development, such as in the electrification and transport sectors, for major irrigation and other agricultural production development projects, as well as for certain types of basic industries, such as iron and steel, machine tools, chemicals, cement, etc. But emphasis only on the long-term aspects of growth can, as pointed out in the 1972-1976 Plan, lead to imbalances and dislocations. One possible point of conflict between long-term and short-term policies arises with regard to the problems of employment.<sup>1/</sup> A balance has to be struck therefore, between the demands of long-term growth and the demands consequent to the present serious employment problem.

---

<sup>1/</sup> In particular, the provision of "employment opportunities" in the immediate future may conflict with the long-term need to develop "basic and heavy" industries. These industries do not provide much employment directly; instead, they generate productive capacity which leads, in the long run, to a faster rate of growth of both output and employment in the economy as a whole.

VII. Industrial financing

93. Until now Sri Lanka has emphasized present consumption at the expense of the capital formation which would make possible higher levels of employment and consumption later. The pursuance of these objectives requires an expansion of the supply of savings. While foreign savings are to provide part of the finance to support higher level of capital formation, this source has its practical limits in terms both of availability and of the implications for the countr's debt service capacity. There is therefore no escape from the need to increase domestic savings substantially and this, in the Sri Lankan context, places a special burden on the need for a significant level of public savings. The public sector corporations must provide more savings than they now generate themselves, directly or indirectly, for today there is excessive reliance on the transfer of resources from the Central Government and inadequate internal generation of savings. A major effort appears to be needed in order to accomplish this objective, which is itself dependent upon improved efficiency in some public sector corporations.

94. Through the years there has been a strong inclination among private entrepreneurs for self-financing with financing institutions playing a relatively minor role. In 1967, only 9% of private investment in the manufacturing sector (including inventories) was financed by institutions, whereas 53% came from firms' own funds and 38% from trade credits and other non-institutional sources. While statistics for more recent years are not available there are no indications that this financing pattern has changed significantly.

95. The bulk of the institutional financing is provided by commercial banks (in 1975: 4 domestic and 7 foreign). Their aggregate outstanding lending to the industrial sector - public and private - was Rs 517 million at the end of 1973, of which more than 3/4 was lent by two Government-owned banks, the Bank of Ceylon and People's Bank. Since the commercial banks have no access to foreign exchange resources, these are handled directly by the Central Bank.

96. The commercial banks lending which is predominantly short-term, is generally conservative and based primarily on the adequacy of the

security. The Development Finance Corporation of Ceylon (DFCC),<sup>1/</sup> established in 1955 in response to IBRD recommendations and subsequently having had both IBRD and ADB loans, is for all practical purposes the only long-term credit institution whose lending criteria are primarily concerned with project viability [and which has sufficient expertise to perform project appraisals]. Since the early 1970s the investment climate in Sri Lanka has improved gradually, and due to the resurgence of investment interest DFCC's activity has been projected to increase rapidly.

97. DFCC is the only private financial institution in the country that provides foreign exchange for industrial investment. (The public sector corporations normally obtain their requirements directly from the Government). For the private sector, the Ministry of Industries obtains a working allocation from the Ministry of Planning to cover the imports of raw materials and spare parts. This allocation was earlier released to the Ministry of Industries in several stages, making it difficult for the Ministry (and thereby also for the private industrialists) to know how much foreign exchange to expect in a given year. Since 1977, however, the allocation has been given in one lump sum at the beginning of the year. In view of the insufficiency of the allocation, various industries are ranked by the Ministry of Industries according to their importance for the national economy. Export-oriented industries are given high priority.

---

<sup>1/</sup> DFCC is concerned with the financing of private enterprises (defined in the DFCC Act to include enterprises in which Government ownership does not exceed 20%) in industry, agriculture, commerce, construction and engineering.

VIII. Policy measures and their implementation

98. During the last few years the increasing complexity of the industrialization process has made new demands on policy. The import substitution potential in consumer goods has not yet been fully exploited and there has been a serious fragmentation of production contributing, inter alia, to the current phenomenon of under-utilized capacity. The incentives structure has **been adjusted so as to better alleviate the severe** foreign exchange shortage, by giving encouragement to export-oriented manufacturing and by promoting increased use of domestic raw materials and other local inputs to industry. Indeed, the principal criteria employed in granting new approvals for industrial projects have for some years been the ability to export, the use of locally available raw materials and employment generation.

99. The wide variety of fiscal inducements which have been offered to industry include:<sup>1/</sup>

- (i) tax holidays for projects accorded "pioneering status" by the Ministry of Industries;
- (ii) a 5 - 8 year tax holiday on export profits;
- (iii) lump-sum depreciation allowance (50-80% for machinery) for export enterprises;
- (iv) a 10% development rebate on imported plant and machinery for approved projects;
- (v) investment relief for approved projects; and
- (vi) priority given to exporters of manufactured goods in the allocation of foreign exchange for raw material imports; they would be entitled to an FEEC premium (see Annex I para. 1) of 65%, and they can retain 5% of export sales proceeds in foreign exchange.

100. To complement these efforts, the Government has since mid-1972 encouraged joint ventures with private foreign enterprises, in which local partners (public or private) hold majority ownership and retain effective control. In exchange, the Government gives assurances that full compensation for the investment will be made in the event of nationalization, and that remittances of profits and repatriation of capital will be allowed.

---

<sup>1/</sup> See further Annex I.

101. Recently, new tax proposals have been made aimed at eliminating some of the earlier overly generous treatment, in addition to introducing some new conditions. The proposals include a partial abolition of the development rebate, reduction of the tax holiday and investment relief concessions, taxation of profits distributed by tax holiday companies and the abolition of lump-sum depreciation allowances. Against this, additional tax relief has been proposed for labour-intensive production. A recent World Bank report notes in this connexion that despite recent revisions the fiscal incentive structure remains highly complex and could benefit from a systematic appraisal of benefits and costs.

102. Finally, in March 1978 the Government announced a new package of incentives designed to attract foreign investors to its proposed export processing zones located just north of Colombo. In addition to a skilled but inexpensive labour force, the Greater Colombo Economic Commission - which is responsible for administering the zones - offers the following incentives to investors:

- (a) All licensed enterprises will be eligible for five-year tax holidays. Upon expiry, firms would be required to pay a turnover tax at the rate of 2% on export sales and 5% on sales in Sri Lanka. In addition, a 10% withholding tax will be levied on all remittances of royalty and technical service fees when the holiday expires.
- (b) All foreign personnel attached to licensed enterprises will be exempt from Sri Lankan taxes for the five-year period during which the company benefits from the tax holiday.
- (c) All dividends paid to non-resident shareholders will be free from all taxes and exchange controls.
- (d) Although companies will have to be locally incorporated, shares can be transferred within and outside Sri Lanka to residents or non-residents with the country of payment being fixed by the buyers and sellers. Such transfers will not be subject to Sri Lankan taxes.
- (e) Agreements signed by the Commission and investors would provide guarantees for the free transfer of capital and earnings and proceeds from liquidation.

103. The following paragraphs examine industrial policy measures as they relate to sub-sector allocation, regional dispersion, small-scale industries, export efforts, technology choice and manpower.

(a) Resource allocation by industry sub-sectors

104. Emphasis during and after the 1972-76 Plan has been given to investment in basic industries which can provide inputs for other industries, for expanded agricultural production and for infrastructural development (e.g. transport, energy, etc.). Foreign exchange difficulties make it imperative that priority be given to reducing the import content of required industrial raw materials. However, with regard to several of these items, the investment needed for local production is large and of a size where the capacity of one production unit could adequately meet the country's requirements for the next 5 - 10 years. Therefore, according to the 1972-76 Plan, these basic industries should be in the public sector. This programme includes investments in chemical and fertilizer industries, petroleum-based industries and basic metal industries.

105. Particular attention has also been given to the development of the country's engineering sector, since no sizeable programme of industrialization can get under way as long as all machines, spares and accessories continue to be imported. While the scope for import substitution of the heavy machinery needed for the large-scale units is slight - at least in the short term - a wide range of spares, accessories and simple machinery offers possibilities for further expansion of the emerging Sri Lanka capital goods industries. An important role for the development of the engineering industries sector is expected to be played by the National Engineering Research and Development Centre of Sri Lanka. <sup>1/</sup> It was established in 1974 with the tasks of examining the types of machines which could be made locally and of designing prototypes for their manufacture. Furthermore, the new Centre is to examine the technical details of new projects in the industrial sector with a view primarily to determining the possibilities of local manufacture of components in such projects.

106. Construction materials constitute major production inputs or requirements in developing economies. One-half to two-thirds of the capital investment required in such economies is generally spent on cement, steel, aluminium parts, lumber and other materials required in the construction sector. Although in the case of Sri Lanka the building materials are

---

<sup>1/</sup> See para. 85 above.

already to a large extent of local origin, some further import substitution might be possible, in particular through use of alternative materials. A well co-ordinated programme for applied technological research - and subsequent investment - aiming at fullest possible utilization of locally available materials is of the greatest importance in this field.

107. Consumer necessities are another major category of goods for which demand will grow following wider income distribution. The production of these consumer necessities is in most cases highly labour-intensive and could thus be a major component in the country's employment programme, in particular as the production units can often be located in smaller regional industrial centres. Such consumer necessities would include clothes, blankets, footwear, processed foods, matches, cooking utensils, bicycles and fuels. These products, which should be produced at low prices, would be aimed at low income groups throughout the countryside as well as in urban areas. Less attention might be given to increased production of other consumer products whose import content is more significant, for instance radios, TV-sets, refrigerators, air conditioners, etc.

(b) Industrial dispersal within the context of a regional development programme

108. The concentration of industry in the Colombo area with consequential urban congestion and pollution is of major concern to the new Government, and the establishment of the Greater Colombo Economic Commission can be seen as a major step towards more orderly development. At the same time growing regional inequality, even in a relatively small country such as Sri Lanka with a high degree of literacy and increased awareness of all the people, brings demands towards a redress of regional imbalances. It is clear that the problem of regional development is a very important socio-political and economic problem that needs to be tackled on many fronts.

109. Hitherto, the major vehicle of industrial dispersal has been the state corporations while private ventures were largely left to locate in the Colombo area since fiscal, tariff and other inducements for industrial ventures were not used to direct industrial location. If industrial development is to be spread more evenly throughout the country, it is essential that poles of industrial growth be planned to initiate the process of creating external



economies, setting off a chain of growth throughout each region. Such a growth pole may be created around a major industrial project whose location may be determined by proximity to an important raw material source, or it may be established through the building up of an industrial estate attracting a variety of small-scale industries. The main factors determining the latter type of growth pole are of course the availability of labour supply and an adequate market, often derived from a well developed agricultural area.

110. Several integrated regional development projects are presently being nurtured within the Ministry of Plan Implementation, to help in various districts, including the following:

- Kurunegala District Integrated Rural Development Project (proposed to be developed in cooperation with the World Bank);
- Matara Rural Development Project (initiated as a result of bilateral cooperation agreement between Sri Lanka and Sweden);
- Hambantota District Integrated Rural Development Project (proposed to be developed in cooperation with NORAD).

(c) Promotion of small-scale industry development

111. As noted earlier, the progress of the industrial sector in the period 1960-70 was not conducive to the optimal development of the economy as a whole. The manufacture of commodities, with high import content and of a non-essential nature, entailed a continuing drain on foreign exchange. Furthermore, adequate account of the resource situation of the country was often not taken and emphasis was placed on the expansion of capital-intensive industries, to the relative neglect of the small-scale sector.<sup>1/</sup> The services needed for the development of small-scale industry, such as credit facilities, extension services in marketing and technical know-how and the general institutional support necessary for the growth of a viable small-scale sector were not provided.

---

<sup>1/</sup> The definition of small-scale industries in Sri Lanka was recently changed from Rs 200,000 of fixed assets excluding land to Rs 500,000 of investment in machinery and equipment. Even the new definition, which corresponds to about \$42,000, covers only the informal sector and the low end of the organized sector.

112. In the 1972-76 Development Plan it was recognized that, by virtue of its high employment potential and relatively low requirements of foreign exchange for machinery, the small-scale industry sector is basic to the development programme. That sector would be the main carrier of the required expansion of the production of essential commodities for mass consumption to meet the increase in demand consequent to the planned rise in incomes of the low income groups. It would also be the main vehicle for bringing industrial activities to the rural areas and thereby supplementing rural incomes by giving employment and by providing a demand for raw materials - agricultural and others - originating there. At the same time, while small-scale industry is often particularly suited to rural location, it has an equally important role to play in the urban areas, for it has a greater employment-generating potential than large-scale industry for a given amount of investment and it can serve as a training ground for entrepreneurship.

113. The increased attention to the development of the small-scale industries sector has no doubt contributed to the fact that the share of small-scale industries in total value added of manufacturing industry has considerably risen in recent years - from 6.4% to 14.2% between 1970 and 1975.

114. A UNIDO adviser was attached to IDB in 1975-77 to assist in the preparation of a programme to develop small-scale industries. His specific tasks included assistance in carrying out a detailed resources study and the preparation of an inventory; in identifying and planning small-scale industry projects based on the resources study; in designing promotional measures for the rapid development of small-scale industries within the framework of the IDB, including measures to be adopted for developing the technology suited to rural areas, with a view to generating employment.

115. The new Government has fully recognized the importance of small-scale enterprises in industry. The 1978 budget grants a five-year tax holiday for small- and medium-scale industries outside the Colombo district, although no clear definition of such industries has yet been specified.

116. As regards finance for small-scale enterprises, the commercial banks with extensive branch networks in rural areas should be encouraged to play a leading role. This will be facilitated by a new credit guarantee

scheme, due to come into effect in 1978. Apart from normal sources of finance such as commercial banks, small-scale industries receive special attention from a number of institutions such as:

(a) The Department of Small Industries under the Ministry of Industries. With some exceptions, the Department is responsible for units with plant and machinery of less than Rs 25,000. In particular, it operates handloom and powerloom centres and training centres, provides tools and raw materials to registered enterprises, and markets small-scale industry products through 12 retail outlets.

(b) Divisional Development Councils (DDCs). The DDCs are scattered all over the country. Each Council consist of several GOSL officials and local community leaders, with the function of identifying and promoting local projects in industry and agriculture. Last year, the 550 DDCs were reduced in number to 154 by enlarging the authority area of each DDC. During the five years of their existence (through 1975) the DDCs have halped to start 1,680 projects (of which 563 in 1975 alone), with total employment of 20,500 persons. A total of 889 projects have been classified as industrial, with total production in 1975 of Rs 18.6 million. To a large extent, these projects were financed through the People's Bank.

(c) The Industrial Development Board (IDB). IDB prepares feasibility studies, provides technical assistance, and operates industrial estates. Since October 1972, it has also operated a joint scheme with the People's Bank for small-scale industry financing, with the IDB and the bank doing the appraisal and the latter providing the financing. The maximum assistance per project has been Rs 50,000. As of March 1976, 171 loans had been granted under the scheme, with 68 loans in arrears with more than two instalments. The scheme is now being expanded with the addition of the Bank of Ceylon and DFCC (see para. 118 below).

117. It should be noted that the Development Finance Corporation of Ceylon (DFCC), in response to the emphasis given by the Government to the need to develop small-scale industry, has indicated its intention to move gradually in that direction. DFCC's appraisal capabilities are, however, not as relevant for small-scale industries lending as for its normal operations, since it is necessary to apply simplified procedures for lending to small-scale industries. In addition, the commercial banks are better suited

for such financing in view of their branch network, working capital lending, and other banking services. For this reason, DFCC has done very little lending to small-scale industries.

118. The IDB/People's Bank scheme for small-scale industry financing is now being expanded to include the Bank of Ceylon as well as DFCC. The main features of the expanded scheme will be as follows:

- (a) Applications under the scheme will be received and processed by IDB and one or the other of the two banks;
- (b) Rupee finance will be given by the commercial banks, while applications for foreign exchange will be submitted to DFCC;
- (c) DFCC will normally undertake a desk review of the appraisal prepared by the other institutions, but will have the right to request more information from these institutions or from the clients. Applications under the scheme will be decided by DFCC's General Manager;
- (d) The follow-up work will be undertaken by IDB and the commercial bank;
- (e) The credit limit per project will be Rs 400,000 with a foreign exchange limit of Rs 150,000; and
- (f) Simplified appraisal requirements have been drawn up, and normal banking security will not be insisted upon. DFCC's foreign exchange loans will be guaranteed by the commercial banks.

119. The utilization rate under the scheme will depend primarily on the demand for finance. DFCC's role will be to provide foreign exchange, and in addition to utilize its appraisal expertise on certain projects, and thereby help upgrade the appraisal skills of the IDB and the commercial banks. However, it will be inconvenient for the small-scale industry clients to establish loan documents with several institutions. Therefore, for foreign exchange, it would be advantageous to let the scheme work as a re-finance arrangement, so that clients would only have to establish loan documents with the bank involved. A credit guarantee scheme for small-scale industry is under consideration within the Government and the Central Bank. Such a scheme, if introduced, could reduce the risks of small-scale industry lending and thereby reduce the minimum spread necessary.

(d) Export industries development

120. As noted above, one of the major ingredients in the Government's 1972-76 Development Plan strategy, involving a shift away from its early industrial policies, was the strong encouragement of those export-oriented industries which were using local raw materials. During the late 1960s, exporting had been unattractive because of an overvalued exchange rate and difficulties in obtaining tax rebates and other concessions from the Government. In 1972 and 1973, the package of incentives was enlarged by providing exporters with a customs rebate, a convertible rupee account, tax holidays and investment relief. (A listing of the incentives enjoyed by the export-oriented manufacturing sector is given in Annex I.)

121. These measures were accompanied by a liberal licensing scheme allowing exporters to import the raw material inputs which they required. As noted elsewhere the Government is presently taking measures to establish export processing zones close to Colombo as a major step to promote manufactured exports.<sup>1/</sup>

---

<sup>1/</sup> In response to a request from the Sri Lanka Government, a consulting firm--under UNDP/UNIDO assistance--undertook in 1974 a preliminary study "Export Processing Industrial Estates, Sri Lanka: Location and Costs", Shannon Free Airport Development Co. Ltd., June 1974, on the locations and costs of export processing industrial estates in respect of five possible sites, namely Pallekelle, Boosa, Katunayake, Ekala and Trincomalee. The study came to the conclusion, after reviewing these locations, that Katunayake and Boosa would have the best immediate potentials, while a Trincomalee project was recommended to be planned in a comprehensive way--with perhaps major initial emphasis on tourism and fishery development--which would include an industrial export processing zone whose development would start in a few years' time. The report also contained an indicative listing of industries with export potential (and which are in general labour intensive) as follows:

electronic components	gloves
scientific equipment	ceramics
watches and clocks	automobile components and accessories
electrical products	jewellery
photographic equipment	office machinery
musical instruments	domestic appliances
toys	pumps and valves
sports and athletic equip.	pharmaceuticals
textiles	machine tools
shoes, boots	ball and roller bearings.

Further UNIDO/UNDP assistance is presently being provided through contract with the SFADCo.

122. Sri Lanka is concentrating its export efforts mainly on four groups of industries:

- (i) food and beverages (mainly fruit processing, seafood and tea bags);
- (ii) textiles and garments;
- (iii) chemicals and chemical products (including soap, fatty acids and glycerine and edible fats); and
- (iv) rubber products.

123. These products have been selected for a variety of reasons. They can generate high net foreign exchange earnings; with the exception of chemicals, their production is labour intensive; and finally, much of the preliminary market exploration and penetration has already taken place so that sales prospects abroad are reasonably secure.

Table 13: Potential new industrial export products as identified in the 1972-76 Development Plan

<u>Textiles, wearing apparel</u>	<u>Non-metallic mineral products</u>
Garments	Ceramic ware and sanitary ware
Batik	Graphite products
Leather cloth	Cement
<u>Chemical products</u>	<u>Metal products</u>
Glycerine and fatty acids	Implements and tools
Vegetable oils and fats	Country products
Paints and polishes	
Soaps and detergents	<u>Machinery</u>
<u>Leather, rubber, wood and paper products</u>	Tea and rubber machinery
Footwear	Rice millers, threshers, grinders
Tanned hides and skins	Water pumps
Tyres and tubes	Boats
Other rubber products (gloves, rubber mattresses, flooring, toys, hose)	<u>Electrical Goods</u>
Plywood and sawn timber	Dry cell batteries, transistor radios
Parquet flooring and other wood products	Electric cables

(e) Selection and acquisition of technologies

124. One of the aspects stressed by the ILO Employment Mission to Sri Lanka in 1971<sup>1/</sup> was that technology was biased towards excessive capital intensity due to a variety of reasons such as an overvalued exchange rate for capital goods, too generous a tax treatment for investment, very low interest rates; and perhaps above all, lack of controls on the introduction of foreign technologies that involve heavy foreign exchange costs.

125. In addition, the conclusions from a more recent study, undertaken in 1975 by the Marga Institute of Sri Lanka and sponsored by UNCTAD, point in general to the inappropriateness of the technology transferred to Sri Lanka and to its excessive cost in relation to the benefits accruing from such transfer.<sup>2/</sup> The initial absence of any machinery to effect a proper choice of technology on the one hand and the absence of institutions adequate to regulate and adapt technology transfer on the other, have been among the factors responsible for the shortcomings of technological development in the country. The issue of technology choice is also pertinent in forging linkages between the industrial and agricultural sectors of the economy.

---

1/ "Matching Employment Opportunities and Expectations - A Programme of Action for Ceylon", ILO, 1971.

2/ "Major Issues arising from the Transfer of Technology - A Case Study of Sri Lanka", document TD/B/C.616 of 7 October 1975, by the Marga Institute of Sri Lanka. The report further notes that "with the main desire to retain the business turnover already enjoyed in the import trade, investors undertook the minimum processing needed to qualify for approval as an industry and escape the restrictions placed on the import trade. In some instances it was confined to the simple assembly of finished components or the compounding and packaging of material imported in bulk. This approach on the part of investors had two consequences for the structure of industry that developed. First, most of the industries that were set up had a large import content, and the foreign exchange cost of keeping the new industrial sector in production was very heavy. Import substitution in industry therefore did not bring the relief to the balance of payments that was expected. Second, in terms of technology the impact of the import substitution programme in the early 1960s was marginal. What was transferred in most cases were the end processes of manufacture. There was no systematic effort to increase progressively the local component in manufacture and find local substitutes for imported intermediaries."

126. The ILO report also noted that the portion of public expenditure going into industrial research was negligible, with the result that there was little possibility of developing technologies tailored to Sri Lanka's needs. The limited research efforts carried out were, furthermore, hampered by the difficulty of obtaining special machinery locally because of the almost complete absence of mechanical engineering activity. Since then, however, the National Engineering Research and Development Centre of Sri Lanka has been established in 1974 (see paras 85 and 86 above).

(f) Manpower for industry

127. The Government has quite rightly placed employment generation high on its policy agenda since the rapid growth of Sri Lanka's labour force has not been accompanied by an equally rapid increase in productive employment. The total labour force grew during the period 1965-74 by an average of 2.33% per annum, while the number of unemployed (persons actively seeking jobs) grew by 11.68% per annum, resulting in an unemployment rate in 1974 of 10.9% (5.0% in 1965).

128. It is now clear from the experience of Sri Lanka and other countries that reliance on rapid growth is insufficient to take care of unemployment. At the 1963-71 ratio of employment to output, output growth would have to be almost 7% annually just to absorb new entrants to the labour force. Thus what is needed is a concerted effort to make the growth process more labour-intensive through appropriate factor pricing, a more careful choice of investments and efforts to improve the working of the labour market.

129. There are large reservoirs of unutilized manpower resources in all categories of occupational groups: professional technical personnel, skilled and semi-skilled workers as well as unskilled workers.<sup>1/</sup> The

---

<sup>1/</sup> Since the Free Education Scheme was introduced in 1945, there has been a rapid expansion of educational facilities at all levels. While pointing out that on the part of the Government the chief concern was to satisfy the unprecedented demand for schooling by quantitative expansion of facilities at every stage, the 1972-76 Development Plan noted that this unplanned expansion had led to the present problem of the educated unemployed, due to the failure of the economy to provide a meaningful and a productive role for the output of the educational system. It has become evident, the Plan notes, that an educated population become a national asset only to the extent it is able to fit into the productive occupations that the economy is capable of providing. The training, the skills, the attitudes and aspirations that are the product

/...



increase in unemployment has, however, during the last two years for which statistical information is available, largely been limited to the unskilled category, as shown in Table 14 on page 52.

130. The extent to which the Government succeeds in shifting its industrial strategy from import substitution of a capital-intensive nature to export-induced growth will be a key determinant of industrial employment growth. It is well recognized that success in international markets for manufactured products has three major effects on employment:

- (i) It adds directly to employment; in developing countries manufactured exports tend to be labour-intensive in relation to industrial output in general.
- (ii) It focuses attention in the economy as a whole on efficiency and comparative advantage (which in Sri Lanka's case are the abundant supply of educated labour at low wage rates). Important for the "spread effect" in this context is the extensive prevailing linkages between exports and other manufactures.
- (iii) Export-led growth tends to lead to higher savings.

---

<sup>1/</sup> from page 50, continued...

of the educational system must be related to the socio-economic environment, and conform in broad outline to the country's occupational profile. To that end a strengthening of the country's manpower planning and forecasting might be called for.

Table 14: Sri Lanka manpower resources and unemployment

YEAR	Population (mid-Year) (thousands)	Labour force (thousands)	Unemployment by occupational groups					Unemployed as % of total labour force (percentage)
			Professio- nal and clerical workers	Skilled workers	Semi- skilled workers	Unskilled workers	Total	
1963	10,650	3,633	48,050	18,556	43,193	71,029	181,128	5.0
1966	11,440	3,714	62,362	20,906	55,709	85,760	224,737	6.1
1967	11,700	3,798	70,523	22,456	64,673	91,8k5	249,467	6.6
1968	11,990	3,883	73,703	24,055	69,353	98,516	265,627	6.8
1969	12,250	3,970	80,159	27,852	78,237	119,702	303,930	7.7
1970	12,520	4,059	93,228	34,636	94,509	158,589	380,962	9.4
1971	12,610	4,149	96,156	39,764	96,730	187,029	419,679	10.1
1972	12,860	4,812	91,420	43,087	100,576	205,250	440,342	10.4
1973	13,090	4,337	86,425	43,402	105,188	222,657	457,671	10.6
1974	13,280	4,435	89,087	44,818	112,574	242,869	489,348	10.9
1975	13,510	4,741	96,450	47,323	120,379	237,562	521,714	11.0

Sources: UN, Monthly Bulletin of Statistics  
ILO, Yearbook of Labour Statistics, 1975 and 1976.

IX. Possible areas for UNIDO and other external inputs

131. Following from the discussion in Chapters VI and VIII, some areas for UNIDO involvement would seem to have particular merit in the short-term. The first of these concerns the ramifications of the Export Processing Zone. Projections of potential output, employment and foreign exchange benefits can be drawn from other countries' experiences. But if the linkages from this zone to the rest of the host economy can be developed, the net benefits could be far greater. Although the rationale for these zones lies in their differential tax, tariff and labour conditions, links such as sub-contracting of production and the provision of ancillary and other services should not be overlooked. Advice into the forging of such linkages must therefore be offered.

132. Secondly, the use of small-scale industry as a tool of regional dispersal policy has attractions of which the Government is well aware. Less well known, however, are the type of constraints which exist on the growth and diversification of such enterprises. Policies so far have focused on the provision of institutional services such as credit banks, market information, etc. While these are in some circumstances important, evidence from cross-country small-scale studies <sup>1/</sup> suggests that the major constraints arise through the small-scale firms' interaction with others in the economic landscape - with oligopolistic wholesalers, for instance, who are in a position to reduce the surplus retained by small producers. Thus, some careful thought above the constraints external to small industries (particularly where they are planned to operate far from Colombo where factor markets will be even more imperfect) rather than solely upon those internal to small industries, is a priority.

133. In the context of the envisaged strengthening of the country's investment planning and promotion functions, possible technical cooperation might be considered, for instance, at the branch-of-industry project identification level. It might take the form of development of

---

<sup>1/</sup> Such as those carried out under the aegis of the ILO World Employment Programme.

programme for fuller utilization of existing productive capacities in various branches combined with project identification surveys and/or comprehensive fellowships training programmes for industrial sector planners and project analysts. Assistance in the field of project analysis and evaluation and in respect of industrial information requirements and facilities might also be needed.

134. Particular attention should be given to possible assistance requirements in further support of the country's export drive, for instance through advisory assistance for development, design and up-grading, quality-wise, of specific products, as indeed has already been the case in respect of ready-made garments, rubber products, leather goods and furniture, ceramics, etc.

135. In recognition of the priority accorded to local manufacture of industrial inputs for agriculture and industrial development in non-metropolitan or rural areas, specific support might be given to the promotion and development of local engineering design and production capabilities, in particular in connexion with manufacture and assembly of agricultural machinery and implements.

136. In the field of agro-based industries a number of specific areas have already been identified or indicated in Chapter IV above, as requiring external assistance at the product research and development level as well as at the production and marketing levels. One specific area where follow-up of initial UNIDO assistance might be required is in the setting up of a cassava processing industry with particular attention to the production of industrial starches. <sup>1/</sup>

137. As noted earlier in the paper, construction materials constitute major production inputs in the economy and a formulation of a comprehensive programme (incl. assistance requirements) for research and development of new products for the building industry aiming at fullest possible utilization of locally available materials, including industrial wastes, might be considered.

138. The packaging industry in Sri Lanka is particularly important in relation to agricultural products for the domestic market and for exports. Some materials for packaging such as wood, paper and fibres can be developed from resources on hand. These materials are however at present not manufactured in sufficient quantity and in the varieties needed for the packaging industry. Indeed only 25% for instance, of the paper needs for

<sup>1/</sup> See project IS/SRL/74/875 "Integrated Industrial Processing of Manioc".

packaging are met from domestic sources. Other materials such as aluminium or other metals are not available locally. Consideration may be given to the undertaking of a techno-economic analysis on the country's future packaging needs in the context of fullest possible utilization of local resources. <sup>1/</sup>

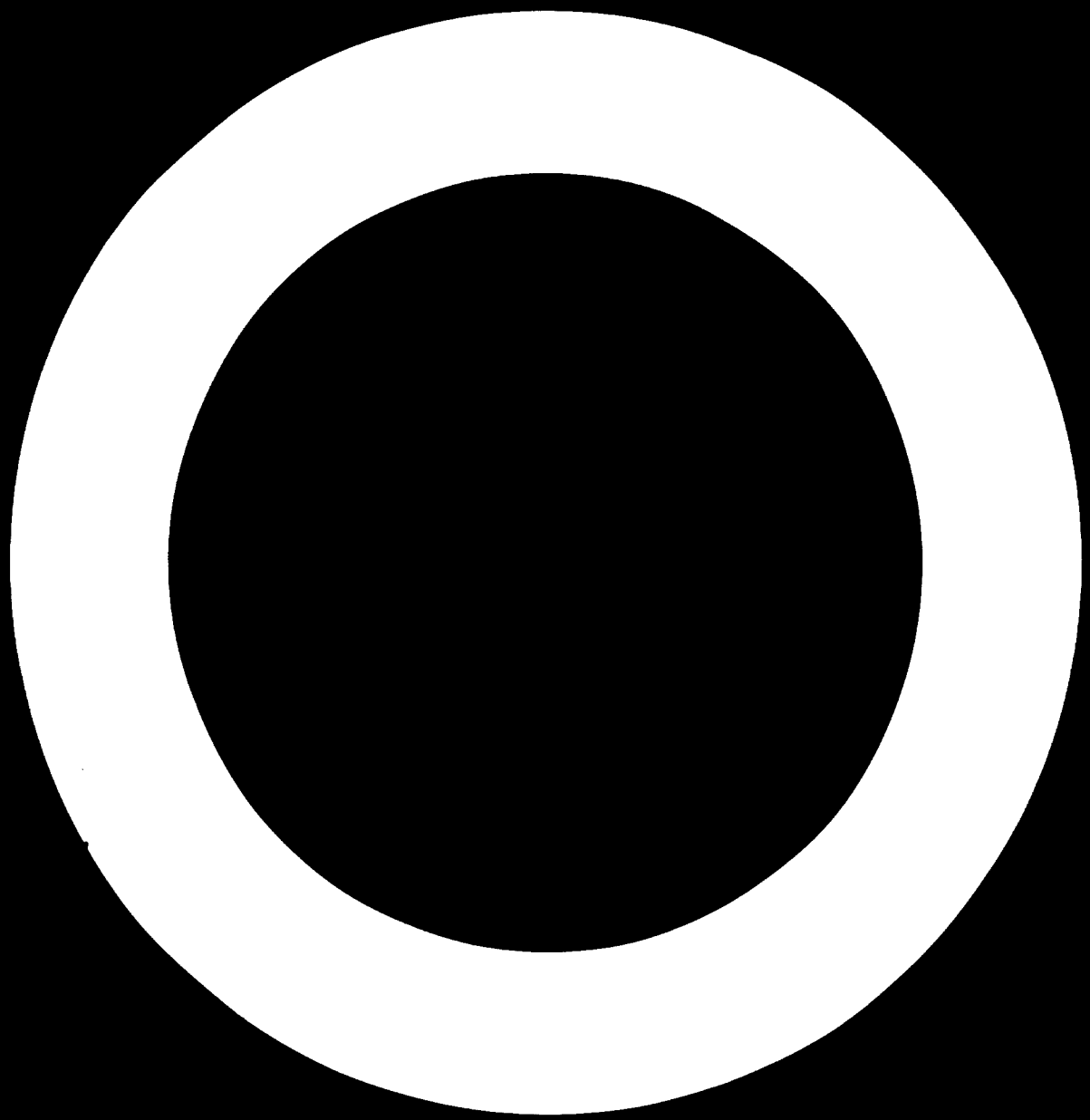
139. Consideration might also be given to possible assistance in the development of comprehensive long-term training programmes for management and technical personnel at the various public sector industrial corporations. Such programmes should be developed as a complement to the intensive training course programmes for the management cadres undertaken by the Management Development and Productivity Centre

140. Assistance, (e.g. by way of training in corporate management techniques and performance monitoring) might be required in connexion with the development of an institutional framework for the systematic evaluation of the performance of public sector corporations referred to in the 1972-1976 Development Plan.

141. Assistance might also be required for the programme, aiming at the promotion and support of entrepreneurship specifically in the rural areas of the country, now being developed under the auspices of IDB.

---

<sup>1/</sup> For more detailed information see the paper "Packaging Situation in Sri Lanka" prepared by Mr. Stanley Wiokremaratne, President, Sri Lanka Institute of Packaging, for the Second UNIDO Inter-regional Seminar for Cooperation in Packaging among Developing Countries held in Seoul in November 1975.



ANNEX I

Private Sector Incentives - Manufactures

1. The export-oriented manufacturing sector enjoys the following incentives:

(a) Foreign Exchange Entitlement Certificate (FEEC).

The exporters of most goods, apart from a few traditional agricultural exports, receive a premium above the official exchange rate. This premium was increased in November 1972 from 55% to 65%. The FEEC rate also applies to most imports (including foodstuffs). Thus, importers of machinery and equipment have to pay 65% above the official rate of exchange.

(b) Convertible Rupee Account (CRA).

The CRA was introduced in July 1972. Under the scheme, exporters of industrial products earning convertible foreign exchange are entitled to retain a proportion of the FOB value of their exports, inclusive of FEECs. The CRAs may be used for the import of a wide range of goods for consumption or industrial use. The percentage is 5% for most articles, 20% for gem exports. In the 1976 budget a variable scale was announced, with a maximum of 15% for industrial exports, 20% for gem exports. However, this change has not yet been introduced. The CRA scheme is considered a powerful incentive, in that it permits the import of many articles otherwise not usually available. CRAs are non-transferable, but goods imported under the scheme are traded at prices implying a rate roughly double the official exchange rate including FEECs.

(c) Tax Holidays on Export Profits.

Tax holidays apply to companies approved by the Ministry of Finance for this purpose. Companies in operation before April 4, 1972, enjoy a five-year tax holiday on their increased export profits over the average export profits for a three-year period before April 1, 1973. New companies, i.e. limited liability companies incorporated after that date, are granted an eight-year tax holiday on their export profits, defined as the same proportion of total profits as export sales to total sales. Previously, dividends declared during a tax holiday (new companies only) were also exempt from tax to the extent they related to export profits, but this has now been changed to cover only companies approved before November 6, 1974, and only for dividends on ordinary shares of up to 10%.

This change was introduced because the Government found the original exemption to encourage the distribution rather than the reinvestment of profits. However, dividends that are invested in approved enterprises would still be eligible for investment relief against income tax (para. (e) below).

(d) Deduction of expenses.

Undertakings approved under (c) above are permitted to deduct from taxable income expenses in connection with export trade including advertising and travelling outside Sri Lanka (the latter only with the approval of the Exchange Controller), as well as expenditures in Sri Lanka on scientific, industrial and agricultural research for export articles.

(e) Investment Relief.

Investment relief is granted for limited liability companies which are considered by the Minister of Finance to be capable of exporting goods or providing services for payment in foreign exchange, or are considered essential for the economic progress of Sri Lanka. Individuals and companies who purchase new shares in such approved companies can claim deductions from their assessable income in the amount of their investment or 20% of their assessable income, whichever is lower. Such investments must be held for at least five years. This incentive has been a major factor in mobilizing equity funds for export-oriented and hotel enterprises.

(f) Turnover Tax.

All exports of industrial products are exempted from business turnover tax and excise duties.

(g) Customs Duty Rebate.

This scheme is meant to refund the amount of import duty paid on imported materials used in the manufacture of industrial exports. In practice, fixed percentages to be refunded, ranging from 3% to 60%, have been determined on the FOB export values of about 300 items. The scheme is operated without major difficulties.

2. The following capital allowances are allowed:

(a) Lump Sum Depreciation.

Assets acquired before April 1, 1957 are depreciated at a fixed annual rate on the written down value of the assets, while assets acquired after that date are given a once and for all lump sum depreciation ranging from  $33\frac{1}{3}\%$  on industrial buildings to 80% on short lived equipment.

(b) Development Rebate.

In addition to lump sum depreciation, a 20% additional depreciation is allowed for factories, staff welfare buildings, and new plant and machinery used in the commencement of a business. If the undertaking is an approved project, the percentage for plant and machinery is increased to 40%. The justification for the lump sum method is that it gives a cash advantage to the investing company by reducing the tax burden in the year of assessment immediately following the investment, but it is of benefit only to companies otherwise paying tax.



Thus to make use of this incentive, companies also enjoying tax holidays for certain profits would either need offsetting profits from other lines of activity, or they would need to carry forward an overall loss from their tax holiday period. Therefore, lump sum depreciation and the development rebate are primarily of importance to companies producing for the local market.

3. In 1976, the following new tax incentives were introduced:

(a) People's Company.

To encourage a broadening of industrial ownership, the Government introduced the concept of a people's company, enjoying an income tax rate of 40%, compared to the normal company tax rate of 60%. The main features of a people's company are that there must be more than fifty shareholders, with no person or family controlling more than 10% of the issued share capital, and where the nominal value per share would not be larger than Rs. 10.

(b) Relief in Respect of Approved Investment Plan.

Companies other than people's companies which after April 1, 1975, make investments in accordance with an approved investment plan are entitled to deduct from the income tax the amount of the investment or 10% of taxable income, whichever is lower.

(c) Relief for Obtaining Foreign Exchange.

Persons or companies carrying on an undertaking in Sri Lanka and bringing in foreign exchange (other than export earnings) for the purposes of the undertaking are entitled to a deduction from payable income tax equal to the amount brought in or 20% of attributable income tax, whichever is lower.

(d) Relief for Increasing Employment.

This relief is granted for companies engaged in agriculture, fisheries, mining, manufacturing, or any activity that will promote these activities. Such companies set up prior to January 1, 1976, and which provide for an increase in the labour force (based on the total employed during the previous year), will be eligible for a reduction in the payable tax of up to 20%, in the same ratio as between the increase in employment to previous employment. Companies set up in 1976 and employing at least 50 persons will be entitled to a reduction of 20% from payable tax. Thus an existing company would have to double its workforce to obtain a 20% reduction in its tax rate, while most new companies would enjoy tax holidays and/or lump sum depreciation and development rebate. Therefore, this measure is too weak to have much impact on employment generation in Sri Lanka.

(e) Limitation.

The aggregate deductions arising from (a), (d), and (e) above plus a similar deduction for housing and land development, shall not exceed  $33\frac{1}{3}\%$  of the income tax otherwise payable.

4. Export-oriented enterprises can make use of all the incentives discussed above. Companies catering to the local market can now be found eligible for investment relief, if they are considered essential for the economic progress of Sri Lanka. They are also entitled to lump sum depreciation, development rebate, and the tax incentives recently introduced (para. 3). In addition, such companies enjoy full import protection, which is granted by the Import Restriction Committee, an inter-ministerial committee chaired by the Secretary, Ministry of Industries. Normally, import protection is granted for products satisfying three criteria:

- (a) satisfactory quality;
- (b) sufficient capacity to cater for the local market;
- (c) the product must be sold at a price giving the manufacturer a reasonable profit margin.

ANNEX II

Ceylon Institute of Scientific and Industrial Research

The Ceylon Institute of Scientific and Industrial Research was established in 1955 under the CISIR Act No. 15 of 1955. The Institute was provided with a initial grant of Rs. 5,000,000 but no further funds were released till 1962/1963 when Rs. 750,000 was provided annually till 1965/1966. The meagre funds provided during the first 10 years prevented the development of the Institute both as regards staff and equipment. By 1966, the scientific staff had increased only by two over the number in 1956.

The ill effects of this shortsighted policy are now being felt by the Institute in that there is a shortage of experienced research scientists to head the various research sections and to guide the younger research workers. This problem is expected to become more acute in the near future, when the few remaining senior officers retire.

Financial support increased after 1966, and the Institute was able to begin expanding. Further steps were taken after 1971 when the Cabinet approved a scheme of reorganization and expansion based on the recommendations of a team scientists from USSR. The scheme provided for an increase in the number of research sections including the setting up of sections in Food Technology, Agro-Industries, Minerals Technology and Economic Evaluation and a considerable expansion of the Engineering and Pilot Plant sections. Additional laboratory space and equipment was provided for together with a considerable increase in the research and supporting technical staff. Legislation was also introduced in 1973 to increase the Governing Board and to provide for a Research Planning Council to advise the Governing Board.

The graduate research staff has been increased from 45 in 1970 to 76 by the end of 1976. It has to be borne in mind though that the larger number among them will take about 5 years time before they can engage in useful research activity.

The research activities of the CISIR centre round the use of local raw materials, both vegetable and mineral, in industry, the development of new technology and improvements to existing technology. In the choice of research projects, the development of industries suitable for rural and of labour intensive technology is taken into account. In the past the work of the Institute had been directed more to chemical and bio-chemical studies than to physics and engineering. An attempt is being made to arrive at a more even balance between the disciplines. Delay in the transfer of technological processes successfully worked out at laboratory bench scale level to commercial industry has been a major problem at the CISIR. Steps have been taken to strengthen the area of pilot plant activities to transfer bench scale work to industry.

Several of the Institutes research results have been applied to industrial use. The process for bottling toddy developed by the CISIR in its early years is now in use at several factories both for the bottling of coconut toddy and palmyrah toddy. The Government derives considerable revenue from this industry. The experimental work done by the CISIR on sugar and jaggery production has been made use of in several small projects and a bicycle centrifuge for small scale manufacture of sugar has been developed and is in use. A carbonated tea beverage made by a process starting with the green leaf is now in commercial production, while a formulation for scented tea is being used by Consolidated Exports. Duplicating inks now used in the country are made to a formulation worked out by the CISIR. Two major projects, namely a process for bottling coconut cream and a formulation for ceramic floor tiles, are ready for pilot plant scale operation.

Besides carrying out research, the CISIR provides a number of services to industry and to public organizations. An important area of work is the repair and maintenance service for a wide variety of electronic equipment in hospitals, research institutions and industry. Calibration and testing of other measuring instruments is also done. Perhaps the best known service provided by CISIR is the physical testing and chemical analysis of a wide range of materials and manufactured products. CISIR also maintains consultancy services and CISIR staff serve on numerous Drafting Committees of the Bureau of Ceylon Standards and on ad hoc Committees appointed by the Ministry.

ANNEX III

Performance of selected manufactured export items 1976 <sup>1/</sup>

Sector I - Food, Beverages and Tobacco

This sector, which comprises sea foods, live fish, canned foods, fruit juices, tea in tea bags, leaf tobacco, cigarettes, wheat bran, cocoa and its products recorded an increase of Rs. 66.3 million over the target of Rs. 50 million set for it in 1976. Sea food (shrimps, prawns and lobsters) made a particularly good contribution towards this rapid growth. Instant tea and tea in tea bags showed a decline but wheat bran and canned fruit items doubled the preceding year's performance.

Sector II - Textile Wearing Apparel and Made-Up Garments

Exports in this sector, which had been growing steadily over the years, showed only a marginal increase in 1975. But it regained its earlier promise in 1976 by turning in Rs. 77.6 million as against Rs. 35.2 million in the previous year. The main item of export in this sector is ready-made garments. A leading joint venture garment manufacturing unit exported slacks for Rs. 2.3 million whereas ladies' and children's wear brought in Rs. 33.6 million. Exports of batiks, however, declined to Rs. 2.6 million as against Rs. 3.5 million in the previous year.

Sector III - Chemical and chemical products

Though this sector exceeded by Rs. 3.6 million the target set several factors contributed adversely to its growth. Vegetable ghee, a major item, contributed only 50% of its performance in 1975, due largely to labour problems. A shortage of coconut oil in the local market and as a consequence the very high coconut oil prices prevailing in the world market had serious repercussions on the structure of Sri Lanka's economy, which led to a ban on imports of coconut oil and derived products. The export of vegetable ghee contributed only Rs. 4.4 million. In contrast soap, whose major constituent is coconut oil, registered an export figure of Rs. 10.8 million. Soap thus made a contribution of over 30% of the performance of this sector and also improved on its own performance in 1975 substantially. Four new items which helped this sector's performance are: (i) activated Carbon - Rs. 1.7 million (ii) Animal Feed Base - Rs. 2.9 million, (iii) curcator

<sup>1/</sup> Based on information given in "Review of Activities 1976" by the Ministry of Industries and Scientific Affairs, December 1977.

(an insecticide) Rs. 1.3 million and (iv) Lead Peroxide obtained from scrap lead batteries - Rs. 1.2 million.

Sector IV - Wood and Paper Products, Leather and Rubber Products

The export performance in 1976 in this sector was below target. Items of export in the sector comprise footwear, rubber products, leather and leather products, wooden products and handicrafts. New joint venture industrial units expected to go into operation did not do so.

Sector V. Non-Metallic Mineral Products

The main export items in this sector are petroleum products which comprise naphtha, fuel oil, marine bunkering and aviation fuel, lubricants, and products like porcelain ware, graphite, ilmenite, rutile and mosaic tiles. Naphtha showed an increase of Rs. 24.1 over the preceding year while fuel oil indicated an increase of Rs. 54.5 million. Porcelain ware, graphite and ilmenite recorded earnings of Rs. 4.6 Rs. 5.3 and Rs. 2.2 million respectively over 1975 while rutile showed a decrease of Rs. 2.1 million. A new unit, M/s. Lanka Wall Tile Ltd., has exported mosaic tiles to the value of Rs. 1.6 million, and is expected to make a substantial contribution in the future towards the growth of this sector.

Sector VI - Ferrous and Non-Ferrous Metal Products

The performance of this sector fell short of the target. The main items of export are motor spares, refrigerators, water pumps, fittings and tin canisters, which depend mostly on markets in the Middle East, Malaysia and Singapore.

Sector VII - Base Metal Industries and Machinery

A shortfall of Rs. 5.3 million was registered by this sector against its target. The items comprising this sector of non-traditional industrial exports are tea machinery, yachts, boats and ship repairs. Tea machinery was exported by two leading firms in this field but these exports were on the basis of tenders awarded by Indonesia, Egypt and Kenya - the bulk going

to Indonesia where the demand for such machinery has been met. The demand now is only for spares. Although there is now a decline in the export of tea machinery, the sector will be boosted by items like yachts and boats in the future. Two new units have been approved for the manufacture and export of luxury yachts.

Sector VIII - Electrical Machinery, Appliances and Supplies

The target set for this sector was exceeded. Almost the entire export by this sector was done by M/s Electronics Ceramics Ltd., which exported flat glass display tubes to the value of Rs. 11.6 million.

Sector IX - Optical Instruments, Plastic Goods, Pens, Clocks, etc.

This sector comprises only miscellaneous items like PVC products, costume jewellery, brassware, clocks, fountain pens, ball pens, lead for lead pencils, polythene bags, etc.



**C-665**



**78.11.06**