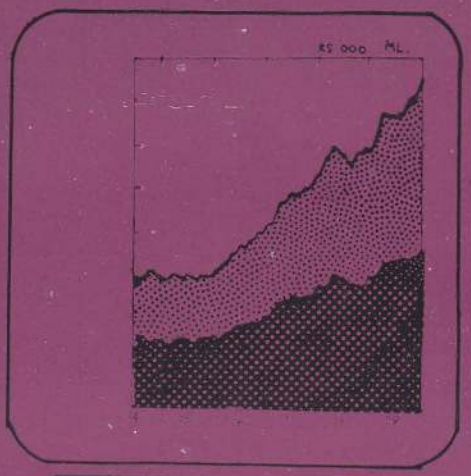
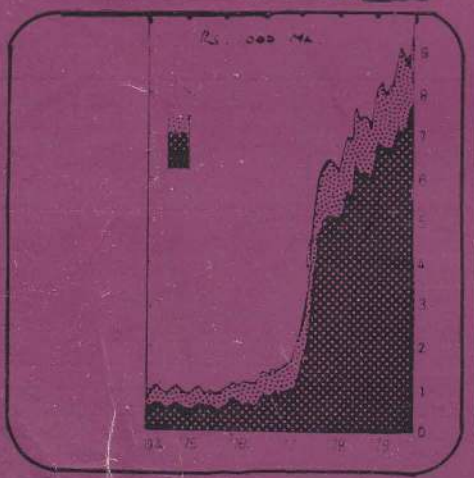
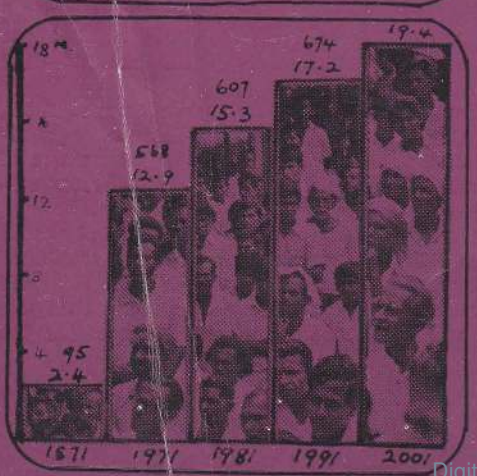
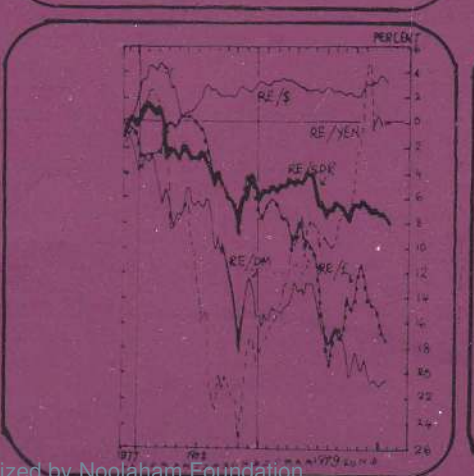
ECONOMIC REVIEW

June 1980









THE ECONOMY IN 1979

SECTORAL COMPOSITION OF GROSS NATIONAL PRODUCT AT CONSTANT FACTOR COST (1970) PRICES

SECTORS	Value added in (Rs. Mn.)			Per cent increase over previous year			Per cent share in G.N.I		
	1977	1978	1979	1977	1978	1979	1977	1978	1979
1. Agriculture, Forestry Hunting and Fishing	**4,299**	**4,532**	**4,623**	**10.4**	**5.4**	**2.0**	**26.9**	**26.2**	**25.1**
1.1 Agriculture	3,977	4,176	4,240	11.4	5.0	1.5	24.9	24.1	23.1
1.1.1 Tea	(416)	(398)	(412)	(6.1)	(–4.3)	(3.5)	(2.6)	(2.3)	(2.2)
1.1.2 Rubber ...	(213)	(225)	(223)	(–8.2)	(–5.6)	(–0.1)	(1.3)	(1.3)	(1.2)
1.1.3 Coconut ...	(423)	(488)	(519)	(–7.0)	(15.4)	(6.3)	(2.6)	(2.8)	(2.8)
1.1.4 Paddy ...	(990)	(1116)	(1132)	(37.5)	(12.7)	(1.4)	(6.2)	(6.4)	(6.2)
1.1.5 Other	(1935)	(1949)	(1954)	(9.2)	(0.7)	(00.0)	(12.1)	(11.3)	(10.6)
1.2 Forestry	143	155	166	–6.5	8.4	7.1	0.9	0.9	0.9
1.3 Fishing	179	201	217	5.3	12.3	7.9	1.1	1.2	1.1
2. Mining and Quarrying ...	**515**	**615**	**652**	**9.8**	**19.4**	**6.0**	**3.2**	**3.6**	**3.5**
3. Manufacturing	**2,357**	**2,541**	**2,659**	**–0.1**	**7.8**	**4.6**	**14.7**	**14.7**	**14.5**
3.1 Export processing ...	823	840	877	–45	2.1	4.4	5.1	4.9	4.8
3.2 Factory industry ...	1,227	1,362	1,417	1.1	11.0	4.0	7.7	7.9	7.7
3.3 Small & other industry ...	307	339	365	3.0	10.4	7.7	1.9	2.0	2.0
4. Construction	**619**	**794**	**960**	**9.6**	**26.3**	**20.9**	**3.9**	**4.6**	**5.2**
5. Electricity, Gas, Water and Sanitary Services ...	**131**	**158**	**190**	**7.4**	**20.6**	**20.2**	**0.8**	**0.9**	**1.0**
6. Transport, Storage and Communications	**1,498**	**1,607**	**1,716**	**5.1**	**7.3**	**6.8**	**9.3**	**9.3**	**9.3**
7. Trade - Wholesale and Retail ...	**2,999**	**3,267**	**3,551**	**2.4**	**8.9**	**8.7**	**18.7**	**18.9**	**19.3**
7.1 Imports	513	702	864	28.3	36.8	23.1	3.2	4.1	4.7
7.2 Exports	663	701	709	–7.4	5.7	1.1	4.1	4.1	3.9
7.3 Domestic	1,823	1,864	1,942	0.6	2.2	4.2	11.4	10.8	10.6
8. Banking, Insurance and Real Estate	**295**	**318**	**350**	**19.9**	**7.8**	**10.1**	**1.8**	**1.8**	**1.9**
9. Ownership of Dwellings ...	**475**	**499**	**518**	**1.7**	**5.0**	**3.8**	**3.0**	**2.9**	**2.8**
10. Public Administration and Defence	**791**	**854**	**905**	**4.1**	**8.0**	**6.0**	**4.9**	**4.9**	**4.9**
11. Services not elsewhere stated (n.e.s.)	**2,099**	**2,212**	**2,378**	**7.0**	**5.4**	**6.5**	**13.1**	**12.8**	**12.9**
12. Gross Domestic Product ...	16,078	17.401	18,501	4.2	8.2	6.3	100.5	100.5	100.6
13. Net factor income from abroad	–79	–90	–112	—	—	—	–0.5	–0.5	–0.6
14. Gross National Product	15,999	17,311	18,389	4.3	8.2	6.2	100.0	100.0	100.0

NATIONAL PRODUCT AND INCOME

The Gross National Product at constant (1970) factor, cost prices in 1979 has been provisionally estimated, by the Central Bank, to be Rs. 18,389 million. This indicated an increase of Rs. 1,100 million or 6 per cent over that of the previous year. The rate of increase in the growth of the GNP. however, was 2 percent less than that of the previous year. According to the Central Bank it was apparent that the Sri Lanka economy which recorded an impressive growth rate of 8.2 percent in 1978, largely as an immediate and spontaneous reaction to the 1977 economic reforms, had slowed down somewhat during 1979, yet remaining on path of the anticipated growth of 6 per cent during the period of 1978 to 1983.

The mid year population of 1979 has been provisionally estimated to be 14.5 million, an increase of 2 per cent, which represents a slight reversal of earlier trends observed in Sri Lanka. This would yield a GNP per capita of Rs. 3,378 or US $ 217, indicating a rise of 19.5 per cent in 1979.

A number of factors contributed to the slower growth of the economy in 1979, according to the Central Bank, The most important of these was the relatively poor performance of the agricultural sector. Although it appears that the performance of plantation agriculture was slightly more favourable than in 1978, the performance of domestic agriculture was uneven. While paddy production in 1979 was 1.4 per cent higher than in 1978, output of minor food crops, particularly of cereals, was significantly below 1978 levels.

The most significant feature of the sectoral composition of GNP was the increased importance of the mining, construction and trading sectors. This trend, the beginning of which was evident in 1978, continued through 1979. Available data on projected investment in manufacturing and construction indicate that they will continue to be major growth sectors in the future. Of special significance in this connection were the public sector investment program in the Accelerated Mahaveli Project and in residential and non-residential construction.

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SPECIAL REPORT

COLUMNS

THE ECONOMIC REVIEW is intended to promote knowledge of and interest in the economy and economic development process by a many sided presentation of views & reportage, facts and debate.

THE ECONOMIC REVIEW is a community service project of the People's Bank. Its contents, however, are the result of editorial considerations only and do not necessarily reflect Bank policies or the official viewpoint. Signed feature articles also are the personal views of the authors and do not represent the institutions to which they are attached. Similar contributions as well as comments and viewpoints are welcome.

THE ECONOMIC REVIEW is published monthly and is available both on

NEXT ISSUE

- Sri Lanka's Graphite Industry
- Agro-chemicals: can controls help
- Offshore banking centres (carried over)
- Trends in Sri Lanka's fisheries industry

COVER ARTIST Palitha Kannangara

Diary of Events

April

1 The US dollar continued to rise sharply against other major currencies in response to increases in US interest rates and pushed the dollar upto its highest level since summer 1978 against the Deustche Mark and the Swiss franc, stated a London *Financial Times* report.

2 Air Lanka signed an agreement with the Lokheed Air Company to purchase two L—1011—500 TRI STAR aircrafts for delivery in August and September, 1982 at a total cost of around $92 million, stated a press report.

3 The government has decided to do away with numerous controls placed on the coconut industry, particularly the 50—60 percent export duty on desiccated coconut, stated the Minister of Coconut Industries.

8 US President Carter broke diplomatic ties with Iran and imposed economic sanctions against that country.

10 The value of the Sri Lanka rupee slumped in the floating basket to less than 50 Indian paise, stated a report from India.

The world tea crop in 1980 dipped sharply during the first quarter of this year, with an approximate production drop of 18 per cent, a new firm of Colombo tea brokers reported.

11 A revised set of floor prices for selected subsidiary food crops were announced by the Ministry of Agricultural Research and Development. The crops included maize, black gram, sorghum, ground nuts, soya bean, gingelly, chillies, turmeric (cured), cowpea and green gram.

12 Sri Lanka and the OPEC Fund signed a Rs. 100 million agreement in Colombo for financing rural electrification projects.

The Ministry of Fisheries announced details of a Master Plan aimed at doubling local fish production to 300,000 tons by the end of 1983.

14 India nationalised six more commercial banks with combined deposits of $ 2.8 billion or approximately Rs. 200 croes each.

15 The main member countries of the 24 nation OECD pledged US$ 1.16 billion of aid to Turkey this year to help finance this country's economic recovery programme, stated a London *Financial Times* report.

The Central Bank had reported a sharp rise in the money in circulation during the pre-Sinhala and Tamil New Year, stated an evening Observer report. It said money circulation which is usually around Rs. 4,000 million had increased by Rs. 500 million.

17 The Board of Directors of the IMF, voted to admit the People's Republic of China to IMF membership and in effect to expel Taiwan, according to a report from Washington.

A Bill is to be introduced in Parliament to provide for the licensing of pesticides, regulate their imports, packing and labelling, storage, formulation, transport, sale and use; while sale of grains on which pesticides have been used will be controlled, according to a Cabinet decision announced officially.

19 The fifth and final session of the Interim Committee of the UNCTAD Common Fund ended in Geneva concluding its efforts carried out over seven months to draft Articles of Agreement for the proposed institution. This meeting focussed on a number of key issues concerning the financial structure and operations of the Fund.

20 Wheat flour consumption in Sri Lanka hit a new low with draw-offs from the Food Department stores in March this year being around 24,000 tons against last year's monthly average of 50,000 tons, stated a press report.

21 The Central Bank raised the bank rate by two per cent to 12 per cent per annum. Simultaneously, interest rates at which the Central Bank accommodates commercial banks above a stipulated amount, were raised by 5 per cent to 20—30 per cent per annum. The bank described its increase in the bank rate and other lending rates as "an essential short-term anti-inflationary measure."

22 At the Colombo tea auctions a parcel of 75 kgs. of flowery fannings super silver tips was sold at Rs. 700 per kilo.

A set of principles and rules for the control of restrictive business practices that adversely affect international trade, especially that of developing countries, was adopted at a UN Conference held under UNCTAD auspices in Geneva.

24 Finance Ministers and Central Bank Governors meeting in the interim committee of the IMF in Hamburg reiterated statements that the inflation and recycling of huge amounts of US dollars paid to oil producers continue to prove to be vexing problems.

28 The Income Support Scheme under which an unemployed person is paid Rs. 50 a month will be discontinued from June 1, the Secretary Ministry of Plan Implementation announced.

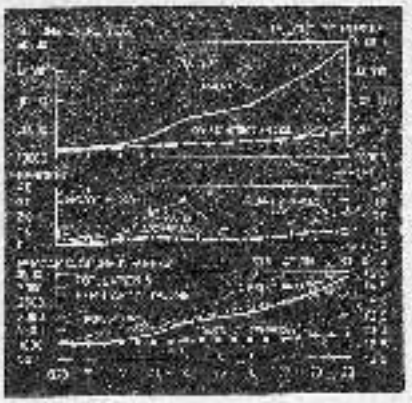
The two State commercial banks, the People's Bank and Bank of Ceylon announced new rates of interest applicable to their savings schemes.

29 The Minister of Trade and Shipping who returned from the United States, following talks on Sri Lanka's ready-made garments exports, stated that of the 17 items that Sri Lanka exports to the US, quotas will be applied on 7 items.

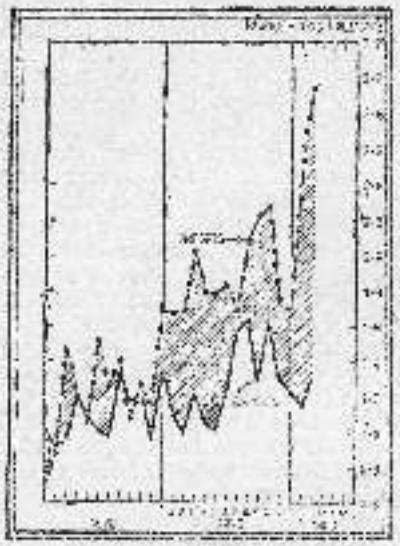
30 The Food Department has contracted for the purchase of five million jute gunny bags from a Chinese supplier on terms official sources described as "extremely advantageous", stated a press report.

SRI LANKA'S ECONOMY
A MID 1980 REVIEW

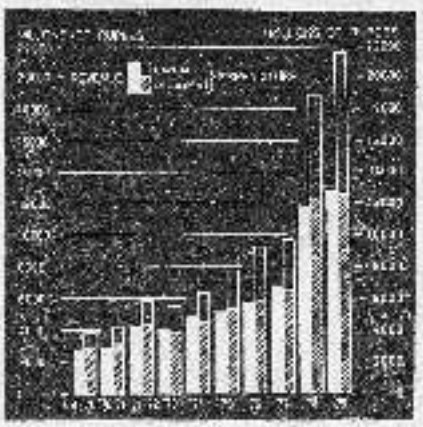
Gross National Product



Exports and Imports



Expenditure and Revenue



Economic Indicators

The achievement of sustained and rapid economic growth is the central objective of the various economic reforms implemented by the government since late 1977. Imports were liberalized, controls were done away with, and liberal fiscal incentives were offered to private enterprise with a view to raising domestic productivity and to achieving an export-led economic growth in the long term.

The object of the new policies it has been stated was "to strengthen production and investment by limiting the Government's role in the economy and by correcting what were perceived as the major price distortions. Important measures since late 1977 include: (a) unification of the exchange system and the adoption of a floating exchange rates with an effective devaluation; (b) restructuring of import tariffs to reduce substantially import duty rates; (c) decontrol of prices on most products and provision of greater freedom to government enterprises in adjusting their charges; (d) ending of licensing requirements and government monopoly for most types of imports; (e) limiting the free distribution of rice (changed into a food stamp scheme in September, 1979) to lower income groups and raising the prices of most subsidized goods and services to cost levels; (f) the establishment of remunerative prices of several agricultural products, including paddy and coconuts, and (g) interest rate reform, involving a substantial upward revision in deposit and loan rates."

Sri Lanka had recourse to the use of International Monetary Fund (IMF) resources in support of its programme of economic reform. A stand-by arrangement was agreed towards 1978, and this was succeeded by an extended arrangement covering 1978-81. The new package of economic policies has been termed 'liberal, outward looking and growth oriented'. In this review, the economic performance of Sri Lanka in 1979 will be evaluated in the light of the above objectives.

ECONOMIC GROWTH

According to the official estimates, the Gross National Product in real terms recorded annual rates of growth of 5.2 percent and 6.2 percent respectively in the years 1978 and 1979. These represent considerable improvements on the growth rates of the previous years of the 1970's which averaged only 3.2 percent per annum. Thus, from an overall macro-perspective, the performance of the economy in the past two years has shown a clear break with the past.

TABLE I

SRI LANKA'S ECONOMIC GROWTH RATES (%) IN THE 1970's

(Two Year Averages)

	G.N.P.	Per Capita
1970—71	2.3	0.5
1972—73	3.5	0.5
1974—75	3.3	1.6
1976—77	3.7	2.0
1978—79	7.2	5.3

Based on Central Bank data.

What were the main sources of the higher growth performance in 1978—79? Which sectors of the economy contributed most to raise the growth rate? A break-down of the growth rates of different sectors in the economy is given in Table II overleaf.

TABLE II. SECTORAL GROWTH RATES (%) 1978—79

	Growth Rates		Percentage share in GNP (1979)	Percentage contribution to the GNP growth rate (1979)
	1978	1979		
1. Agriculture (including forestry & fisheries)	5.4	2.0	25.1	8.4
1.1 Plantation Agr.	5.6	3.9	6.2	4.0
1.2 Domestic Agr.	4.8	0.7	16.8	1.9
1.3 Fisheries	12.3	7.9	1.1	1.5
2. Mining and Quarrying	19.4	6.0	3.5	3.4
3. Manufacturing	7.8	4.6	14.5	10.1
4. Agriculture and Industry (1+2+3)	7.2	3.0	43.1	22.0
5. Construction	28.3	20.9	5.2	15.4
6. Electricity, Gas & Water	20.6	20.3	1.0	3.0
7. Transport and Communications	7.3	6.8	9.3	10.1
8. Trade	8.9	8.7	19.3	26.3
9. Banking, Insurance and Real Estate	7.8	10.1	1.9	3.0
10. Construction, Utilities, Trade and Commerce (5 to 9)	10.9	10.1	36.7	57.8
11. Other Services	5.9	6.6	20.6	21.0
12. Gross National Product	8.2	6.2	100	100

SOURCE: *Central Bank of Ceylon.*

As seen in this table, the sectors which contributed most to the higher growth performance were Construction, Trade and Commerce, Transport and Utilities. These sectors which together have a weight of about 37 percent in the GNP grew at an annual rate of 10—11 percent during 1978—79. Nearly 58 percent of the GNP growth in 1979 originated in these sectors. The highest contribution to the GNP growth came from trade (over 26%), followed by construction (15% and transport (10%). These three sectors together accounted for over one-half of the GNP growth during 1979.

In contrast, agriculture and industry have failed to record high growth rates and this was particularly so in 1979. These two sectors which have a weight of 43 percent in the GNP grew at a rate of only 3 percent during 1979. The contribution of these two sectors to the GNP growth during this year was only 22 percent, which was substantially lower than the contribution of the trade sector (which was over 26%). However, within agriculture and industry, two activities showed sustained output increases during 1978—79. These were (a) mining and quarrying and (b) fisheries. On the other hand, the performance of the agricultural sector remained low and domestic agriculture in particular (which has a weight of 17 percent in the GNP) recorded only a marginal growth rate of 0.7 percent. In fact, the domestic agriculture (excluding paddy) failed to record any growth in 1979. The manufacturing sector grew by less than 5 percent. It may be noted here that had agriculture and industry recorded higher growth rates, the output in the other sectors — trade and commerce and other services — would have responded and grown at a faster rate than they actually did.

Thus, although the GNP growth in 1978 and 1979 was characterised by progress on a broad front (trade, commerce, construction etc.) the two major productive sectors in the economy (agriculture and industry) failed to show strong growth impulses. In this sense, the growth performance appears somewhat 'unbalanced' in that it is heavily biased towards trade, construction, commerce, transport etc. while agriculture and industry has lagged behind. A growth process of this nature must necessarily generate substantial inflationary pressures in the domestic economy. Moreover since lagging agricultural and industrial growth has also meant lagging export growth, the growth process has failed to make a significant contribution to narrow the trade gap.

TRADE, TRANSPORT AND CONSTRUCTION

What factors lay behind these differential sectoral growth rates? The high growth in the trade sector was primarily a result of the import liberalisation. A significant part of the higher growth rate in most growth sectors, specially in trade, have been due to an import led growth. The total import bill which rose by 23 percent (in SDR terms) in 1978 moved up further by 45 percent in 1979. The import volume index rose by 37 percent and 23 percent respectively in these two years. Commercial activity, in general, showed a higher level of activity as a result of import and exchange liberalisation. The growth of tourism (tourist arrivals rose by 30 percent in 1979), increased travel abroad by Sri Lankans, the expansion of the banking system, setting up of Foreign Currency Banking Units and the establishment of three new foreign banks in the growth of commerce. The sharp increase in the imports of all varieties of motor vehicles (the total vehicle population in the country rose by 12% in 1978 and 18% in 1979) was the major factor in the higher value added recorded in the transport sector.

In the field of construction, the public sector investment programmes in the Accelerated Mahaweli, New Parliamentary Complex, and in housing and office complexes were the most important factors in the higher level of output recorded in this sector. Private sector construction in residential business and hotel complexes was also characterised by a higher level of activity. However, it appears that within the construction sector there was competition for the limited resources of building materials (e.g. cement) and skilled labour, and larger construction projects attracted the limited resources at the expense of the smaller projects. As a result, private house building activity, in particular, appears to have suffered a dampening effect during the year.

MANUFACTURING

The growth of manufacturing output (which was 8% in 1978) slowed down to less than 3 percent in 1979. In manufacturing, the year 1979 was a period of consolidation following the liberalization of the economy. Liberalization proved a double-edged weapon in the manufacturing sector. While some industries expanded under the impetus of liberal economic policies (freer availability of raw materials, machinery and spares, and tax incentives) some others suffered under competition from imported goods. The main development can be summarised as follows:

Small scale and cottage type industries such as those producing handloom textiles, wood and paper products, glassware, chemical products such as paint, hardware and metal products appear to have suffered heavily from strong import competition. These industries were in general inefficient and the product quality was poor. Once the shelter of heavy protection provided by import controls was removed many of them could not survive. There were also clear signs that some of these small scale industrialists moved away from industry into other activities such as trade and construction where the profit prospects proved more promising. On the other hand, some small scale industries such as those making bricks and tiles, those engaged in vehicle body construction and repair activities showed a significant expansion.

Production declines were also seen in several factory industries such as those producing fabricated metal products, machinery and transport equipment, textiles and paper. Many assembly industries such as radio and electrical goods have suffered a decline in output in the face of strong competition from imports. Some of these import substitution industrialists appear to have abandoned their industrial production and reverted to the more lucrative import trade. As a result there has been a diversion of resources from production-oriented activity to trade-oriented activity. An important industrial sector which felt the impact of import competition most severely was textiles. The textile production in the government owned mills dropped by 7 percent and that in decentralised power looms dropped by 18 percent. The overall textile production (both private and public sectors) at 106 million meters showed a decline of nearly 9 percent. The principal reason for this production drop was the marketing problems caused by freer availability of imported textiles. At the end of the year, the unsold stocks of local textiles amounting to over 40 million meters valued at Rs. 355 million had accumulated in the hands of manufacturers. This situation resulted in severe liquidity problems in textile mills.

Another industry adversely affected by import competition was paper. The paper production at Embilipitiya mill dropped by as much as 28 percent and the paper board production at Valaichchenai dropped by 11 percent. Import competition also led to a drop in the production of mammoties and cast iron products of the Hardware Corporation.

On the other hand the output of several factory industries showed a significant growth during the year under review. The cement output continued to expand and the total production at 660,582 metric tons was 15 percent higher than in 1978. Despite this increase, however, the local production was found to be inadequate to meet the expanded demand and imports filled the gap in supply.

There was also a notable expansion in the output of export-oriented textile garments sector. The value of garments exported in 1978 amounted to Rs. 950 million (nearly US $ 80 million) representing in 1979 amounted to Rs. 930 million near-million) representing a jump of 116 percent over the 1978 level. However, in view of the high import content in the final product, the value added (and hence the contribution to the national output) by the garment industry would be only a fraction of the export value. The domestic value added has been estimated at about 25—30 percent of the value of the final product.

AGRICULTURE

The relatively poor performance of the agricultural sector was a notable feature of the eco-

TABLE 10. VALUE OF INDUSTRIAL PRODUCTION 1977—1979

Industrial Sector	Value of Production (Rs. Million)			Percentage Increase/ Decrease (—)	
	1977	1978	1979[1]	1978 over 1977	1979 over 1978
1. Food, Beverages and Tobacco	2,304	3,689	2,856	13.7	3.5
2. Textiles, Wearing Apparel and Leather Products	618	1,008	1,128	44.4	11.9
3. Wood and Wood Products, including Furniture	127	124	169	-2.4	33.9
4. Paper and Paper Products	270	378	445	39.3	18.4
5. Chemicals, Petroleum, Coal, Rubber and Plastic Products	2,489	3,276	4,608	32.3	37.6
6. Non-metallic Mineral Products, except Petroleum and Coal	511	702	710	44.0	18.9
7. Basic Metal Products	139	219	349	65.9	59.4
8. Fabricated Metal Products, Machinery and Transport Equipment	571	500	669	3.2	-3.6
9. Products n.e.s.	34	66	80	61.8	-9.1
Total	7,008	9,052	10,781	26.4	21.8

[1] Provisional

SOURCE: *Central Bank of Ceylon.*

nomy of 1979. The overall agricultural output grew by a modest 2 percent and even this growth came largely from the plantation sector rather than from the domestic agricultural sector.

In the plantation sector, tea production is estimated to have increased by 4 percent; and coconut production recovered further (from the all-time low level of 1977) by recording an increase of 8 percent over the 1978 level (but the production still remained below the average level of the recent past). Rubber production on the other hand is estimated to have shown a decline of about 2 percent. Minor export crops fared unevenly with some crops (mace, cardamom, cloves), showing an improvement and some (cocoa, pepper) showing a decline.

In the domestic agricultural sector, paddy crop which attained a record level in 1978, showed only a marginal improvement of 1.4 percent in 1979. This was a result of the poor Yala harvest (reflecting adverse weather conditions). The fertilizer use in the paddy sector declined by as much as 37 percent and there was also a sharp decline in the credit use following the more rigorous terms imposed on the issue of credit faci-

How to liberalise prudently —World Bank Advice

Experience demonstrates that a successful export drive depends crucially on easy access to duty-free imported inputs, through, for example, special export-processing zones or efficient systems of bonded warehouses and tax rebates, and on the maintenance of export price incentives that are comparable to those accorded production for the domestic market. An existing industrial base is also a prerequisite, although countries such as the Republic of China, (Taiwan), Israel, the Republic of Korea and Singapore began to compete successfully in the world market for manufactures when their industrial sectors were quite small. In the Republic of Korea, for example, industrial value added was only about US $1 billion (at 1975 prices) in 1964, and yet this was the year in which the highly successful export drive took off. A significant number of Low Income countries already have industrial bases of comparable size and are therefore in a position to embark on their own export drive.

Regional economic integration offers an alternative means of participating in the benefits of trade, but international experience with such efforts has been mixed. While member countries enjoy access to each other's domestic markets, they forgo the possibility of purchasing extra-regional commodities that may be cheaper than those available within the region. A potentially more significant field for regional co-operation is the phasing of large-scale investments so as to avoid excess capacity. The Association of South East Asian Nations, for example, has recently embarked on the construction of regional nitrogen fertilizer plants in Malaysia and Indonesia.

Transition to an Outward-Looking Trade Regime

The Republic of China (Taiwan), the Republic of Korea and Singapore switched to export promotion relatively early in the industrialization process. Many other countries, recognizing the limitations of prolonged reliance on import substitution, have also redressed, at least partially, a bias against exports. Their experience suggests that the transition to more outward-looking trade policies increases in difficulty with the duration and extent of import-substitution policies. Countries that are still in the preliminary phases of import substitution are well advised to initiate their policy transition before the emergence of politically vocal, and strongly entrenched, vested interests. Countries that have already entered the later stages of import substitution behind protective barriers face more severe problems in securing a smooth transition. But, at the same time, the recent experience of nations such as Brazil, Colombia and Spain indicate that success is feasible and that the resulting benefits are substantial. In Brazil, for example, manufactured exports increased from about US $300 million in 1967 to about US$2 billion in 1974 (at 1975 prices) despite a prior history of almost exclusive reliance on import substitution.

The range of countries that have now moved toward a trade regime less biased against exports indicates that such a step can be contemplated in a wide variety of economic circumstances and policy environments; export success has been achieved in poor and rich countries, in small and large countries, and in countries well advanced in import substitution as well as those still in their initial stages. This range of experience, including a number of failures, constitutes an important empirical basis for the development of policy guidelines for countries yet to embark on the transition.

Although the basic ingredients of the policy package-devaluation, inducements for exports and reduction of quantitative restrictions and of tariffs on imports — are reasonably well understood, their implementation poses many problems. Frequently, such a policy change has been initiated in the midst of a foreign exchange crisis, sometimes it has been a direct response to pressure from aid donors. Absence of a strong national commitment to export promotion has sometimes meant that export incentives have been unsatisfactory, and inadequately maintained. This, compounded by a lack of adequate external financial support over a difficult transitional period, appears to have hampered some devaluation efforts, such as those of Brazil in 1957 and India in 1966. In several countries engaged in trade policy reform, inflation-induced erosion of international competitiveness has constrained the expansion of exports. This, together with the improved access to, and consequent growth in, imports has often led authorities to reinstate quantitative restrictions and increase tariffs to defend a deteriorating trade balance. In some cases the policy reforms have been thwarted by a lack of adequate external financing to support the balance of payments during the transitional period before exports respond to the new trade incentives.

Although policy changes introduced in response to crises are apt to run into difficulties the adjustment to a more outward-looking trade policy will perforce often have to be initiated in unfavourable circumstances — especially in

ities. These factors would have caused a drop in the paddy output if not for the considerably improved paddy production under the major irrigation schemes. The decline in minor food crop production continued into 1979. The decline was most pronounced in chillies and cereals (maize, kurakkan etc.) this sector was a direct victim of the government policy of maintaining buffer stocks by the importation of cereals, potatoes, onions, chillies which has had a dampening effect on domestic production. Sugar production declined by 26 percent and this was largely a result of inadequate water supply and cyclone damage. The estimated milk production also showed a drop of about 7 per cent.

It appears that the main factor in the poor performance of the agricultural sector was the inadequate producer margins. Adverse weather conditions were also a contributory factor. In many crops the rise in producer margins has not kept pace with the increase in production costs. The average costs of production in the plantation crops, for example, have moved up by anything from about two-thirds to 100 percent during 1977—79.

countries that are already far along the import-substitution route and have highly distorted trade systems. Experience suggests that in such cases a gradual approach is most appropriate; giving initial emphasis to expanding exports rather than reforming the import regime, except to the extent that the latter directly inhibits exports. Strong incentives to expand and diversify exports are particularly important where a shortage of foreign exchange is restraining industrialization. Devaluation is usually essential for this purpose. In addition, exporters of manufactures must be assured of access to duty-free imported inputs and convinced of official commitment to export promotion. Export-processing zones have been important in the early expansion of exports in a number of countries. Resort to certain temporary expedients also merits consideration: for example, it may be useful to tie the distribution of import licenses and access to foreign exchange to export performance even though the ultimate goal is the removal of import licensing and exchange controls. It is more important, however, to ensure that over the long term, production for export remains as profitable as production for the domestic market; for this purpose, the exchange rate may need to be adjusted frequently in order to offset differential rates of domestic and international inflation.

As exports rise, attention can be turned to import liberalization. Remaining quotas can then be eliminated and tariff structures rationalized with less fear of a foreign exchange crisis, although even here a gradual approach may be most appropriate. Israel, for example, began liberalization by reducing tariffs on imports that did not compete with domestic industries; the additional step of eliminating quotas and reducing tariffs on competing imports took another seven years.

Reforming a trade and exchange rate regime in the midst of a crisis runs the risk of recession. Apart from the hardship caused by the loss of output and employment, the ensuing dissolution to efficient and promising manufacturing activities also retards industrialization. The avoidance of recession is difficult since, unless exports are highly responsive, or sufficient external financing is made available, deflationary measures — fiscal austerity, tight monetary control and high interest rates — are required. Avoiding the premature liberalization of imports, encouraging domestic savings, and obtaining support from additional foreign capital inflows can help to lower the risks of recession somewhat. Even so, the transition from a severely distorted trading environment to a more outward-looking trade regime will involve a politically difficult redistribution of income, away from some of the existing import-substituting activities toward the newly emerging export sectors. These difficulties underscore the importance of retaining control over the timing of the transition; beginning the policy switch from a position of strength perhaps deriving from good harvests or improved terms of trade, and before the commitment to import substitution has become excessive, renders the transition both economically more feasible and politically more palatable.

Industrial Licenses and Price Controls

Even if a successful transition is made to a more open trade regime, the competitiveness of the foreign trade sector may be diminished if administrative controls — industrial licensing and price regulations — hinder the functioning of domestic markets. Such measures are usually introduced for specific purposes, but difficulties of implementation have frequently prevented them from attaining their immediate objectives, and have often imposed severe costs on other sectors of the economy. Industrial licensing schemes, for example, frequently fail to consider issues of plant location and size, the timing of investments, or the choice of technology, while they have rarely achieved their main objectives of regional balance and control of monopoly power.

Price controls on industrial products have also had many unintended results and often have proven costly to the economy.

Countries that have a long history of direct controls can rarely abandon them immediately; the transition is likely to be facilitated, if, as in the foreign trade sector, it is initiated in favourable economic circumstances and the controls are dismantled progressively over a specified period. Prior announcements of the forthcoming administrative reforms could also be made to minimize uncertainties and delays. The loosening of price controls and industrial licensing and their replacement, where necessary, by appropriate fiscal incentives, may best be commenced in low-priority sectors and then extended to the more strategic sectors. The achievement of regional balance and the control of monopoly power can be sought through taxes and subsidies and the provision of infrastructure, rather than licensing systems. The alignment of domestic prices and real economic costs following price decontrol will usually improve the allocation of resources and make the reforms of foreign trade policy more effective. Since these transitions entail significant adjustment costs, countries may be well advised to limit their reliance on administrative controls during the earlier stages of industrialization.

Source: WORLD DEVELOPMENT REPORT 1979, The World Bank, August 1979.

Similar cost increases have occured in most other crops given the higher costs of fertilizer, tractor charges, other inputs and the higher labour costs. However, the high export taxation (levied along with the Devaluation of 1977) has kept the producer margins relatively low in the plantation sector; the guaranteed price of paddy at Rs. 40 per bushel is lower than import cost of rice by as much as one-third to one-half; and the buffer stock scheme for subsidiary food items has depressed the producer prices of these items. In this context, the terms of trade (between agriculture and industry) would have clearly moved against the agricultural sector. Compared with the sharp price escalation of industrial goods, the rise in the agricultural prices was modest indicating that the terms of trade have turned against agriculture. It should be noted, however, that measures to improve producer margins in the agricultural sector involves some difficult decisions given the long standing tradition of protection of consumers and the substantial sacrifice of government revenue (lower export tax revenue) that these measures would entail.

INCOME DISTRIBUTION

If Sri Lanka's economic growth record during 1978-79 represents a clear break with past performances, available evidence also indicates a reversal of trends in the field of income distribution. Over the years Sri Lanka has moved in the direction of a more egalitarian society by successive reductions in income disparities. The Gini ratio (the commonly used indicator of relative income in equality) declined from 0.49 in 1963 to 0.41 in 1973. While the percentage of total income received by higher income brackets declined, that of the lower income brackets improved. The preliminary data of the first round of Central Bank's Consumer Finance and Socio-economic Survey (1978) indicates that while the average income level has improved and all income classes have made appreciable gains, there has occurred an increase in income inequalities. These data indicate that in 1978 the Gini ratio moved upto 0.49 and the percentage of total income received by the top 10 percent of the income receivers had moved upto 39 percent (compared with 30 percent in 1973) while the share of the bottom 40 percent of the income receivers had dropped to 12 percent (compared with 15 percent in 1973). In fact, the only decile that improved its share of the total income in 1978 was the highest one. In all probability these trends would have accelerated in 1979. These developments have occurred against the background of the withdrawal of consumer subsidies, sluggish real wages outside the plantation and construction sectors, improved income earning possibilities for profit earning groups in the context of liberal economic policies of the government and the generous tax reliefs afforded to private entrepreneurs. Growth of income disparities is probably inevitable in the context of the particular economic policies pursued in the past two years. But the continuation of these trends over the long term could have serious social repercussions, for economic growth by itself will not be meaningful to the masses unless it is accompanied by an equitable sharing of fruits.

EMPLOYMENT

It is not possible to obtain a clear and unambiguous picture of the trends in employment due to the absence of reliable data. However, all available evidence suggests a distinct improvement in employment opportunities in the organised sectors of the economy, that is the government departments, semi-government institutions, and the or-

WHAT THE EMPLOYMENT SURVEYS REVEAL

Private sector

The Survey of Employment in the Private Sector conducted by the Ministry of Plan Implementation, through a monitoring of the advertisements relating to job opportunities published in the Lake House Group of Newspapers during the three years 1977, 1978 and 1979, reveals that the upward trend in the generation of employment in the private sector since the latter half of 1977 was maintained during the year 1979. The total number of job opportunities advertised in 1979 was 34,955 as against 16,469 in 1978 and 9,154 in 1977. (See table below).

NO. OF EMPLOYMENT OPPORTUNITIES ADVERTISED DURING THE YEARS 1977, 1978 & 1979

Year	High Level	Middle Level	Skilled Level	Unskilled Level	Total
1977	1,035	3,153	3,607	1,359	9,154
1978	1,297	5,274	6,913	2,985	16,469
1979	1,280	9,965	14,074	9,636	34,955

This data shows a steep increase in the demand for skilled level persons (3,607 in 1977 to 14,074 in 1979) caused largely by the exodus of such personnel for jobs abroad and also the shortage of such skills locally. It is evident that urgent steps are required to expand opportunities for training in skilled and craft level opportunities. The survey report of the Ministry of Plan Implementation concludes "the positive response from the private sector consequent to the introduction of a package of new economic policies, liberal, outward looking, and growth oriented, has enabled a dent to be made even in small measure, in the unemployment situation of the country. It is also significant that such a growth in employment generation has taken place in a situation of general wage rise in the country."

Public Sector

The Central Bank's annual survey of employment in the public sector indicated that employment in Government Departments increased by 33,713 or by 5 per cent in 1979. Of this increase, 39 per cent was in subordinate grades, 29 per cent in teaching, and 24 per cent in minor grades. In semi-government institutions (Public Corporations and Statutory Boards) employment increased by 89,385 or by 14 per cent. Of this, 83 per cent was in minor employees grades and 14 per cent was in subordinate grades. There was a substantial increase in employment in public sector plantations of 61,000 or 13 per cent. More than two-thirds of the increase in employment in the semi-government sector occurred in the state plantations.

ganised private sector. Tentative estimates prepared by the Central Bank reveal increases in employment of the order of 145,000 in 1978 and 136,000 in 1979 in the above sectors. In 1979, the highest increase in employment took place in the state-owned plantation sector which recorded an increase of 61,000 persons or 13 percent. The net increase in employment in the organised private sector has been estimated at around 23,000 persons, though vacancies advertised in the press in 1979 by the private sector amounted to 34,955. (See Box). No estimates are available on the employment expansion in the non-institutional unorganised private sector and in the domestic agricultural sector of the economy.

The expansion of trading and commercial activities raised the demand for personnel in clerical and allied grades and the demand for skilled workers in engineering and construction trades also remained high. The exodus of skilled workers to Middle Eastern countries, which accelerated in 1979, created shortages in some occupational categories, particularly in the construction sector. Statistics collected by the Ministry of Plan Implementation reveal that as against 16,469 job vacancies in the private sector advertised in national newspapers in 1978, the corresponding figure for 1979 was 34,955 indicating an increase of over 100 percent. According to the preliminary findings of the Central Bank Consumer Finance and Socio-Economic Survey the level of unemployment in 1978 was 974,000 as against an estimated figure of over one million in 1973. Those findings reveal a significant decline in unemployment, from 24 percent of the work force in 1973 to 15 percent of the work force in 1978. However, unemployment continues to be a major problem in the economy.

INFLATION

Available evidence also suggest a sharp acceleration in the rate of inflation during the year. The rate of inflation appears to have been particularly high during the second half of the year.

The official cost of living index (Colombo Consumers' Price Index) showed an increase of 15 percent during the twelve month period ended December, 1979. However, this index is defective in many respects and underestimates the actual rise in living costs. Available evidence suggests that the living cost increase was higher, probably in the region of 25 percent. The important factors behind this living cost increase were the withdrawal of the price subsidies for rice, sugar, milk powder and kerosene, upward revision of the prices of wheat flour and bread, secondly effects of the petroleum price increases and the rise in the prices of coconuts and vegetables due to production shortfalls. The effects of these factors were intensified by the higher growth in the money supply (29 percent in 1979 as against 11 percent in 1978).

In regard to the price behaviour of intermediate and investment goods, the only available data are from the Central Bank's Wholesale Price Index. The sub-index of intermediate goods rose by 21 percent and the sub-index of capital goods rose by 15 percent. The price increases in paper products, metal products and fuel and light ranged from 26 to 30 percent.

On the basis of the above evidence, what could be said of the behaviour of the general price level (that is the average price behaviour in the economy)? Since there is no comprehensive index on the average price level, only some rough guesses are possible. A rough estimate would be that the general price level rose by over 20 percent, (perhaps 20—25%) in 1979 as against 15- 20 percent in 1978.

Using the above evidence on price changes, a rough estimate could be made on the behaviour of the domestic purchasing power of the Rupee (i.e. by deflating the Rupee by the price increases). Alternative calculations are shown in Table IV, and these calculations show that the domestic purchasing power of the Rupee has fallen by 20 to 30 percent during the period 1977—79, although rupee incomes had of course increased among certain groups.

The expansion of employment opportunities, the rise in the average money income levels and the Food Stamp Scheme operated for the poorest segment of the population would have mitigated somewhat the impact of the rising prices for a substantial section of the population. However, in an inflationary situation, all those persons whose money incomes fail to rise as fast as the rising prices are bound to suffer a reduction in real incomes. Generally, profit earning groups benefit by an inflation since rising costs lag behind rising prices thereby ensuring higher profits. In the case of wage earners, however, it is generally the case that the rise in money wages lags behind rising prices causing a drop in real wages. In the case of Sri Lanka, the minimum wage rate (money wage) index of Central Government employees rose by 19 per cent, that of workers in plantation agriculture rose by 28 percent, and the index of workers in private sector industry and commerce rose by 17 percent. When discounted by the Colombo Consumers Price Index (which rose by 11 percent on an annual average basis and 15 percent during January-December 1979) these minimum wage rate indices show increases of varying degrees in real terms. However, given the fact that the Colombo Consumer's Price Index grossly underestimates the actual rise in living costs, the real wages may have declined in 1979 except perhaps those of the plantation and skilled construction workers.

TABLE IV

PURCHASING POWER OF THE RUPEE

	Based on the Colombo Consumer's Price Index	Based on Wholesale Price Index	Based on GNP defintor	Based on the estimated rise in the general price level
1977	1.00	1.00	1.00	1.00
1978	0.89	0.86	0.87	0.85
1979	0.80	0.79	0.78	0.69

FOREIGN TRADE AND PAYMENTS

An inevitable initial consequence of import liberalisation is the creation of vast trade gap resulting from the sharp rise in the import level without a corresponding rise in export earnings. Until such time that exports could rise sufficienly to match the rising level of imports, the country has to depend on external loans and aid to finance the trade gap. Hence, a significant growth in exports, to be achieved relatively quickly, is crucial to the successful maintenance of a liberal import regime.

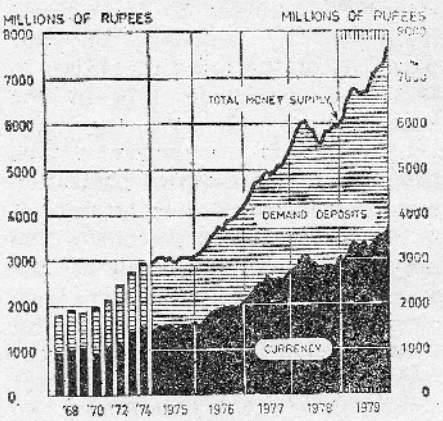
Following the import liberalisation of late 1977, the rate of flow of imports accelerated in 1979. The import expenditure rose by 54 per cent. (reflecting a volume increase of 23 per cent and a price increase of 52 per cent). The export value, on the other hand, rose by only 13 per cent, the bulk of this increase was an account of a rise in export prices rather than in the export volume (which rose by only 1 per cent). The resulting trade gap was of the order of Rs. 7,287 million — a near fourfold increase over 1978

The disappointing performance of exports and the widening trade gap is a matter of serious concern for an economy pursuing a liberal import policy since the very objective is to achieve an export-led growth in the long term. The crucial question is how long will Sri Lanka take to achieve a significant breakthrough in the export field so that the liberal trade regime could become viable. The longer this transitional period takes the longer will be the dependence on foreign grants and loans to finance the trade gap.

In the case of South Korea and Singapore (the two success stories of outward-looking trade regimes) the time taken to achieve a major breakthrough in exports was fairly short, a matter of four to five years from the commencement of the liberal trade regime. In Singapore, for example, exports which had been stagnant for several years began to increase from 1967, the year in which the country positively turned to an export-oriented strategy. During 1967—72 the exports recorded an average growth rate of 11 per cent per annum. The bulk of this export growth was on account of foreign investment. In South Korea, the switch over to an export-oriented strategy took place in 1963—64 and since then the export growth had been phenomenal. Exports grew at an average rate of 38 per cent per annum during 1964—70. The GNP grew by an average of 11 per cent per annum during the same period.

On the other hand, Sri Lanka's export growth had been relatively poor during 1978—79. The export volume index rose by 6 per cent in 1978 and 1 per cent in 1979. The export volume (in SDR terms) rose by 2 per cent in 1978 and 13 per cent in 1979. The main problems appears to be that traditional exports, which account for about 75 per cent of the total exports have failed to register any significant increase. On the other hand, industrial exports (which now account for about one-quarter of the total export value), have shown a significant increase from SDR 88 million in 1977 to SDR 185 million in 1979, an increase of over 100 per cent. This increase has come from two main sources, namely textiles and garments and petroleum products. In the case of petroleum products the increase in the export value (over 70% increase during 1977—79) was largely on account of the higher export price rather than of an increase in the export volume. In any case, the net foreign exchange earnings from petroleum exports are quite low given the high import content in the export production

MONEY SUPPLY



Source: *Central Bank of Ceylon*

With the upsurge of private sector activity since 1977, the role of monetary policy in regulating the level and composition of demand has expanded. The main feature of monetary developments in 1979 was a significant re-acceleration in the rate of monetary expansion following the substantial moderation observed in the previous year. The money supply, narrowly defined as the sum total of currency and demand deposits held by the public, rose by Rs. 1,733 million or 29 per cent during 1979. This same level of expansion continued upto the first quarter of 1980. The main factors contributing to the increase in monetary expansion were the rise in net external banking assets and the operations of the government sector.

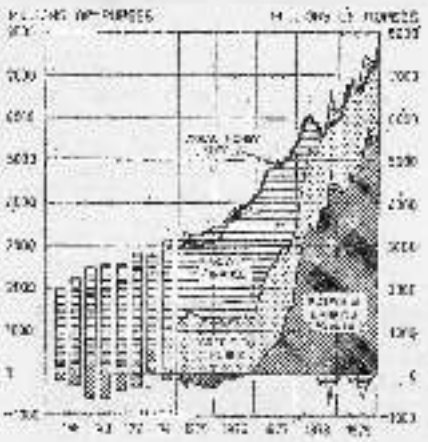
TABLE V COMPOSITION OF EXPORTS 1977 — 78

	Value in SDR Million			Percentage of total exports		
	1977	1978	1979	1977	1978	1979
1. Plantation Products	495	495	492	75	73	65
2. Minor Agricultural crops	35	38	42	6	6	6
3. Gems	30	27	24	4	4	3
4. Industrial Exports of which	88	99	185	14	15	24
(a) Textiles & Garments	13	25	55	2	4	7
(b) Petroleum products	56	48	96	9	7	13
5. Total Exports	659	674	759	100	100	100

(Average value of SDR 1977=Rs. 10. 42, 1978=Rs. 19.58, 1979=Rs. 20.13).

Source: *Central Bank of Ceylon*

In the case of textiles and garments, the export value (in SDR terms) rose by over 300 per cent during 1977—79 and the share of these exports in the total export earnings of the country rose from 2 to 7 per cent during the same period. Garments are clearly the most significant growth item in the total exports, and garment exports are projected to show further increases in the next few years. However, there are sharp limits to the possible future expansion of the garments industry in view of the export quotas imposed by developed countries. The EEC countries, Norway and Sweden have already subjected Sri Lanka's exports to quote restrictions. US authorities who cautioned Sri Lanka against a sharp rise in exports to the US market have now decided to impose quotas on selected items. Once quotas are



Source: *Central Bank of Ceylon*

This chart indicates the origin of Money Supply in Sri Lanka

(a) "Government Finance" shows the claims of the banking system on the Government net rupee cash holdings of the Government.

(b) "Credit to public" shows the claims of the banking system on the private sector net of time and savings deposits.

When net external banking assets were negative, the total money supply line is below the line limiting Government finance and when the Government's contribution is negative the total money supply line is below the line limiting credit to public.

Changes in external assets attributed to exchange rate changes with contra entry in the International Reserve Revaluation Account have been excluded commencing January 1977.

In contrast to the experience in 1977 and 1978, when the government fiscal operations led to a substantial monetary contraction, the government sector's operations with the banking system in 1979 resulted in a significant expansionary impact of Rs. 1,067 million. This was the combined outcome of a considerable increase in bank credit to the government and a decrease in government deposits with the banking system.

There were three important developments however, which went to offset, at least partially, the poor export performance. They were (a) increased earnings from tourism, (b) increased remittances from abroad and (c) increased flow of direct investments. Gross earnings from tourism increased by 40 per cent to reach a level of Rs. 1,053 million in 1979. This increase was largely a result of higher tourist arrivals (30% increase over 1978). Private transfers received from abroad, the bulk of which constituted remittances made by Sri Lankans working abroad, have increased by 48 per cent to reach Rs. 935 million in 1979. There was also a sharp increase in the net inflow of private foreign capital largely as investments in the Investment Promotion Zone of the GCEC. Private direct investments which had been quite insignificant in Sri Lanka during the past three decades recorded a jump in 1979. They rose from Rs. 23 million (about SDR one million) in 1978 to Rs 789 million (SDR 38 million) in 1979. The above three items together contributed Rs. 1,474 million in foreign resources which was equivalent to nearly one-fifth of the trade gap. All three items could be expected to grow further in the future years.

The country continued to depend heavily on long-term loans, grants and IMF drawings to finance a substantial portion of the trade gap. However, some relief was provided by the fact that outright grants recorded a substantial increase during the year. As against Rs. 959 million in 1978 the grants received rose to Rs. 1,933 million in 1979, an increase of nearly 102 per cent. IMF's External Fund Facility arrangement for Sri Lanka which was approved in January 1979, permitted Sri Lanka to borrow upto Rs. 5,200 million (SDR 80 million) during the three years 1979–81 for the purpose of providing balance of payments support needed to effect structural adjustments in the economy. These credit facilities are subject to periodic negotiations and mutual agreement on Sri Lanka's overall economic policies. In 1979, Sri Lanka drew Rs. 1,582 million under this facility. Beside, the country has also obtained long-term loans amounting to Rs. 2,803 million during the year. These resources flows proved sufficient not only to finance the external resource gap but also to generate a surplus in the overall balance of payments and to augment the external assets of the country by Rs. 2,175 million or 28 per cent. The level of external assets at the end of 1979 (Rs. 9,852 million or SDR 475 million) was adequate to finance about 3½ months of imports projected for 1980. As against this, the outstanding level of external debt at the end of 1979 stood at a level of Rs. 18.5 billion (or SDR 906 million).

The debt-service ratio (capital repayments and interest on foreign

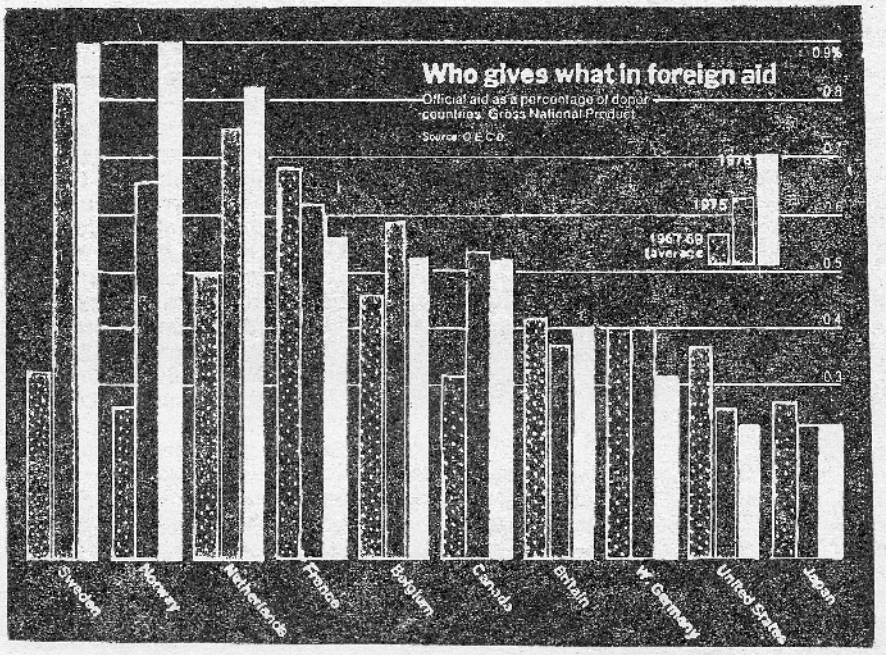
imposed, the possible annual rate of export growth for garments would be sharply curtailed. At present, apart from garments, there are no signs of any other new export item making a significant upward trend. Following the experiences of countries such as Singapore and South Korea the next export candidate for promotion is likely to be electronic goods. But as yet, there are no signs of a clear progress in this direction.

Future Directions — An IMF Assessment

"Several assessments have been made of the future directions in the economy; we quote here from one such forecast, by the Asian Department of the IMF in its fortnightly survey published in June 1980. It's comments on the outlook of the economy and possible measures in the future states: "The Government of Sri Lanka is expected to continue its efforts to concentrate on subsidy and transfer expenditures. In addition to the measures already taken, it is expected to reduce significantly the number of food stamp recipients from the current 7.3 million persons by checking income declarations more thoroughly. Export taxes are expected to be rationalized further, with a view to ensuring an adequate return to growers of tea, rubber, and coconuts. This increased profitability, together with enhanced supplies of inputs and extension services, should contribute to higher growth in the agriculture sector in coming years. Prospects for higher growth in the manufacturing sector are also bright, given the recent emphasis on seeking export markets. The construction and services sectors, led by the growth in public sector investment and tourism, are also expected to show healthy growth. Overall, real GDP is projected to increase by 6 per cent a year over the medium term. Inflation is expected to taper off as the need for official price adjustments diminishes and budgetary controls are tightened. The Government's policy of maintaining realistic interest rates should also help to dissipate inflationary pressure. These measures should also strengthen the balance of payments, which would otherwise be subject to great pressures because of the heavy public investment expenditures expected during 1981–82".

FOREIGN AID TRENDS

By 1979, the relative importance of outright grants in financing Sri Lanka's external resources had increased considerably. Since the latter part of 1977 outright grants, long term official borrowings, private direct investments and drawings from the IMF were taking a more important place in the inflow of foreign resources than that of short term credit and bank borrowings. This trend is seen clearly over the years 1978 and 1979. Of the entire foreign aid receipts in 1978 as much as 75 per cent were loans and only 25 per cent grants; while in 1979 the position had changed to 52.7 per cent loans and 47.3 per cent grants. The grants in 1979 included commodity grants of Rs. 1,167 million (SDR 58 million), project grants of Rs. 998 million (SDR 49 million) and profits distributed by the IMF under it's gold sales programme of Rs. 74 million (SDR 4 million). Suppliers' credits which dipped sharply in 1978, rose substantially to Rs. 609 million (SDR 31 million) in 1979. Long term loans consisted of commodity aid of Rs. 1,464 million (SDR 72 million), project aid of Rs. 840 million (SDR 42 million) and a loan of Rs. 599 million (SDR 30 million) from the Trust Fund of the IMF. Although the disbursements of long-term official loans declined from Rs. 3,680 million (SDR 188 million) in 1978 to Rs. 2,903 million (SDR 144 million) in 1979, this decline was more than offset by the substantial increase in outright grants. Details in the table below give a further view of the changing aid picture.



The Scandinavian countries have increased their level of foreign assistance to developing countries in recent years, as the diagram reveals; and this is also evident in the present high grant element of aid to Sri Lanka from Sweden, Norway, Denmark and the Netherlands. Generally, however, the aid from OECD countries has been running at less than half the declared target of 0.7 percent of Gross National Product.

SRI LANKA'S AID RECEIPTS 1978—79
(Rupees Million)

	Loans		Grants		Total	
	1978	1979	1978	1979	1978	1979
Project Aid	1,221.7	617.1	241.6	1,067.5	1,463.4	1,684.7
Commodity Aid	1,134.7	1,266.5	272.2	558.5	1,406.9	1,825.0
Food & Other Aid	535.5	274.2	444.9	307.2	980.3	581.4
Total	2,891.9	2,157.8	958.7	1,933.3	3,850.6	4,091.1

SOURCE: External Resources Department, Ministry of Finance and Planning.

The greater inflow of long-term official loans, drawings from the IMF, private direct investments and the allocation of SDRs generated a surplus in the capital account. This surplus was more than sufficient to finance the current account deficit and the external resource gap and, therefore, additional resources spilled over to external assets. This improvement in Sri Lanka's external assets during the last 2 years has also strengthened the country's credit-worthiness in international capital markets.

Among the countries whose assistance in the form of grants was almost 100 per cent were Australia, UK, Japan, Sweden and Norway. With the changing pattern in the manner of financing the country's external resources gap there was also a decline in the debt service ratio (i.e. the capital repayments and interest on foreign loans) as a percentage of foreign earnings and repayments. Excluding IMF transactions the debt service ratio fell from 12 per cent to 8 per cent in 1978 and the actual debt services repayment declined in 1979 by 16 per cent.

As the Minister of Trade emphasised at a recent seminar: "Sri Lanka has done much better than many other developing countries in external debt management. Many non-oil developing countries had to borrow heavily just to cover payments deficits caused by higher oil costs. It is estimated that on average these countries' medium and long-term debt increased from 1973 to 1979 by 21 per cent per year, compared with Sri Lanka's foreign (medium and long term) debt

TABLE VI

FOREIGN RESOURCE FLOWS (KEY ITEMS)

(In SDR million)	1977	1978	1979
1. Exports	651	695	769
2. Services of which	89	98	149
Tourism	28	39	50
3. Private transfers (Remittances)	38	31	46
4. Direct foreign investment	—	1	38
5. Grants	47	45	111
6. Long-term loans	124	136	144
7. IMF drawings	50	30	80

loans as percent of earnings from exports and services) which had shown a decline in recent years, declined further to 13 per cent in 1978. This reflects in part the more favourable terms on which borrowings have been made in recent years. (See Box on pages 12 & 15).

SUMMARY OF TRENDS

The economic growth, as measured by the rise in the GNP, has shown a distinct upward trend during 1978—79. The growth rate in 1979 (6.2 per cent) was however lower than that of 1978 (8.2 per cent). The higher level of economic activity has led to a substantial reduction in the level of unemployment and an increase in the average income levels. It appears, however, that the growth process has been accompanied by a rise in relative income inequalities. The top 10 per cent of the income earners has shown a clear increase in its income share. Moreover the growth process appears somewhat 'unbalanced' in that the principal contribution to the higher growth rate came from trade, transport, commerce and construction while the contribution of agriculture and industry (the major productive sectors of the economy) has remained relatively low. Strong growth impulses are not yet evident in these two sectors. Furthermore, the growth process has been accompanied by a relatively high rate of inflation which has begun to accelerate particularly since about the middle of 1979. The expansion in employment, rise in average incomes, rise in money wages, and the Food Stamp Scheme would have contributed to mitigate the impact of the rising prices. However, a decline in the real wages for a portion of the wage earners is also indicated.

Another disquieting feature was the poor performance of the export sector specially with regard to traditional exports. Among the new exports textile garments continued to make rapid progress but the export quotas imposed by developed countries have placed sharp limits on the possible future scope for expansion. At present, there are no signs of the emergence of any further new export items which could make a significant impact on the overall export level. Slow growth of exports, if continued into the future, could have serious effects on the economy of a country which has adopted a export-led growth path. On the other hand, earnings from tourism, remittances from abroad, and private foreign investment inflows showed distinct upward trends during the year. However, these proved inadequate to make up

which increased by a lesser amount, Sri Lanka has been prudent enough to ensure that her debt service ratio is brought down over time. Thus, despite the growing oil bill which was purely on account of rising oil prices and not on account of increased oil imports, the country has done reasonably well in her foreign debt management". (see table below and chart on page 16).

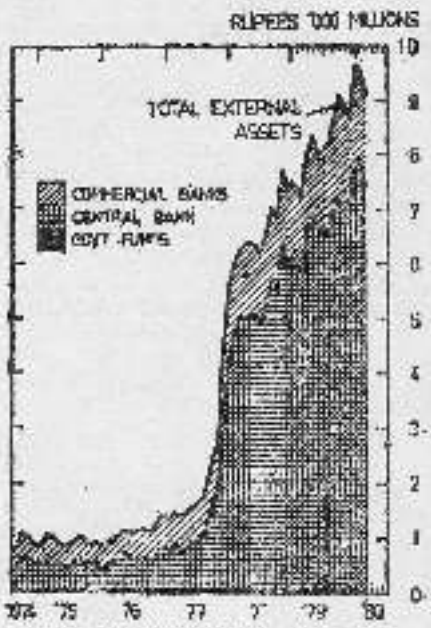
FOREIGN DEBT (1972—79)

(In millions of Rs)

Year	Total Foreign Debt	Repayments (Capital & Interest)
1972	688	79
1973	559	99
1974	685	102
1975	750	146
1976	770	127
1977	843	136
1978	1,055	151
1979	1,262	146

Source: Central Bank of Ceylon.

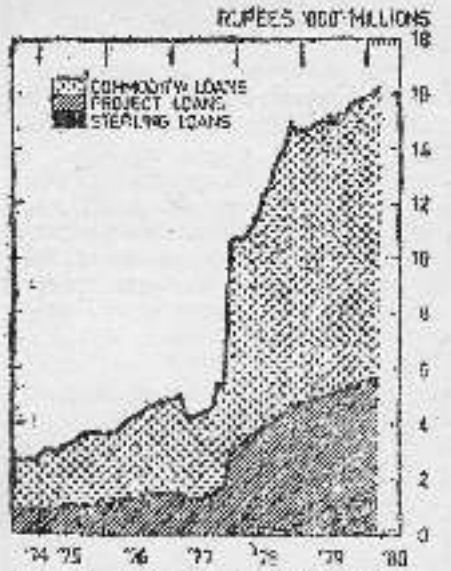
EXTERNAL ASSETS



Source: *Central Bank of Ceylon*

Despite the initial fear of a balance of payments deficit after liberalisation, the overall balance of payments recorded a surplus in both 1978 and 1979, with foreign exchange receipts from various sources (other than trade) rising sharply during the last two years.

FOREIGN LOANS



Source: *Central Bank of Ceylon*

While the quantum of foreign loans increased sharply over the last two years, Sri Lanka's debt profile also showed improvement. The proportion of debt with a maturity of ten years or less fell from 7.2 percent of the total in 1977 to 2.5 percent in 1978. Reflecting this decline, the debt-service ratio fell from 17 to 7 percent during the same period.

for slow export growth and the balance of payments had to be managed by a heavier recourse to foreign loans and aid. Some relief was, however, provided by the fact that a substantial portion of the inflow of foreign resources took the form of grants rather than loans. However, the emerging world recession could slow down the inflow of foreign resources in future years and this is a further factor which underscores the need to reorient policies to foster the export sector, if an export oriented policy is to be maintained.

PROSPECTS FOR 1980

What are the prospects for 1980? All indications are that the record of the relatively high growth rates that characterised the past two years, would continue to be a feature of 1980 as well. The main sources of the higher growth rate would continue to be more or less the same as in the past year. Trade, transport, commerce, and construction are likely to be the main growth sectors. There are no clear indications of a substantial output expansion in the agricultural sector. The domestic agricultural sector (excluding paddy) is unlikely to show any major improvement from the depressed level of the past two years.

The indications are that inflationary pressure in the economy is unlikely to show a marked reduction. Given the recent increases in the prices of major consumer items such as sugar, wheat flour and bread, and the possibility of a further upward revision in the prices of petroleum products and energy (except perhaps petrol where unsold stocks have begun to accumulate), the average price level would clearly show a marked increase during 1980. In this context pressures for higher money wages are bound to arise.

The widening trade gap, as a result of sluggish export growth and the growing import bill would continue to be an important feature of the economy during 1980. In this situation, the country will have to continue its heavy dependence on foreign loans, and aid to finance the growing foreign resource gap. The race seems to be between bridging the gap with foreign grants and loans till the trade gap is closed by increased exports.

FINANCE

Global Inflation - Who's Paying

Persistent inflation became a world wide phenomenon during the 1970's and by the end of the decade not even the centrally-planned economies, where prices are generally regulated, have been free of it; (one estimate cited in a Worldwatch Institute publication has set Soviet inflation at about 5 percent per annum in the first half of the 1970's). What is unique about this current wave of inflation is that it is the first one in history that has been truly world-wide. It is the market economies of the Western world, however, that are worst affected and among the two most seriously afflicted are Britain and the U.S.A.

For Sri Lanka too the problem of global inflation can have serious repercussions, particularly when it has become declared government policy to remove the cushion of price subsidies on imported products and commodities and the country's major development programmes now under way are heavily dependent on imported inputs. The inflationary trends in Sri Lanka, as a result, are already well known. On the city building programme alone costs have doubled in recent months. A recent press report stated that the building for the Sri Lanka Customs, earlier scheduled to cost Rs. 25 million will now cost Rs. 125 million — a staggering five-fold increase. The Minister of Finance was reported, in late June, as saying that world inflation was today Sri Lanka's greatest problem and that it had raised the cost of government's development schemes beyond recognition — the total cost of the development programmes (including Mahaweli) had now gone up to Rs. 120 billion from Rs. 47 billion in 1978. Citing examples of increases on specific development projects he listed the following:

	1978	1980
	(Rs. million)	
Kotmale Scheme	3,200	8,000
Maduru Oya Project	1,200	2,200
Victoria Scheme	3,482	6,000
100,000 Houses Programme	1,772	6,079
Kotte Development Project	680	1,150
Ruhunu Campus	100	600

How deep has been the recession so far? In the early months of 1980 a reduction in orders and consequent cut back in production schedules was reported in some of the major Western industrialised countries. (Sales of US-made cars in May '80 tumbled 37% below a year earlier and new orders received by US factories in April fell 5.5% from the month before). The US and UK have been the first to be hit by the recession but predictions are that export cuts will follow in Europe and possibly Japan, though these countries are not expected to experience recessions of the same degree (some reports indicated that by mid-June Japan's inflation rate was only half that of the US and Japan's growth rate was on par with that of West Germany's).

In the US inflation reached 13 percent in 1979, and the price spiral in many major Western countries was moving closer to this level. The recession in the US economy has been accompanied by rampant inflation. The total output of goods and services, as measured by the Gross National Product (GNP), started to decline during the second quarter of 1979 while prices kept moving up. Most of big industrial corporations in the US were thus caught up with enormous inventories of unsold goods, as in the case of the automobile industry. Many of them have resorted to discounts and rebates in order to increase sales. These, however, were only temporary sales promotion devices and their 1980 models had to reflect the price increases. Policy makers and businessmen were both fearing that a prolonged period of rising prices would engender a momentum of its own.

One commentator analysing this situation in the US stated

"What are prices for many sellers are costs for buyers, so that price increases end up as higher costs; and labour costs go up to the extent that workers are successful in their unending struggle to keep their real wages from being eroded. And so the scene is set for another round of price hikes, with each additional round planting the seeds for still another one, providing only that the government and financial institutions are ready to sup-

The National Bureau of Economic Research in the US formally announced in mid June "the US is indeed in recession". The US economy had reached its high point in January, 1980, and gone downhill ever since, as the Timechart shows clearly. In mid June the Time Board of Economists rendered a mixed verdict: the downturn will proceed at least through the rest of this year, and on the whole will not be quite as violent as the one in 1973 – 75, though it may be worse in some specific respects — notably unemployment.

The US rate of unemployment in May jumped to 7.8 per cent of the work force, from 7 per cent in April and 6.2 per cent in March, the steepest two-month rise in at least 32 years. Sales of US made cars in May tumbled 31 per cent below a year earlier to less than 500,000. New orders received by U.S. factories in April fell 5.5 per cent from the month before, the sharpest drop in more than five years, reported TIME.

COURTESY:

Time, The Weekly Newsmagazine.—16.6.80

ply enough funds, through the expansion of debt, to sustain the higher price-and-wage structure. But this too feeds the flames because of the rising costs of financing the debt"

It is against this background that the upsurge of prices in the US during the 1970's and in 1980, together with growing unemployment and the downturn in economic growth rates in recent months must be viewed.

The continuous diminishing in the value of any country's currency can cause anxiety and harm to that country's economy. In countries like Argentina and Israel, where the current runaway prices have approached the level of hyperinflation, the situation has been viewed as serious. As a result of such "hyperinflationary" situations, states one commentator, "the economic information required for intelligent decision-making is also muddled and lost, and investments and fundamental research and development all suffer, diminishing a society's capacity to renew itself".

Many companies in the US were compelled to issue a second set of financial reports to illustrate the impact of inflation on their performance.

Again, in Britain wage rates have been rising far more rapidly than in other industrialised countries. Meanwhile, tough government policies now include high interest rates and painful cuts in public spending, which would have to be sustained until inflation is checked, but prices keep going up. The British Central Bank (Bank of England) has followed up its gloomy assessment of the country's economy with figures in mid June, showing that while average earnings were rising at 21.2 percent, Britain's price inflation was nearly 22 percent and unemployment was at a post World War II record of 1.5 million and was expected to go much higher.

In the existing global economic order the growing inflation in the industrialised economies and the overall economic health of these countries have generally turned out to be a key determinant in the growth prospects of the developing countries. The pattern is now repeating itself. These industrialised countries have been the principal markets for exports from the developing countries and also their main sources of external capital and modern technology. In the late 1970's the industrialised countries purchased between 60 and 70 percent of the primary commodities and manufactures of the developing countries; but prospects for the future are by no means bright. (see table below).

The slow and erratic growth in industrialised countries in recent years, combined with disruptive influences such as increased protectionism, exchange rate instability and international inflation has led to a reduction in the volume growth of world trade from about 8 percent a year between 1965 and 1973 to just over 4 percent a year between 1973 and 1977. In the same periods, the growth of developing

Industrial Countries: Growth of Gross Domestic Product, 1960—80

(Average annual percentage growth rates, at 1975 prices).

	1960—70	1970-73*	1970-80	1960-80-*
North America	4.0	3.4	3.3	4.0
Japan and Oceania	9.4	5.1	5.1	5.9
Western and Northern Europe	4.7	2.8	2.9	3.8
All Industrialized Countries	4.9	3.4	3.4	4.2

* Estimates for 1978 are based on preliminary data.

** Forecast

"World Development Report, 1979"

country exports declined from 6.4 percent to 3.6 percent a year (Source: World Development Report 1979. The World Bank). The final assessment in this World Bank document is that.

"the joint attainment of rapid growth, full employment and price stability has remained elusive in recent years in the industrialised economics. In several countries, strong inflationary pressures and volatile external payments situations have hampered sustained recovery from the recession of 1974—75. Projections for 1979 and 1980 do not indicate any significant improvement over the 3.4 percent anual growth achieved in the previous decade. The outlook for the next decade is uncertain, but it seems reasonable to assume recovery to an average growth rate of 4.2 percent a year, with Japan's economy growing at nearly 6 percent a year while the economies of North America and Europe grow at or below the average rate for the group", a less gloomy view than the IMF's prognosis issued about the same time.

Many leading economic advisers in the Western industrialised countries are hoping, however, that a continuation of relatively strong growth in West Germany and Japan will help to avoid a recession similar to that of 1974—75. There are fears that in the present mood many of these nations may try to counter the threat of a price-wage spiral by a tightening of fiscal and monetary policies, precipitating slump—"an actual fall in world output, not just a cut-back in its rate of growth". It is, in fact, apparent that the current emphasis in the industrialised world is on economic policies geared to combating inflation rather than slump.

For most Third World nations, on the other hand, the growing inflationary and recessionary trends in the market economy countries are posing a threat to their major development programmes for which international financing is essential. For many of them foreign capital is becoming increasingly more expensive and difficult to get. While many struggle with inflation at home and try to counter the impact of the recession abroad they are also being compelled to control their appetite for larger international loans. The non-producing oil importing countries, particularly, face the problem on two major fronts — meeting their rising fuel bills and maintaining payments on their international debts. A recent *Newsweek* analysis showed that since 1974 the developing countries debt burden had tripled to an estimated $325 billion (see chart) — and many private bankers were unwilling, or even unable, to extend any more credit. It concluded that this situation

"had placed a relatively greater burden on official lending agencies such as the International Monetary Fund. The IMF plans to increase its loan pool from $23 billion to $30 billion this year, but the harsh conditions it imposes as the price of its largesse make many LDC's reluctant to request aid ..... Many LDC's will have to curtail economic growth sharply if they cannot get the new loans they seek to finance deficits — and the eventual result could be deepening poverty and greater social and political instability".

Compounding the payments problem is the anticipated slowdown in world trade both this year and next. To combat growing inflation in their countries the major industrial nations have adopted restrictive fiscal and monetary policies that have the effect of slowing down their economic growth. Adds Newsweek:

"Government banking authorities in Switzerland, West Germany and Japan, for instance, have already imposed restrictions on new loans to developing countries. And American banks, which had a staggering $ 57 billion in LDC paper have begun to bump up against self-imposed constraints".

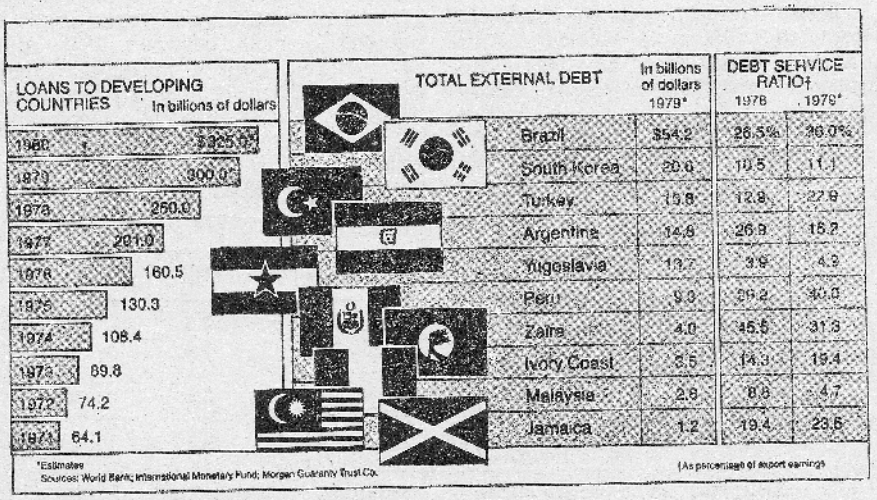
There is at present a great strain on the existing international financial system, as we can see: and in such a situation the smaller developing nations have little leverage, while they face financing requirements that are larger than ever before and in relation to the size of their economies.

One result of the recessionary and inflationary situation, as we observed, is that many countries are registering price increases considerably above the average. Most Asian countries too are reported to be experiencing a 20—25 percent annual inflation rate just now and in countries like South Korea the inflation rate was over 30 percent. Another current report states that in the Philippines the consumer-price index was now at an annual rate of 25 percent. Peru and Ghana, however, provide striking examples of how the damage could be more devastating for a developing nation than implied by the average rates of inflation.

Robert Fuller of the Worldwatch Institute, taking an environmentalists overview of global inflation in a recent paper thus comments:

"Peru provides a striking case in point. In the last four years, workers real buying power has been cut in half. The price of bread has jumped tenfold. Per capita calorie and protein intake is but two thirds of that listed by the UN Food and Agriculture Organization (FAO) as the recommended minimum. According to an observer, the number of infants in Lima who die during their first year has gone up by an estimated 30 percent. During a recent teachers' strike, the instructors stressed that they could not teach students who were on the border of starvation.

The current situation in Ghana provides another example, one that illustrates the potentially disastrous chain of events that can result from inflation once it gets rolling. In Accra, the impoverished majority spend about one quarter of their daily wages just getting to and from work. They must spend three days' wages for a kilo of



COURTESY: *Newsweek, The International Newsmagazine. —26.5.80.*

meat, and one days wages for a tin of condensed milk or a kilo of fish or poultry. Even on the rare occasions when they are available: sugar, flour, tinned fish and soap are beyond an unskilled workers' income. During the 1970's, the price of food in Ghana rose 40 percent more than the general price level did.

It is in the countryside, however, that the actual consequences begin to unfold. It is there that farmers produce cocoa, the single commodity that provides two thirds of Ghana's foreign exchange and is the major income source of small farmers. The world price of cocoa is not keeping pace with domestic inflation. Therefore the cocoa farmers' incomes are falling in real terms. They are being forced to cut down their cocoa trees, along with the forest cover that the cocoa bushes require, in order to plant the food crops that they can no longer afford to buy.

The widespread cutting down of forest cover along with the cocoa trees could lead to an ecological as well as an economic catastrophe in Ghana. It takes 20 years for a cocoa tree to reach the point of highest productivity. The shade canopy necessary to cocoa growing takes about the same period to grow. Without the trees, the topsoil will be washed away or depleted. Within 10 years, some of Ghana's most productive agricultural land could become clay".

To environmentalists like Fuller "there are clear signs that the world is faced with exploding demand, rising costs of essential commodities, stagnating productivity and a levelling off (if not actual decline) in the real standard". He sums up "the current global inflation is more than an economic disease that can be cured by the clever use of monetary and fiscal policy. The problem is misunderstood when it is viewed simply as a malady of the economic system".

Spokesmen for the Western market economies and the Western based media have succeeded in placing the entire blame for the inflationary crisis on the OPEC price hikes, though OPEC spokesmen argue that this is not so (see pages 32 and 33) as the upswing in global inflation was well under way in 1978 without any oil price movements. The causes of the current wave of inflation are far more deep rooted than only the actions of OPEC or ORCD. Just as there is no simple cause of inflation, there is not likely to be a simple cure. Inflation is not so much a disease as it is a symptom of the growing imbalances in the world economy.

RESOURCES

Fisheries Resources—Signs of Hope

Possibilities for a substantial increase in world marine protein supplies have appeared through a discovery in the Arabian sea by a Norwegian research vessel. The researches by this vessel have uncovered a potential of 100 million tons of fish in the Arabian sea which could increase world supplies of fish by 10—25 per cent a year.

The tiny phosphorescent fish from the deepest layers of the sea, known scientifically as a "myctophid" and popularly called the "lantern fish", has been described as "one of the three major latent marine resources" (the other two being krill and squid), and it is found in all the oceans of the world.

With the exception of occasional catches by the South African fishing industry, the potential of the "lantern fish" was ignored until recently. Vast concentrations of the species have now been found in the Arabian Sea by the Norwegian research ship Dr. Fridtjof Nansen, as part of the Indian Ocean Fisheries Programme. That programme involves 30 countries and is supported by the United Nations Development Programme (UNDP) and the Food and Agriculture Organisation of the UN (FAO).

A two-year exploratory expedition by that ship in the region has proved very successful. The UNDP, at the annual meeting of its Governing Council from June 3 -13 proposed a $1.5 million project to help make the Dr. Fridtjof Nansen available to developing countries in other fishing regions.

During the 1970's, world fisheries have undergone a "radical change" according to UNDP Administrator, Bradford Morse, who recommended that the Governing Council approve the project.

"A consensus has emerged from the Third United Nations Conference on the Law of the Sea (UNCLOS) that coastal states should exercise greater control over the living resources lying off their shores", said Morse. Many countries have now established 200-mile Exclusive Economic Zones (EEZ's) in place of the 8 to 12-mile jurisdictions that were common a decade ago."

"As a result of this many developing countries have new opportunities for utilizing the fishery resources within their coastal waters."

The classic method of assessing fishing potential, which uses data based on the activities and catches of commercial fishing ships is generally insufficient to uncover such opportunities. What is needed are acoustic surveys. These determine the kind and quantity of fish with commercial potential, as well as their distribution and migration. But such technologies are not available to all developing countries.

In five tours of the Arabian Sea, from Pakistan to Somalia during 1975 and 1976, the Dr. Fridtjof Nansen employed the most sophisticated acoustic technologies. As a result, it found important concentrations" of both small "pelagic" (open-sea) fish, such as sardinella, horse-mackerel and anchovies, and also "demersal" (bottom-dwelling) fish, including goatfish, treadfin bream, catfish, hairfish, croaker and grunt.

Both groups of fish are already being tapped commercially in the region to a certain extent. But research surveys show that the four major countries concerned.— Pakistan, Somalia, Oman and the People's Democratic Republic of Yemen — could gain millions of dollars in income from these resources each year. The potential annual production could be several hundred thousand tons, the surveys found. (The annual global fish catch hovers around the 70-million-ton mark).

Theoretically, the lantern fish can be processed like sardines. However, reports based on the 1975-76 exploratory cruises indicate that fish meal (for animal food) and oil are the most profitable immediate uses of both pesopelagic fish of the Arabian Sea.

The Norwegian Agency for Development (NORAD) has agreed to make the Dr. Fridtjof Nansen available for an additional 18 months to expand the Arabian Sea project and include other fishing regions such as the South Western Indian Ocean, the South China Sea, the West Coast of Africa, the Mediterranean and the Black Sea.

Paddy Production, Pricing and Self - Sufficiency

The consumption of flour in Sri Lanka registered a marked decline of 37 per cent during the first quarter of 1980 when compared with that of the corresponding period of 1979; although consumption in the 1979 period was 14.1 per cent higher than the corresponding figure of the first quarter of 1978.

This downward trend in flour consumption during the last few years (see table 1) is attributed to the comparative advantages of consuming rice rather than flour, created largely through upward revisions in the price of flour and a stabilizing of the price of rice. This trend, however, has created a new situation for the country's rice stocks as a fair proportion of the shift in consumption from flour has been towards rice.

TABLE 1
CONSUMPTION OF FLOUR

Year		Quantity (Long tons)
1975		466,506
1976		496,014
1977		566,998
1978		443,597
1979		569,381
1980	January — 28,167	
	February — 35,314	
	March — 21,913	
1980	(1st quarter)	35,394
1979	(1st quarter)	135,534
1978	(1st quarter)	118,786

Source: *Food Commissioner's Department*

But, however favourable rice production trends in Sri Lanka may have been they were not able to cope with these additional demands. (see table 2). At the same time the production of local substitutes, such as other field crops, have not faired impressively. Thus, the quantity of rice imported during 1979 increased by 22.3 per cent over that of 1978. This trend has posed a series of questions regarding the attainment of projected rice production targets and feasibility of achieving self-sufficiency in rice in the near future; and also of passing the benefits of the long established consumer subsidy to the local producer.

Census Department estimates revealed a record paddy harvest of 91.9 million bushels in 1979 or an increase of 1.4 per cent over that of the previous year. Furthermore, production trends from 1976 have been favourable and reinforces the optimism on which the projections of reaching the self sufficiency level of 129 million bushels per year were based. Two major alternative courses of action are available in achieving these targets, that is, the intensification of the entire production process or the extension of land area under cultivation. The policies of the government indicate a combination of both these courses. An estimated additional area of 120,000 acres is expected to come under paddy cultivation by 1981, resulting from the massive programme to regulate water under major and minor irrigation schemes throughout the country. Nevertheless, the recent overall economic trends influenced by a growing inflationary situation, restricted the possibilities of opening up new lands, which would require large sums of scarce resources. The need has therefore arisen to get maximum use out of the existing land under cultivation by increasing cropping efficiency and productivity. A higher emphasis is now being placed on the use of available resources for 'quick-return' projects, rather than projects of long gestation and maturity. Hence it would be rational to select the first alternative of intensification of paddy cultivation on available lands and attaining the target of an additional 9 bushels per acre (62 bushels per acre) which is the requirement for self sufficiency. This alternative would not appear unusually optimistic or ilogical, as it only needs a better and more organized use of various resources (inputs) going into paddy cultivation. But possibilities of attaining self-sufficiency through these measures may be greatly affected by some of the recent unfavourable socio-economic developments in the rural sector of Sri Lanka. The most important of these developments is the rapid rise in prices of basic inputs; (chemicals and labour) resulting in an increase in the overall cost of production. The end result is that profit margins have been trimmed down for the farmer. A further significant development arising from this situation is that it is more profitable for small farmers to offer their labour in various forms rather than engage themselves in their own cultivations.

TABLE 3
Average cost of paddy production per acre plots in Thoranegama Maha Season 1978/79 (Mahaveli H Area)

		Rs.
1.	Land Preparation	
	Cleaning	80.00
	Ploughing	400.00
	Others	5.80
2.	Sowing	133.40
3.	Transplanting	183.90
4.	Fertilizing and Weeding	39.90
5.	Harvesting and Transportation	446.80
Total		1,289.80

Source: *People's Bank Research Department Survey.*

The comparative cost of production of selected districts (namely: Polonnaruwa, Kandy, Kurunegala, Colombo and Hambantota) had recorded an average increase of 139.9 per cent over the seven year period starting from 1972. A study conducted by the Research Department of the People's Bank has revealed that the cost of production of paddy in certain areas has almost reached the potential income level derived from paddy cultivation leaving no surplus for

TABLE 2 FLOUR AND RICE IMPORTS AND LOCAL PADDY PRODUCTION

	Rice Imports		Flour Imports		Local Paddy Production	
	Quantity (tons)	Value per ton Rs.	Quantity (tons)	Value per ton Rs.	Million Bushels	Per Bushel Rs.
1975	455,218	2,296	452,067	2,167	55.0	33
1976	379,760	2,056	418,349	1,730	60.7	33*
1977	523,861	1,698	534,606	1,770	80.4	40**
1978	602,947	3,460	158,856	3,628	90.6	40
1979	459,485	3,591	208,464	4,239	91.9	40
1980 (1st quarter)	149,436	4,649	56,414	4,425	N.A.	N.A.

* upto Nov. 15, 1977
** from Nov. 16, 1977

Source: *Food Commissioner's Department*

the farmer. This is particularly true in those areas where large amounts of labour are required for transplanting. In such cases this labour has gone up to as much as 37 per cent of the total cost of production (Matale, Galewela and Nalanda areas are good examples). Even in the Maharoli H area where the average cost of production per acre in 1978/79 was Rs. 1,269.50 (see table 3), there was a small return accruing to the farmer but this was not sufficient in most cases. In the latter part of 1979 and early 1980 with the increasing costs of fuel and other inputs this small profit would be hardly sufficient to meet the daily requirements of these farmers. One possible way out of this situation for the farmer would be a reduction in the cost of certain inputs like fertilizer, chemicals and mechanical ploughing. (Farmers are already receiving a 75 per cent subsidy on fertilizer). Even if those costs were lowered there are certain other costs which cannot possibly be lowered in this manner. It appears therefore that the upward revision of the price of rice purchased under Guaranteed Price Scheme has become inevitable in order to prevent a critical situation arising in the paddy farming section of Sri Lanka; though the inflationary situation that could result from such a step would have to be closely considered.

A further point in support of the proposal is that upward revisions have been made since January 1980 in the floor prices of some of the grains coming under the field crops category. At present 10 subsidiary food crops have been brought under this new scheme. Although these floor prices are intended to be used as a hedge against the reduction of the prices of those crops, it is ironic that in the case of the G.P.S. for paddy it works as a hedge against the farmers getting a better price for their major income earner. In the latter instance the G.P.S. for paddy virtually acts as the maximum price for paddy in the open market too.

Secondly, as stated earlier, the import bill for rice seemed to be increasing both due to an increasing volume of imports as well as rising prices. The price paid for imported rice in the first quarter of 1980, when converted on a crude basis, showed that the equivalent of a bushel of imported rice cost approximately Rs. 89.10. This disparity between imported and local costs of rice have given rise to the view that there is bias towards subsidising the consumer at the expense of the paddy cultivator. In other words, the present Guaranteed Price of Rs. 48/ per bushel of paddy appears to be preventing the peasant farmer from getting a much deserved price which should be decided by the market mechanism.

Thirdly, the adverse effects of inflation are felt as much by the peasant paddy farmers as the salaried earners in the urban and estate sectors. However, steps taken so far to meet this situation seem to be inadequate. The fact that little or no agitation for better prices for their produce has come from the farmers does not mean that they are less affected by the growing inflation.

SCIENCE AND SOCIETY

UNCSTD AND AFTER

In August 1979 Vienna was the venue of the last of eight Special Conferences the UN staged over the past decade. This was the UN Conference on Science and Technology for Development (UNCSTD). The Conference was preceded by an array of preparatory meetings and attended by nearly 2,000 delegates and observers representing 142 states, 3 national liberation movements (Palestinian Liberation Organisation; the African National Congress of South Africa and the Patriotic Front of Zimbabwe) and representatives of a number of Regional Commissions, UN bodies, specialised international professional organisations, intergovernmental bodies and N.G.O.s. The overall cost of this conference was reported to be over $ 8 million. All this reflects the importance attached to these sessions by the organisers. However, there is a growing scepticism in many quarters about the effectiveness of these large conferences and the UNCSTD was not free of such attitudes. The participation of the scientific community was said to be minimal, so also the organisers efforts to involve non governmental bodies. Counter conferences sponsored by the N.G.O.s have become a permanent feature accompanying these conferences. At the UNCSTD counter conference one of the organisers was Ivan Illich and even UN publications reported that "the NGO effort could claim to have achieved more, at least in exchange of views and addresses, than did the conference proper". Apart from these organisational shortcomings the main stumbling block during the conference was the diametrically opposite interests of the developed and developing countries, in major areas, which makes it difficult to settle on a solution to the key issues and the bonefits on which the Third World countries depend.

In preparation for the Conference the following four items constituted the agenda: 1. Science and technology for development, 2. Institutional arrangements and new forms of international co-operation in the application of science and technology, 3. Utilisation of the existing UN system and other international organisations, 4. Science and technology and the future. But the Action Programme which came out of the conference called the "Vienna Programme of Action on Science and Technology for Development" was detailed under a slightly different set of headings, which probably reflected the issues that were brought up and discussed in the course of the conference. The Vienna Programme of Action consists of 3 sections: Section I — strengthening the science and technology capacities of the developing countries; Section II - Restructuring the existing pattern of international scientific and technical relations; and Section III — strengthening the role of the United Nations system in the field of science and technology and the provision of increased financial resources.

The Sections I and II were more or less included in the preparatory agenda. Section III which talks of changing the existing relations is an item that reflects the existing unequal relationships in the world with regard to science and technology.

The existing global inequalities in science and technology developments between countries also reflects the unequal level of economic development among them. They characterize the prevailing global structural relationships. It

UNCSTD - a further meeting

A regional meeting of experts from South and Central Asia was held in Colombo from 6—9, May 1980. This was a follow up of the UNCSTD recommendation on the need to develop national and regional programmes and projects in science and technology. The main objective of the meeting was to explore possibilities for regional co-operation in science and technology and to identify projects that could be forwarded to be financed by the UNCSTD Interim Fund.

The meeting was attended by experts from seven countries: Afghanistan, Bangladesh, India, Iran, Nepal, Pakistan and Sri Lanka. Observers and representatives from regional UN bodies and from other specialised UN agencies also attended. The country papers presented at the meeting reflected the priorities of the different countries. The Sri Lanka paper for example outlined four possible areas of cooperation:

(1) Providing improved and appropriate training courses in the universities, technical colleges and other training institutes; (2) Strengthening the research and development capabilities of scientific institutes; (3) Transfer and development of technology; and (4) Information exchange. Specific projects were suggested under each of these headings.

On the other hand the country paper from Bangladesh contained elements of an overall science policy within which their specific projects were to be carried. The overall policy stated the government's decision to bring about a technological revolution in the country during the second five year plan which starts from July, 1980. This statement emphasised "The main strategy of the programme will be participation of the people for a break through in the technological revolution, for it is believed that such a revolution has primarily to come from the people".

is no surprise therefore that in almost every international conference, whether it be in relation to trade, information or science and technology development, the developing countries have emphasised the need for changes in the existing structural relationships. At the UNCSTD conference too, this key question resulted in an entire new section being added to the Action Programme. But it is precisely when it comes to the problem of structures and the attempts to alter them that we find the positions of developing and developed countries most far apart.

UNCSTD achieved very little on these basic issues. As reported in an UN publication "UNCSTD never really got away from being a mini North-South Confrontation, which ended in a rout of the South". Consider for example a proposal in the draft of the Action Programme under the item "Measures and mechanisms for strengthening the scientific and technological capacities of developing countries". This proposal on the mechanisms for transfer, acquisition and assessment of technology called for a "machinery to effectively monitor, screen and evaluate imported technology, including that of transnational corporations with a view to ensuring maximization of domestic technological inputs". The objectives of such machinery should be such that transnational corporations and other enterprises:

(1) Do not impede but contribute to the diffusion of technology within the country.
(2) Encourage subsidiaries to carry out research and development in developing countries and associate in this process local science and technology personnel.
(3) Give priority to the use of local raw materials, intermediate products, technology and personnel.
(4) Organise technical training programmes in the countries concerned.
(5) Make available to the appropriate national entities information pertaining to the results of their research and development activities undertaken in developing countries.
(6) Undertake co-operative schemes, including joint ventures, with developing countries, enterprises and research and development institutions.

This specific proposal has a connection to the existing situation in the Third World countries. While there is much talk about appropriate and intermediate technology, the transfer of technology into the Third World countries through foreign investments is taking place very rapidly. Infact one could say that this will be the major channel of technology introduction into the Third World for many more years to come. This proposal attempts to deal with the situation for the benefit of the Third World countries. But in the final report the original proposal was converted to a very general statement, which in reality means little, due to the objections of developed countries on various grounds.

Funding is the other area where agreement is hard to reach at these conferences, although a transfer of financial resources from developed countries to developing is regarded by the latter as the cornerstone of any agreement for development.

The UNCSTD agreed to form an Intergovernmental Committee on Science and Technology for Development and this committee will seek to formulate major policies for the various UN organisations active in the field of science and technology. Specifically, it will establish guidelines for the fund or — to use the official term — "financing mechanisms". However, until these mechanisms are set up on a permanent basis, an Interim Fund of $ 250 million, administered by the United Nations Development Program (UNDP), will be created for 1980 and 1981.

What was in fact achieved at Vienna by way of funding was an Interim Fund amounting to only $ 250 million through voluntary contributions. But the developing countries had been hoping for far more by way of financial commitments. Truly a 'diet of crumbs' was how one report described it; as this sum seemed ridiculously small, compared with annual world expenditures of about $ 150 billion on Research and Development (98% of which is spent in the developed countries) and the initial requests from the developing countries for $ 2,000 million in 1985 and $ 4,000 million in 1990.

Furthermore, the Group of 77 asked that these sums be collected "automatically" by taxing the surpluses amassed by industrialized countries through trade with developing nations. However, the developed countries rejected outright the principle of automatic contributions.

COMMODITIES

COCONUT

Heavy fall in kernel products exports

The exports of Sri Lanka's coconut (kernel) products registered a marked drop in both volume and prices upto the end of April this year. Exports of coconut-kernel products during the first 4 months of this year dropped in volume by nearly 50 percent when compared with that of the same period in 1979. During the 1979 period too a drop was registered over that of the same period of the previous year — the volume of coconut-kernel product exports (in million nut equivalents) during the January-April period being: 1978—169 million; 1979 — 120 million; and 1980 — 63 million.

The value of kernel-products exports has also registered a considerable (Rs. 80 million) drop in the 1980 period from Rs. 279 million in January-April 1978 to Rs. 199 million in January-April 1980 (see table below).

A significant trend in the export pattern of coconut products is the shift from kernel-products towards other by-products, particularly fibre products (see table below). Kernel-products which accounted for 68 percent of the value of exports in the 1979 period, accounted for less than 50 percent of the total exports during the 1980 period. All by-products, (which include fibre, shell and okels) on the other hand, had accounted for only 32 percent of the total value of exports in the 1979 period. In 1980 these accounted for just over 50 percent of the value of total exports, and now exceed the value of kernel exports.

The sharp drop in kernel-products exports this year is the result of a 64 percent drop in the volume of coconut-oil and a 41 percent drop in the volume of D.C. exported. Value-wise too, the fall in exports for both these kernel-products amounted to about 32 percent. International prices, particularly for D.C. were much higher than during the same period in 1979; (US$, 675 per metric ton in April 1980 against US $ 1,481 in 1979).

The short-fall in crop and production was the main reason for the fall in the exports of kernel products. Low production was the main reason for the fall in the exports of kernel products. Production of D.C. and coconut-oil for the January-April period during 1979 and 1980 were as follows:

(Production in metric tons)

	Coconut Oil	D.C.
1979	24,354	16,672
1980	14,160	6,732

The exports of fibre products, however, seemed to gain at the expense of the drop in kernel products exports. Fibre products which accounted for about 32 percent of the total value of all exports in the January-April 1979 period now contributed to 57 percent of the total value of all exports of coconut products while there was an almost 80 percent increase in the value of fibre products exported in the 1980 period when compared to the same period in 1979.

The attractive international prices for coir fibre helped considerably in boosting export earnings — mattress fibre FAQ (U.K.) had gone up from US$ 175 to US $245 per metric tonne. Major increases in earnings have been recorded for mattress fibre in bales, twisted fibre and coir fibre.

Coconut shell products exports, on the other hand, registered a fall in volume and an increase in earnings. Value of exports was up by 16 percent, mainly due to an 84 percent increase in earnings (and 32 percent increase in volume) from activated carbon. Volume-wise exports of all other coconut shell products registered a fall (see table below).

The overall drop in coconut production also resulted in a tighter local market situation. The transacted price for D.C. had gone up from Rs. 6.40 per kilogramme in April 1979 to Rs. 8.00 per kilogramme by April 1980; while the average wholesale price per 1000 nuts which was Rs. 850 in April 1979 had gone upto Rs. 1,245 in April 1980, according to the Coconut Development Authority's Marketing Division.

EXPORTS OF COCONUT PRODUCTS JANUARY–APRIL 1979/80

		Volume (metric tons) 1979	1980	Percent Change	Value (Rs. '000) 1979	1980	Percent Change
1.	Coconut oil	4,409	1,558	-64.2	87,884	22,319	-67.2
2.	D.C.	12,529	7,409	-40.9	211,106	166,821	-21.0
3.	Copra	—	—	—	—	—	
4.	Fresh Nuts	—	—	—	—	—	
5.	Sub-Total Kernel Products (Mn. nut equivalent)	119.60	62.60	-47.6	278,989 (bln. nut equivalent)	189,040	32.2
6.	Mattress Fibre	16,554	18,895	+11.5	39,068	65,812	+68.0
7.	Bristle fibre	3,608	3,881	+5.3	23,607	24,345	+2.7
8.	Twisted fibre	8,687	11,748	+35.24	23,890	45,503	+88.6
9.	Coir Yarn	990	407	-57.2	6,680	3,369	-49.6
10.	Coir Twine	55	216	+517.1	280	2,500	+792.9
11.	Sub Total Fibre products	30,324	35,159	+15.9	89,515	141,747	+58.2
12.	Coconut Shell Charcoal	13,609	11,770	-13.6	31,557	34,791	+11.0
13.	Coconut Shell Flour	326	50	84.6	194	129	-73.6
14.	Coconut Shells	265	385	8.2	300	392	+30.7
15.	Coconut Shell Activated Carbon	240	331	+33.8	2,488	4,589	+84.2
16.	Sub-Total Shell Products	14,500	12,476	-14.8	34,639	39,901	+15.2
17.	Coconut Okels	1,003	2,200	+57.2	1,109	3,753	+20.7
18.	Other By-products	—		—	3,187	5,499	+72.5
19.	Sub-Total Non-Kernel Products	—	—	—	130,550	190,900	+46.2
20.	Total Value of All products	—	—	—	409,339	379,940	-7.2

Welimada's Vegetable Cultivators Reap Dwindling Returns

Lionel Siriwardene

That the middle man exploits the small producer in this country, in several sectors of the economy, is very much a truism. Here Lionel Siriwardena, Research Officer of the People's Bank, provides some of the answers why this happens to the Welimada vegetable farmer and suggests that a better 'organised' and 'motivated' marketing system can help to mitigate many of their ills of the existing system.

Agricultural marketing is an area of critical significance in the management of our marketing system. Most of the ills of this system can be attributed to the faulty marketing of the rural farmer's produce. Seasonal surpluses and consequent slumps in prices at the time of harvest, scarcity during the lean period which tends to strengthen the harmful trade monopoly of the middlemen and a resultant rise in consumer prices, the ultimate exploitation of producers as well as consumers — all these ills arise out of lack of an "organised" system of marketing. This is a crucial issue, especially in the case of vegetable marketing in the country and more so for that of upcountry grown vegetables. If only there could be an assured system of 'organised marketing', the periods of scarcity and glut could be curbed and wide fluctuations in prices minimised. Several surveys have revealed that on an average nearly 10 per cent of the monthly household food expenditure of our people is spent on vegetables. Thus, any fluctuations in the price of vegetables would naturally be felt in the living costs of the average consumer. On the other hand, a very significant proportion of the farming population of the country is dependent on vegetable cultivation and, the fluctuations in prices naturally render unstable the incomes of these producers.

Middlemen are found to be exploiting both consumers and producers, absorbing a large proportion of the price paid by consumers and at the same time depriving producers of a major share of the returns due to them. If the wide disparity between the producer prices and consumer prices could be reduced then there would be neither exploitation of producers nor of consumers. Effective organised marketing could provide at once the principal incentive for increased vegetable production and a means of promoting distributory justice.

Vegetable marketing, as it is, provides a graphic example of the disparities, dislocations and disincentives caused by the absence of organised marketing systems. Past experience of vegetable marketing in the country shows that for the last twenty-five years we have not succeeded in evolving a system of effective marketing of vegetables. The prices of vegetables over this period have shown a continuously increasing trend with a sudden and unprecedented rise during the last five years (particularly the exotic or 'up-country' vegetables like carrots, leeks, beans and beetroot) but the benefits to the producer have remained meagre. Attempts to remedy the situation have come from time to time from the Government, which has promoted many institutions to intervene in the existing system. Such institutions included the Marketing Department, the Coop. Marketing Federation (Markfed), the Cooperative Societies and the Producer Unions. The major objective in establishing these institutions has been "to assure a reasonable price to the producers and a fair price to consumers". The effectiveness of the intervention of these institutions is best judged by the fact that, as one research study on vegetable marketing summed up, "the producer has never been able to obtain a fair price for his produce while the urban consumer has always been called upon to pay high prices". It is apparent that all these institutions need to be 'effectively' linked up with the field level organisation of farmers. The emphasis here in on 'effectively' which means that the interests of the farmers need to be placed above those of all others. This does not happen now as we shall see. The end result is that the vegetable farmer (of Welimada) has never been able to better his lot; the prevailing market system has provided him no incentive for an improvement of the existing practices and relationships. An objective of successive governments and development plans has been to develop vegetable production and expand acreage under vegetable cultivation. But studies have revealed that the acreage and production of vegetables have not increased significantly over the years; a major reason being the inability of farmers to get their fair share of the retail price and the resultant lack of incentive. The description that follows from a study of vegetable marketing in the Welimada area highlights clearly the lack of alternatives the Welimada farmer has to put up with in the absence of a marketing system that will give him a fair return for his produce.

In respect of vegetable marketing no institution has yet been able to compete effectively with the private sector. Marketing, referred to here, is not merely the collection and redistribution of vegetables, it also involves packing, weighing, transport, grading and sorting, pricing, financing, retailing and many other minor functions. At all these levels private sources are estimated to handle nearly 80 per cent of vegetable marketing functions in Sri Lanka. Why the private sector is able to retain so large a segment of the market is simply because farmers regard this sector as the most efficient outlet available. This sector on the other hand does not fail to take maximum advantage of their situation.

MARKETING SYSTEM

The vegetables that move out of the principal growing areas find their way to the major consuming areas located in the cities and suburban areas of the country. The marketing system or channels through which vegetables move in Sri Lanka are broadly categorised under three groupings: the private (traditional) marketing system;

Government or Marketing Department; and Cooperatives. These groups in turn operate at three broad levels in the marketing chain; primary or farm; wholesale; and retail. Each of these groups, however, operate through different links of the marketing chain, depending on the location in which they operate.

It was observed that in the Welimada area there were three principal methods of marketing vegetables at the primary or farm level namely, through (1) Commission Agents and traders; (2) Co-operative Societies and (3) the Marketing Department, whose influence is negligible. Almost the entire trade goes from the farmers through the commission agents and their collectors.

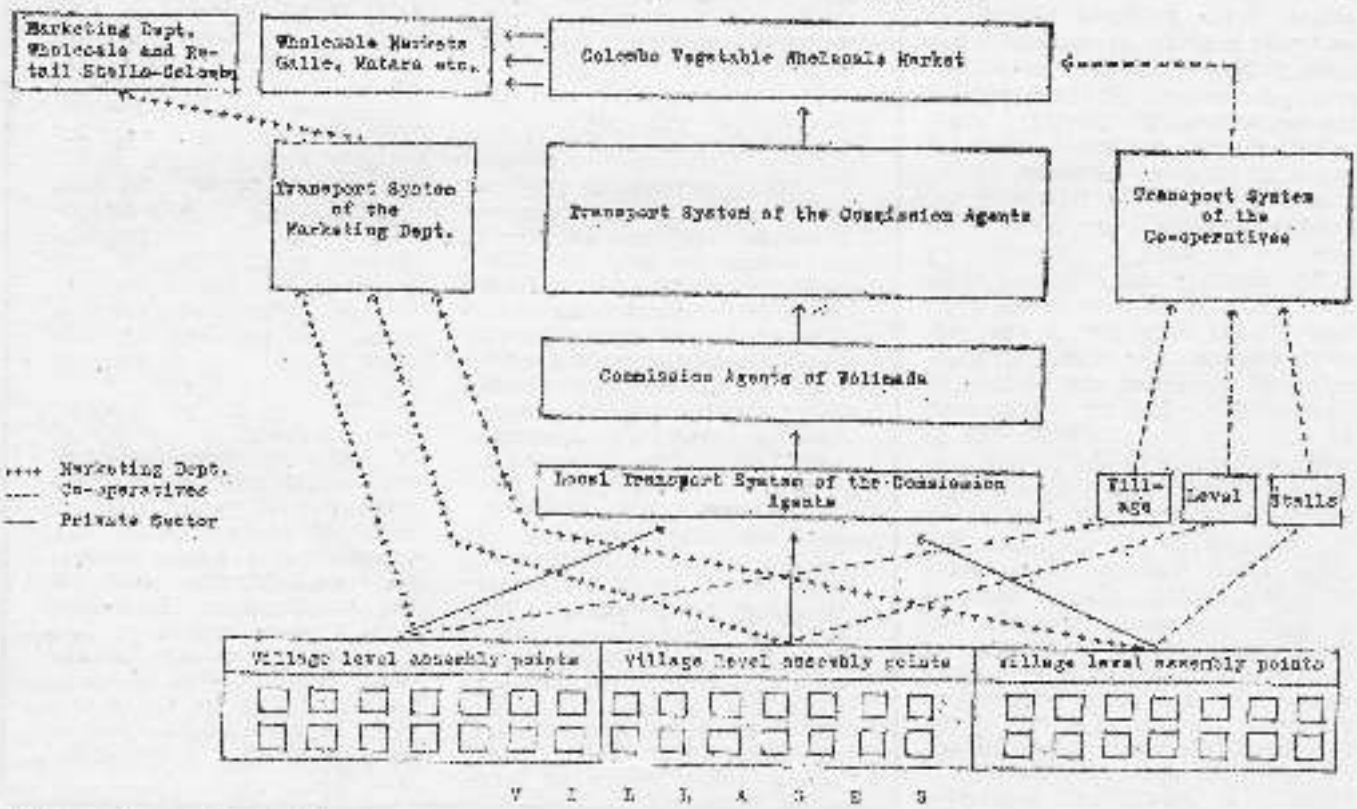
COLLECTION OF VEGETABLES

The geographical situation of Welimada area and the distribution of villages have a great influence on the collection system of vegetables. For instance, though it is easy to collect vegetables in a village like Pelugama, bordering the Welimada — Nuwara Eliya public highway, the collection of vegetables in areas like Karagahaulpata, Dikkapitiya and Borelande has proved difficult due to the lack of motorable roads and the hilly terrain. When farmers have easy access to transport through highways they are more independent to select the most profitable marketing channel of their choice. These farmers, however, are not fortunate enough to have access to transport and are therefore dependent on particular marketing channels whether they are profitable or not. The Welimada farmer has to face this burden in addition to the problems common among most vegetable cultivators such as seasonal variations in prices, shortage of labour, increasingly higher prices and non-availability of inputs at the correct time, and low producer prices despite increasing cost of production. On the other hand, the situation at Welimada has only helped to strengthen the existing marketing channels, even though it has not been to the best advantage of the farmer.

It is important therefore to examine the efficiency, advantages and drawbacks of the channels operating from the bottom upwards. It was evident that in Welimada area though public organisations such as the Marketing Department and Co-operatives were set up to minimise the adverse impact of the private trader and middle-man, for both producers and consumers, they have not had the desired impact. Cultivators are very much bound by both the private commission agents and traders and if any concessions or facilities are granted to the farmers in these areas, they get it from the private trader. Thus more than 80 per cent of the vegetables in the Welimada area are still being collected by private traders and their agents and, the entire marketing system is under their control.

As stated earlier the principal method of marketing vegetables, for the producer, in the Welimada area are through (1) Commission Agents and traders, (2) The Cooperative Societies, (3) The Marketing Department. It is the private trade, however, which dominates; the organisational structure of this sector has better links down in the level of farmers than those of the other two channels. The diagram below illustrates this. It was found that about 20—30 commission agents transport vegetables within the area in 40—50 lorries that are in good condition. These agents of the transport agents have links with every village. In

Transport of Vegetables — Producer to Wholesaler



villages difficult of access by vehicles, they collect the vegetables with the help of carts, tractors and smaller lorries and transport them out of the village in bigger lorries. Though the Udapalata Co-operative Society maintains 22 collecting centres they still collect a quantity relatively less than three lorry loads. Even the Uva Paranagama Co-operative Society has four collecting centres but only a very small quantity of vegetables is collected. Details are seen in the table below.

Vegetable Transport in Welimada Area — Number of Lorries and Tractors

		Big lorries	*Small lorries*	*Tractors*
Commission Agents	(22)	40—50	30—40	10—15
Co-operatives	(03)	10—15	6—8	5—10
Marketing Department		2—3		

MARKETING SYSTEMS — PRIVATE TRADERS AND INSTITUTIONS

Traders in lorries and tractors, having links with commission agents or wholesale traders, come to the verge of village lands where vegetables are cultivated. All that the cultivator has to do is to bring his vegetables upto the road close to his vegetable farm. Even if on certain occasions vehicles fail to arrive at the appointed time because of a vehicle break down, or because a sufficient quantity of vegetables has already been collected, they will come even at midnight to take away the vegetables. Furthermore, while every effort is made to collect all the vegetables as promised, if an adequate number of labourers are not available the trader himself will take up the bags of vegetables on to his shoulder and help load them into the lorry. If room is not available in his lorry for all the farmer's vegetables he makes arrangements to transport the balance in another lorry. It is for reasons such as this that the cultivator has so much confidence in the private trader even though prices are not high. In the collection of vegetables by the Udapalatha Co-operative Society, which manages 22 vegetable collecting centres, though there is an assurance about prices, the risk has become greater. According to the views expressed by certain cultivators, they are given prior information of the time of arrival of the Co-operative lorries. Before the appointed time the cultivators are expected to have their vegetables ready for collection. If on account of some shortcoming the vegetables are not ready for collection at the time the lorry arrives, it drives away. Sometimes the vegetables are not sold to the private traders in the evening but are kept till 10 or 11 o'clock at night in expectation of co-operative lorries and the hope of higher prices. The Co-operative Society collects vegetables according to instructions from its Head Office, on a special route only. The cultivator has to bring his vegetables on to that special route. The private trader or collector however, comes to the proximity of the vegetable farm and takes away the vegetables. Hence the cultivator tries to sell his vegetables to the private trader even at a lower rate. Furthermore, in the matter of collecting vegetables, the Co-operative Society has no need to cultivate any link with the farmer. Co-operative officials work for a salary. If the private trader, while collecting vegetables, acts in such a manner as to foreit the confidence of the farmer, such conduct will result in paralysing his business. Basically the private trader always tries to conduct affairs to the satisfaction of the farmer, through the provisions of various economic services and also social relationships. (See Box below on 'Trader-Producer Relations'). One result is that the farmer is obliged to take whatever price he gets and not even ask questions about the traders malpractices such as underweighing.

CLOSE TRADER PRODUCER RELATIONSHIP

The close relationship between the vegetable farmer and the commission agent is dealt with in detail in a very thorough study entitled "Factors Influencing Vegetable Prices — A Study of the Vegetable Economy in Sri Lanka", carried out by P. J. Goonewardena and Athula Chandrasiri of the ARTI in 1978/79. To quote from their report (Pages 116—117), when they dealt with the situation of vegetable cultivators in the Badulla district.

"The commission agents lend money to their farmer-clients in Vidurupola and Boragas village not only for cultivation purposes but for other needs of the farmers as well. The amount of loans that a particular farmer could get depends on the expected volume of vegetables that he could send to a particular commission agent. The commission agents do not insist on a formal interest rate. However, they may have recovered a hidden interest from the proceeds of sale by under invoicing and under-weighing the produce. The average amount of loans granted by the commission agents to the farmers sometimes extends upto Rs. 500/- per season. One particular commission agent lends over a million rupees per year for the cultivators at Vidurupola".

".....Besides providing credit, most of the traders and transport agents provide certain other facilities to the cultivators, for example, the transport agents who come to Welimada area transport agricultural inputs, building materials and even furniture for the farmers. The majority of the farmers know their commission agents pesonally. The commission agents are invariably invited to the social functions of farmers. On such occasions, the traders strengthen their relationships through gifts, donations etc. It was noticed during the survey that farmers who came to collect the proceeds of sale were treated well in turn by the commission agents.

Through the relationship such as credit ties, provision of inputs and consumer goods and social relationships, the traders have been able to maintain goodwill among the producers and assure a regular "clientele". The result is the establishment of mutual trust between groups so that one group does not bargain with the other. This, however, paves the way for the prevalence of trade abuses such as underweighing, underinvoicing, etc."

THE CO-OPERATIVE METHOD OF MARKETING COMPARED WITH THAT OF THE PRIVATE TRADER

It is a view expressed by many that since private traders and commission agents act with efficiency in transporting vegetables it has been possible to provide the market in Colombo with vegetables on time; this gives the trader a better price and a fair return to the farmer. Transport agents who come to the Welimada area any evening roam in every village and having collected vegetables and duly packed them into lorries come to Welimada town around 11 p.m. Every lorry having thus come to the town is driven speedily but with apparent care so as to reach Colombo about 6.30 a.m. It is only with regard to vegetables that are brought to Colombo on time that more satisfactory decisions can be arrived at with regard to prices and sales. Since this activity is performed as the personal responsibility of every lorry driver great confidence is created in the trader even if the cultivator does not get a satisfactory price. The drivers of the Co-operative lorries, however, do not act with the same sense of personal responsibility for the load of vegetables. They rather perform their service for a salary and in conformity with rules and regulations. For instance, if the collection of vegetables is delayed till 11 or 12 at night, unlike the private trader, the co-operative driver does not feel responsible for the vegetables reaching Colombo by dawn the following day. What appears most necessary is that as an official duty they bring the load of vegetables to Colombo. As a result, sometimes when this vehicle reaches Colombo the vegetable stocks in the wholesale market in Colombo have been sold out. The prices too have come down.

The private trader on the other hand, shows a keen desire to rescue a vehicle that goes out of commission and then continue his trip. For instance, it was reported from Keppetipola that while vegetables were being transported, the transport agents realised that owing to a collision on the road there would be delay, and they did an extra 25 miles on by roads to reach Colombo on time. On other occasions private traders whose lorries break down on the way succeed in obtaining, from a passing lorry, spare parts or other assistance needed and run their lorries once again within an hour. All losses that occur on such occasions are borne by the trader and often these costs do not matter much to him. Also, lorries that follow often stop and inquire from lorries stalled on the road whether they need help, and thus they receive protection through such co-operation and unity. But when a co-operative lorry breaks down or meets with an accident the others do not willingly venture to offer any help because they feel that it is not anyone's private property, while the drivers of Co-operative vehicles show little eagerness to get them repaired as quickly as possible once they break down. By getting them repaired without delay the driver reaps no personal gain. Further, if his actions contravene rules and regulations he may have to face punishment.

What has been revealed at villages like Bogahakumbura, Karagahatalpata, Ambewela, Ambagasduwa is that many cultivate vegetables in small quantities. What is accepted by a lorry is bags each weighing about one hundred-weight. But a single farmer does not have the ability to produce enough carrots, chillies, or beans to fill a bag. On account of this middlemen have sprung up in villages who collect vegetables by the pound and hand them over to the collecting agents. They can be described as private collectors of vegetables who are agents for the commission agents. Though a farmer in flourishing areas like Polugama or Udugawara sells a minimum of 10 15 bags of vegetables, the position of small scale farmers who cultivate carrot beet, capsicum etc. is different.

In their study on factors influencing vegetable prices P. J. Goonewardene and Athula Chandrasiri also comment on this situation which leads to a lack of competition and imperfections in the market for vegetable farmers in the Badulla district. The situation is well documented in their report as follows:

"The majority of the producers at Vidunupola send vegetables to the commission agents through transport agents. Three private lorry services enjoy a near monopoly in the transport of vegetables. These are (1) P.M.T. Transport Service, (2) B. M. S. Transport Service and (3) S. H. A. Transport Service. The last two now operate as a single enterprise and exercise a control over almost all aspects of vegetable transport from the farm level to the wholesale level. These three services have divided the days of the week among themselves so as to restrict the competition with regard to the collection and transport of vegetables.

The collectors' truck-buyers get their quantities of vegetables through brokers who enjoy the benefit of competition among the farmer. This happens at Boralasgamuwa village too. The commission agents and truck-buyers sometimes compete with each other for limited quantities of vegetables not through different prices, but through various other ways. At the Welimada fair, there is a competitive situation when vegetables for sale are limited and traders are many. But the competitiveness does not reflect much on price. Even this limited advantage is granted more by the brokers and other intermediaries". (Pages 110-11).

"The isolated nature of the producer-level markets also contribute to the emergence of imperfection in village level marketing. This is associated with poor infrastructural facilities which lead to the dominance of a few buyers who could find suitable transport facilities. The producer-level markets are also fairly scattered so that price information does not properly flow between the markets. This enables the traders to pay different prices for the same produce offered for sale at different markets even in the same village" (Page 114).

PRIVATE TRADE CHANNELS

On account of the fact that the private trader transports the farmer's vegetables without any delay, he reaps a surplus profit during periods when high prices prevail in Colombo, by supplying vegetables to meet particular consumer demand. The procedure adopted by those traders for the transport of vegetables is given below, as an illustration.

A SAMPLE

Farmer:— L. M. Dingiri Banda,
Vegetable trader in Colombo: D. N. Abeysinghe
Number of vegetable market: 234.

When of an evening Dingiri Banda packs his vegetables into bags and hands them over to the transport agent, he marks his name, the name of the trader to whom the vegetables are being sent and the number of the market very clearly on the outside of the bag as shown below. This is described by the farmer as "blanding" the name.

234
D. N. A.
L. M. D. B.

Once these bags of vegetables are handed over to the transport agent

he loads them into the lorry in the order of numbers alloted to the various traders and transports them to Colombo. After the lorries reach Colombo, the Colombo traders take over the bags in conformity with the directions against "brand names".

After the sale of these vegetables a letter and a bill are sent to the farmer on the evening of the same day. This bill is often decorated with various illustrations and advice to encourage the farmer. Among the matters stated therein, are the following.

1. Variety of vegetables
2. The number of pounds
3. Amount deducted as lorry hire
4. Amount deducted as wages of labourers
5. Amount deducted as commission and for loss of weight
6. The initials of the farmer
7. Method of payment (cheque, money order or cash)
8. Number of bags.

No inspection is made after these vegetables arrive at the Pettah market. After checking the number of bags mentioned in the letter sent by the farmer and taking delivery of them, the farmer is informed of the wholesale prices and the prices at which vegetables were sold, once the sale is over. As the lists of prices reach the farmer within a very short time, Bills relating to stocks handed over reach the farmer within two days. The farmers stated that as a result they were able to know the income they should receive and to plan their future activities including those pertaining to production and consumption. When vegetables are sold to the co-operatives one has sometimes to wait longer than a week to receive the bills relating to the sale of those vegetables. In addition to the delay since the income one receives also remains indecisive, there is indifference in the farmer's expectations of the co-operatives.

FAIR AT WELIMADA

The Welimada fair is the one centre where the farmer's vegetables are sold for ready cash and are available in large quantities. It is held on two days in the week.

Many farmers now make an attempt to bring vegetables to the Welimada fair. The chief reason for this is that they can sell their vegetables at one spot and collect the money. The collection of vegetables like cabbage, beans and radish for the fair is carried out for one full day.

On the night before the 'fair-day' traders of various ranks, mainly from distant areas, gather in Welimada town. The traders, particularly brokers and intermediaries, with knowledge of the various tricks of the trade, employ all possible means to obtain the vegetables as cheaply as they can. Even when vegetables for sale are limited and traders are many one would expect the competitive situation to reflect on price. But this rarely happens. There is collusion among traders and producers have bigger deductions on containers, for loss of weight, spoilage etc. and producers, have little alternative but to accept what they are offered. It is estimated that upto 20 percent of the total weights sold here is deducted for the containers, moisture, drying and spoiled vegetables. Producers also complain that the traders at Welimada fair underweigh their produce; and even worse was the complaint that the weights adopted here by the Marketing Department were not satisfactory.

The primary objective in establishing institutions such as the Marketing Department, Markfed and Producer's Unions, was to counter the disadvantages to the producer from the private trade and to introduce an element of competition with the hope of giving producers and consumers a fair deal. However, the shortcomings of the Marketing Department were such that generally the Welimada vegetable cultivators avoided this outlet. Only a few commission agents benefitted from this outlet. For instance, at the Welimada fair a vegetable purchasing unit of the Marketing Department has been established and it prominently displays a price list. On the road close by about 25 lorries, vans and tractors belonging to private traders and a lorry of the Marketing Department also could be seen. One official is engaged in the work of purchasing vegetables. Dissatisfaction prevails among many farmers over this procedure. The Marketing Department by putting up a price list in the market place early in the morning gives information to the private trader regarding prices. It is on the basis of current prices in Colombo that the Marketing Department prepares its prices. But the traders who come to the fair at Welimada are from places like Moneragala, Chilaw and Puttalam. In these areas the price levels of vegetables are high. If the Marketing Department fixes the price of cabbage at 15 cts. a pound the trader does not make an offer of over 16 cts. Meanwhile, though prices are displayed by the Marketing Department it is often unable to purchase even 5 percent of the stock of cabbage available. Though a high price is marked on the price list, it was the view of the farmers that they could not easily sell their produce to the Marketing Department. It is only varieties of vegetables that the Department wants that they purchase and that too up to the limit they require. While no real service is done to the farmer by the Marketing Department, what is done is to stabilise prices of the private trader at a lower limit.

According to the views expressed by officers of the Marketing Department and some officers of the Co-operetive Department, they have to act according to instructions they receive from Colombo . If, out of consideration for the welfare of the farmer, they act against instructions, such action will be a violation of rules and regulations. Further, however high a price rules in the market, officers cannot fix prices accordingly. Vegetables have to be bought in accordance with instructions from Colombo, at the prices stated therein

The Goonewardena and Chandrasiri study also lists in detail some other noteworthy shortcomings of the Marketing Department purchas-stated therein.

1. The MD does not purchase all vegetables brought by the producers to the collecting centres, over and above a certain limit. The officials have to adhere to the orders placed by the head office in Colombo.
2. The MD buys vegetables through a few brokers in the villages, rather than from the producers themselves. The MD has been able to realise economies of scale by purchasing through the brokers, but at the expense of the small scale producer.
3. The MD lorries in certain localities, do not go to the farms or along pre-arranged routes, so that the producers are compelled to transport the produce to a far off collecting centre.
4. The producers as well as the MD are played out by some officials at regional collecting points. They write false bills, especially in transactions with relatively less educated producers who do not ask for receipts.

5. The MD often pays a lower price to the producers than that paid by the private traders.

6. The collecting centres of the MD do not pay the proceeds of sales to the producers promptly.

7. The centres often do not promptly return the containers belonging to the producers.

8. The MD does not have a loan scheme for vegetable cultivators which means it has less control over vegetable marketing.

The popularity the MD has enjoyed about 10 years back in the areas where field surveys were conducted, has waned because of these shortcomings. (Page 121).

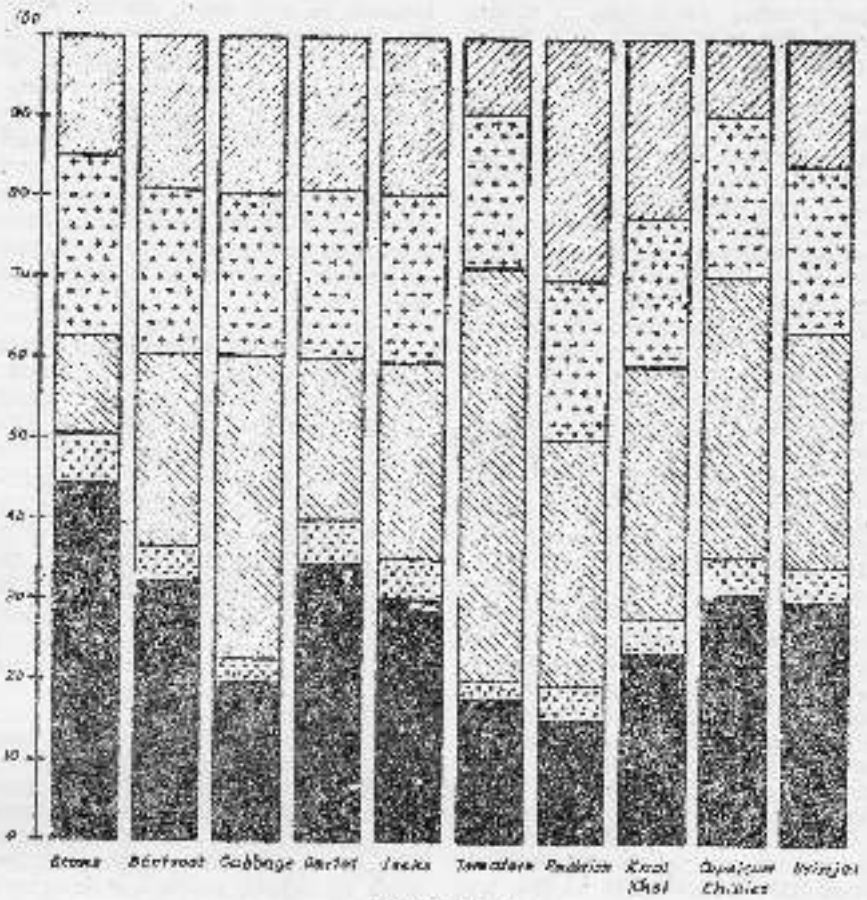
"Producers in the villages complained that the MD purchased Grade I produce from them. But at the wholesale floor at Pettah, the vegetables are of the lowest quality. This substantiates the sudden transactions between the private intermediaries and the MD's officials at the producer level. It was also observed that the MD's wholesale vegetables. Some stocks were in the floor received a day or two days old not of marketable quality. It was observed that the MD sells vegetables to private wholesalers at the Pettah Market and the latter re-sell it at a profit". (Page 126).

"Private traders usually pay a flat rate for produce and are not concerned about grading. Therefore the producers invariably avoid any grading and are not satisfied with the grading done by the MD. Some commission agents wholesalers at the Pettah market sort out vegetables into several grades before selling to retailers" (Page 22).

LAND SITUATION

Land is another important factor determining the economic well being and conditions of the Wolimada farmer. Most successful vegetable growers could be found in the places like Pelugama, Uduhawara and Pevalanda due to good quality land and easy accessibility to transport. More than 75 per cent of the land area in such places seems to be controlled by a few businessmen and the bigger farmers. On the other hand due to very keen competition for land among the poor and small farmers within these areas, land has often been fragmented, leased or rented out. But at the periphery, in areas like Panalawela and Bambarapana, the majority of the farmers own very small plots of lands often only their home gardens. That the land

SHARES OF CONSUMER PRICE TO PRODUCERS AND OTHERS



SOURCE: *"Factors Influencing Vegetable Prices: A Study of the Vegetable Economy in Sri Lanka" AHTI Feb. 1989.*

The share of the consumers price which the producer gets is less than 40 per cent in the case of all vegetables, and in some cases less than even 20 per cent. A major part of the costs of vegetables to the consumer are taken up by the various links in the marketing chain. The share accruing to the Commission Agent appears to be the lowest and is lower than the brokers'/sub-wholesalers' margin.

The retailers' operating costs or the margin are by no means small. It varies from 18.8 percent for beans to 68.8 percent for tomatoes. The traders' total percentage share is higher for more perishable vegetables such as cabbage, tomatoes, raddish and knolkhol and capsicum chillies. It is interesting to note that the gross marketing margins of vegetables with relatively higher loss ratio are comparatively higher than those vegetables with relatively lower loss ratio. For example, the percentage gross marketing margins for raddish, knolkhol, tomatoes, and cabbage are relatively larger than those of other selected vegetables.

use system in the Welimada vegetable growing areas has a strong relationship with wealth and power is clear.

Many vegetable growers in the Welimada area had rented or leased land for vegetable cultivation under various terms. Under this system nearly half of the crops had to go to the landlord while others pay a considerable amount for lease of the land. The majority of those who rent or lease land cannot compete with owner cultivators as far as cost is concerned. They have encroached on crown land and thus faced difficulties in getting cultivation loans or other inputs from co-opetives. High land values and the tennure system therefore create an additional cost for vegetable cultivators.

OTHER INPUTS

In addition, these farmers faced the problem of increasing costs of other inputs. For instance, more recent technology has made available improved varieties of seed, fertilizers, agro-chemicals and various scientific cultural practices but to these smaller farmers much of this seems beyond reach. Often such inputs are made available to him through the traders and agents and this only binds him more firmly to the trader.

PRICES

In this situation a continuous upward trend in prices is not surprising. A more disturbing feature, however, is that the overall supply of vegetables in recent years has not kept pace with the fast increasing demand. High prices and better returns have been accruing to farmers from crops such as potatoes, chillies, cowpea, green-gram and onions. It appears that lands under vegetable cultivation have therefore been turned over to these food crops which yield higher profits. The paradox is that despite this tighter supply situation the vegetable cultivators share of the consumer prices has always remained between 20 and 40 per cent, and in exceptional cases almost 50 percent but not over.

The Gunawardena — Chandrasiri study on "Factors Influencing Vegetable Prices" has even found that "net average profits to producers are negative in the case of most vegetables, (e.g. carrot at Vidurupola and cabbage at Boragas even discounting the imputed cost of family labour. Some vegetables are pro itable (in terms of net profits) when the imputed cost of family labour is not accounted. In such cases, the net profit from the vegetable cultivation can be regarded as the net return acruing to family labour. However, the decreasing profitability is a disincentive to the majority of small cultivators to expand the production of vegetables. The net profits decrease due to increases in the prices of factors of production and the marketing costs incurred by the producers, given relatively low producer prices".

This study also maintains that marketing costs comprise a considerable part of the end price paid by the consumer. For instance; the gross marketing margin constitutes more than 50 percent of the consumer prices. But this is not solely due to retailers making high profits. There are also the defiiciencies in the marketing system itself. The risk involved in the vegetable retail trade, especially with regard to those vegetables with comparatively short market lives, which compels the retailers to mark up a high margin in order to recover any loss due to further wastage in terms of spoilage, damage, shrinkage and left-overs. Efficient storage systems can solve many of these problems. The overhead costs of the retailer such as wages, market levies, stall rents, taxes etc; are also considerable. In addition, the retail price is fixed on the basis of consumers preference and their purchasing power. Producers, however, have no say in price, it is the wholesaler who decides. This study concludes.

"In areas where the producers have direct links with the major wholesale markets, they are paid according to the wholesale price despite the fact that most wholesalers underpay the producers or pay the prices of the lowest grades Truck-buyers rely on the wholesale prices prevailing in the areas where they come from. The village level assembly agents who operate for wholesalers at distant markets also base their prices on wholesale price. Thus, the base for producer prices is the wholesale price which again varies in terms of the following considerations.

(a) Volume of vegetables offered for sale by the producers at a particular point of time.

(b) Number of producers and traders at a particular market place.

(c) Quality of vegetables.

Apart from these, the producer level price determination is affected by the following factors too, all of which weaken the bargaining position of the producers.

(a) Gluts of supply at peak harvesting periods.

(b) Producers urgent financial needs.

(c) Socio-economic relationship between the producers and the traders.

(d) Lack of price information.

(e) High margins kept by the primary level brokers and assembly agents to hedge against risks expected at subsequent levels.

The wholesalers who have a long "experience" in this respect determine their selling prices and the prices payable to producers on the basis of previous prices and likely reactions they may caught on future prices."

This study also maintains that marketing costs comprise a considerable part of the end price paid by the consumer. For instance; the gross marketing margin constitutes more than 50 percent of the consumer prices. But this is not solely due to retailers making high profits. There are also the deficiencies in the marketing system itself. The risk involved in the vegetable retail trade, especially with regard to those vegetables with comparatively short market lives, which compels the retailers to mark up a high margin in order to recover any loss due to further wastage in terms of spoilage, damage, shrinkage and left-overs. (Efficient storage systems can solve many of these problems).

The Welimada farmer is therefore caught up in the grip of various forces, social and economic, over which he has no influence. The arbitrary fixing of prices for his produce is clearly the result of the market imperfections at various levels of the private marketing channel. For maximisation of their profits and ultimate survival the middlemen-traders who are spread out on the different links in the marketing chain work in close collusion. This sysem canot be eradicated altogether, but an effective 'organised' system of marketing (as stated at the outset), begining from the provision of basic infrastructure facilities, secure tenurial conditions, essential inputs and accurate and prompt market information can help to counter some of the more pernicious features of the exising private marketing system.

The Electrification of Railways — financial, economic, operating, social, environmental and functional considerations

J. Diandas

Following its decision to electrify the Colombo Suburban Railway Services the Government recently awarded a leading Japanese firm the tender, estimated at nearly Rs. 4 million, for preparing of designs and specifications for this project. Originally 131 miles of track were to be electrified under this project but now, with the increased economic activity, the proposed total track mileage has been increased to approximately 185 miles. Here J. Diandas, a student of transport and chartered accountant by profession, analyses certain financial, technical and social aspects of this project and comments on its significance for the country's transport system and the overall economy.

If we are to discuss electrification of railways, the very first thing we have to do is to clear up the energy related questions. Thereafter we can get down to the other fundamentalities, namely:

(1) first cost of electric infrastructure
(2) first cost of electric rolling stock
(3) whole life cost of electric rolling stock (which is a function of first cost, life-span and maintenance)
(4) operational advantages
(5) attractiveness to passengers
(6) environmental advantages

On energy, the first maxim is that an electric train is absolutely indifferent as to the primary source of energy from which the electricity was generated. If hydro electric power is available, well and good, because this is beneficial to the overall energy problem. But even if hydro electric energy is not available, an electric railway is equally happy with oil, or coal, or wood, or nuclear, whatever is available, and whatever the electric power station is capable of consuming.

The second energy maxim is that if oil is the primary source of energy, whether you convert it to electricity at a large central power station, or convert it to electricity on board a diesel-electric locomotive, the oil consumed is much the same, and even if you use a diesel-hydraulic, or diesel-mechanical locomotive, the oil for a given job of movement or transport is again much the same.

It is true that a large stationary central electric generating station like Kelanitissa is more efficient in its combustion and turbine process than is the electric generating diesel engine on board a diesel train. For example, Kelanitissa in its best days would get something like 14 kwh out of a gallon of furnace oil, which is about 27 percent of the energy or heating capability inherent in the oil, whereas a diesel electric locomotive would get only 12½ kwh for a gallon which is only 24 percent as input to the electric motors which drive the train. However, between 5 percent and 10 percent of the Kelanitissa generated electricity (say 1 kwh) will be lost in transmission from the power station to the railway's overhead contact wire, and another ½ kwh will be lost through the electric locomotive's pick up apparatus (pantograph) and step-down transformer, so that the same 12½ kwh will be placed at the disposal of the trains electric traction motors.

These are of course relative, rather than finely accurate figures, intended only to illustrate the energy issues. It is said that advances in silicon wafe, (the so-called solid-state technology) will reduce these energy losses, more so for the straight electric than for the diesel electric train. Solid-state devices such as thyristors are being increasingly used and developed for wheel-slip control on both diesel-electric and straight electric trains, and for regenerative braking. The latter has very limited scope on diesel-electric in combination with flywheels and batteries, but has significant scope in electric railways. For regenerative braking converts the train's traction motors into generators so that the energy of the train's momentum is generated into electricity and fed back into the overhead wires. Wimalasundera proposed regenerative braking for an electrified Badulla-Matale railway as long ago as 1918, but in fact this energy-recuperative technology was clumsy and not much used until transistors, diodes and thyristors came along. For suburban and mountainous rail-loading they promise recovery of upto 20 percent of the energy used to propel the train.

To put the energy part of electrification in perspective, figures drawn or derived from the Sofrerail 1974 report are set in Table 1 below.

Thus railway electrification is not as much an energy-saver (although it can do a little of that) as an energy-versifier, taking a railway out of total dependence on oil as source of propulsive power and making it dependent only on the country's multi-sourced electric generating system capability.

Next to energy, the second issue that has to be cleared up is that the cost of electrification as such consists only of the infrastructure, which is to say the catenary or overhead wiring structures, (or the third rail if that system is to be

Table 1 Projected suburban train service energy 1981

	Diesel	Electric
Million train-set miles*	0.29	0.08
Energy per train mile*	1.7 (litre)	4½ (kwh)
Million energy units	0 (litre)	23 (kwh)
Conversion rate to gallon	4½	12½
Million gallon	2	1.8

* Source: "Sofrerail" "Feasibility of the Electrification of Colombo Suburban Railway Services", Aug. 1974.
(This is regarded as the only relatively recent comparative study of diesel and electric traction on the Colombo suburban railways. It was carried out in 1973-74 and the report issued in August 1974).

(NOTE: Lower electric train miles reflect extra accommodation in each train in lieu of diesel engine compartment).

used), and the substations where electric energy is picked up from the transmission grid system, converted to the form required by the railway and fed on to the catenary.

For example, the Sofrerail study put the cost for Kalutara-Negombo-Veyangoda electrification at Rs. 39 million for infrastructure, plus a further Rs. 36 million for modifications (signal, telecommunications and bridges) making Rs. 75 million as infrastructural cost. The study also estimated Rs. 257 million as the cost of initial electric rolling stock, and it became popularly believed that the cost of electrification would therefore amount to Rs. 332 million or so. Some later spokesmen, using an inflation factor of 5 have put today's cost at Rs. 1.7 billion. However, the Sofrerail study clearly indicates that without electrification Rs. 261 million would have to be spent in the same time frame for new diesel rolling stock.

Some of the Sofrerail figures were reviewed, and the Institution of Engineers did their own calculations in 1975. Table 2 shows a range of figures placed before a seminar in March 1978.

Table 2 Comparative cost estimates in rupees million

	GMR Jan. 1974	Sofrerail Aug. 1974	Review Dec. 1974	IESL 1975
Structure				
Electric infrastructure	32	39	39	44
Signal modification	30	26	30	32
Other modifications	7	10	7	10
Total structure	69	75	69	86
Additives				
Up grade track	70			
Workshops	22			22
Rolling stock alternatives				
Electric trains	327	257		350
Non-electric substitutes		261		294

Source: IEE & IESL: "Railway Electrification Now or Never" Proceedings of Seminar March 1978.

Since these figures were calculated a lot of changes have taken place. First and foremost inflation has multiplied everything somewhere between five and ten times. At the same time catenary has got cheaper and is still getting cheaper in real terms, which means that its multiplier will be less than the general inflation rate. Moreover, solid state technology advances are tending to widen the extent to which electric locomotives or trains are cheaper than diesel equipment for the same duties. This applies to most countries, but not to USA. There diesel electric locomotives are mass produced, standardised and cheap, but electric rolling stock manufacture is so sparse that it costs more than diesel; in consequence of which USA tends to import its electric trains, trams and trolley buses from Europe or Japan. Other local changes are that track upgrading or rehabilitation is already underway and that signal system replacement, (pre-screened against electrical interference), is already needed and committed irrespective of electrification, so that these two items come out of the reckoning.

Table 3 above is an attempt to reconstruct the IESL cost pattern on assumption that the same extent of electrification could be inaugurated in say 1984.

Table 3 Possible cost for 1984 (Rs.M)

	IESL 1975	Multiplier	Possible 1984
Structure			
Electric infrastructure	44	4	176
Signal modification	32	—	
Civil modifications	10	6	60
Total structure	86		236
Additives			
Workshop	22	6	132
Rolling stock alternatives			
Electric trains	350	5	1,750
Non-electric substitutes	294	7	2,058

If these figures are fair, the question is whether it was worth spending about Rs. 100 million to electrify in 1975, and whether it is now worth contemplating an investment of near Rs. 250 million to accomplish electrification of a minimum viable block of trackage. If, as is recently reported, the concept has been expanded to reach Polgahawela or Kurunegala and to cover some proposed new suburban lines including Kotte, the sum will get bigger in proportion. However, this paper will consider Rs. 250 million as the contemplated sum.

To what extent will any or all of the following benefits of electrification, which will run far into the future (much longer than the 30 year limit of bankers' contemplatory projecting capabilities) justify such an investment.

Energy
: Versatility
: Oil saving (at least 2m.gal/year)

Whole Life Cost of Trains
: Lower first cost
: Longer life (in years and in miles)
: Lower cost of maintaining

Operating Advantages
: Greater availability (ie. more annual miles)
: Better acceleration

Other Advantages
: Attractive to passengers
: Friendly to environment

The principal cost advantages of electric traction arise directly from the fact that an electric locomotive or an electric power car has less moving parts than a corresponding diesel unit. This is because the electric unit does not carry its own engine or energy converter around with it, which engine is full not only of moving parts, as such, but also of many reciprocating parts which cause

Table 4 Electric train life spans

Country	Locomotive type	Dates	Life
Scotland	Underground EMU	1896—1979	83
USA (PRR)	GGI (Passenger)	1935—1974	45
USA (MILW)	Little Joe (freight)	1945—1975	30
Sweden	Dk	1930—1979	50
Switzerland	Ac 4/4 (BLS)	1925—1979	55
USA (ICG)	Chicago EMU.	1930—1975	45

(EMU = Electric Multiple Unit)

much shudder and vibration. Typical longevities of electric train equipment is set out in table 4.

On the other hand, diesel electric locomotives were usually rated for 15-year lives extending to 30 with careful maintenance and at least one complete rebuild or rehabilitation.

For maintenance, a fairly recent British Railway Board (BRB) Discussion Paper (May 1978) places maintenance per train mile at 21p for electric and 38p for diesel. A more recent joint interim report "Review of Main Line Electrification" issued by BRB and the Department of Transport states on page 21:

> "....electric locomotives are cheaper per unit, have longer operating lives, and fewer are needed to provide a given service. Electric locomotives are available for a higher proportion of the time as a result of the lower frequency and duration of maintenance work compared with diesel; this is also the reason for their much lower maintenance costs"

Using the Sofrerail study as guide for local conditions, we can make a rough conservative calculation of life-cycle cost per annum in table 5, excluding personnel cost.

Table 5 Comparison of life-cycle cost per annum (Rs.M) based on Sofrerail data and Sofrerail assumption as to train mileage per annum

Items	Sofrerail 1981		Multiplier	Possible 1984	
	Diesel	Electric		Diesel	Electric
Diesel @ 6/-	12		4	48	
Electricity @ -/12		2	5		10
Catenary (40 years)		1	4		4
Maintenance	14	8	6	84	48
Operating	26	12		132	67
Depreciation (20 yrs)	13		8	104	
Depreciation (30 yrs)		8	7		58
	39	20		236	125

In total terms, these figures show a saving in cost of Rs. 110 million per year (as against Sofrerail's Rs 19 million) which will surely justify investing Rs. 260 million. If electric life spans is increased to 40 years for electric, the saving becomes yearly Rs. 114 million. Even in cash terms (i.e. leaving out depreciation) there is a saving of Rs. 65 million or Sofrerail Rs. 14 m) or 25 percent of the investment. Going still further into conservatism by putting electricity at Rs. 2 - per kwh (based on gas turbine fuel cost), thereby levelling energy cost at Rs. 48 million for both diesel and electric, the annual cash cost saving of electrification would still be Rs. 32 million, or 14 percent of the investment.

These must be regarded only as "order of magnitude" figures, but they do indicate the directions of saving as well as some of the reasons why all the world, except USA, Canada and Sri Lanka is rushing ahead with railway electrification.

The operational advantages of electrification are such that all railway transportation men have always wanted to electrify, but have been held back by their governments their shareholders and their bankers who tend to want quick pay back advantages. For railway operators the diesel locomotive did away with the need for fire preparation and fire box cleaning and was available for work, except for shop repairs and refuelling. An electric locomotive or train does not even need refuelling and, as the British report said, needs less down time in the work shops, so it is available almost continuously for duty.

Not only this, it is inherently cleaner, and so needs less washing time.

The characteristic of drawing energy from an almost limitless supply on the overhead catenary wire gives the electric train the further advantage of very smart acceleration away from stations or from signal stops. This is of fundamental importance for smart working of schedules and for increasing the utilisation of both train and track.

The principal constraint on passing more trains along a given track is station time. This constraint can be eased by reducing the dwell-time at the platform, and by smarter acceleration. For example, a plan has been drawn up for a third track between Fort and Ragama, for the dual purpose of increasing train throughput (presently 12 trains per hour at the busiest time) and speeding up express trains. The first of these functions could be fully achieved, and the second partly achieved by electrification. For example, Sofrerail show the timing from Fort to Ragama for a stopping train at 29½ minutes for electric against 24½ minutes for diesel, a saving of nearly 4 minutes. They also show 3 minute headways per electric train, which is equal to 20 trains per hour against the present 12. Thus the cost of the third track to Ragama can probably be saved by electrification, or at least postponed, and this is no mean cost. (The estimated cost of the third track is in the region of Rs. 103 million).

From the operators' viewpoint, the greater reliability of electric trains (there are less moving parts to go wrong) removes another headache, that of the train which fails on the track.

Moving now from the financing, engineering and operating spheres of interest to that of the passengers, for whom at least the passenger trains are run, the electric train adds quality to the ride in a manner that is difficult to describe. No smoke, no diesel exhaust, much less noise, no vibration, less dirt and a smoother and faster ride. All this adds up to something called the "sparks effect" which until the almost universal ownership of motorcars and the ubiquity of motorways on which to drive them became commonplace in Europe, accounted for massive increases in train travel where railway lines were electrified.

It is more than probable that electrification in Sri Lanka will also draw patronage from those using bus or car on many journeys for which the electric train offers a suitable alternative.

It is beyond doubt, however, that present riders will obtain a far superior ride to what they enjoy today and especially if the quantum of train capacity operated keeps pace with rising demand for travel by train.

Finally, we come to the externalities. If you stand on Mihintale's highest point at dead of night, the diesel train can be heard throbbing for twenty miles or more away. This is an intrusion. Likewise if you live or work adjacent to the railway, the noise of passing trains is a disturbance. Electric trains will not remove all

noise, but they will certainly reduce it, will eliminate the low pitch throb, and will not push visible odiferous exhaust fumes into the air. Railways are generally regarded as the mode of transport least harmful to the environment, and electric railways in this respect are the least of the least.

There is one topical energy question omitted from the above discussion, namely, what happens if there is a power cut? What happens when demand for electricity exceeds the country's capacity to generate it? The proposed electric railway section will not likely demand more than 50 MW of power at any one moment, and it will receive this directly off the high voltage grid. Hence it is not difficult to cut low voltage distribution to consumers while keeping railway cantenary alive.

To recapitulate, electrified railways are good for energy, good for costs, good for maintenance, good for operation, good for passengers and good for the environment. For what then are they bad? The only answer to this question seems to be that they are bad for those who think of investments for their financial dividends alone rather than for their functional uses; and want quicker pay-back projects than railway electrification. For this reason they impose "discount rates" of upto 12 percent which make any benefit after 30 years look like nothing at all, and which make even the benefits of the next decade look negligible, although the same people sometimes widen highways, build pedestrian bridges, inaugurate universities, commission new police stations without any financial feasibility study and without any discount rates at all.

In the non-English speaking world, electric railways have always been considered investments for the future and most countries have rolling programmes to electrify an many kilometers of line per annum. In the English speaking world the progress has been less sure, more jerky. It might go forward all the same, perhaps if realisation of human concern for future generations gave rise to the imposition of a negative discount rate in assessing investments for the electrification of railways.

World Inflation: Who's in the Dock?

Adnan Al-Janabi

The oil-exporting countries have raised their prices substantially since 1973. Everybody needs oil, therefore there has been a strong inducement to regard rising oil prices as 'behind' the rising price of everything else. Oil producers, however, do not see it that way. In this article, Adnan Al-Janabi, head of OPEC's Economic and Finance Department, explains just how much oil prices have contributed to world inflation.

The phenomenon of inflation, being generally considered a "bad thing", is an orphan. Since increasing prices are a sign of mismanagement, nobody is admitting responsibility for these phenomena. The easiest body to blame for this since 1974 seems to be OPEC and the biggest cause for inflation had often been claimed to be "increasing oil prices".

To start with one has to point out that an increase in the price of a product does not necessarily have to take place as a result of increases in the costs of its constituent inputs or factors. This is especially true in market economies with a high degree of competition and well managed money supply. An increase in the cost of one factor may result only in the reallocation of the relative prices of other factors without a salient change in the price of the output. In reality, however, most market economies have developed a high degree of structural rigidity to the extent that increases in the cost of any input is passed over to the next cycle of reproduction. Furthermore, inflation is increasingly becoming a tool in the struggle of redistribution of income between the various segments of society. Within this struggle for income redistribution no segment of society accepts a reduction in its relative share of total production. It is within this context that one has to view the apparently contradictory phenomena of high unemployment coupled with increasing wages.

Inflation (and exchange rate fluctuations) is not only a tool of income distribution domestically, but also on an international level. Income redistribution internationally and changes in terms of trade are increasingly being fought on the front of relative inflation movements. With each upward swing in the prices of exports of finished goods from the industrialized countries there also occurs a reverse transfer of wealth from the developing countries ...to the industrialized ones,' increasing the widening gap between rich and poor. In this connection, OPEC as a group of developing countries is probably the worst hit within the developing world. The import price index of OPEC member countries has more than quadrupled since 1973. It is by no means an exception in OPEC countries to have costs of projects or machinery imports doubling within one year.

Within this general overview of the phenomenon of inflation it is important to have some realistic and cool thinking about the contribution of oil prices to global inflation. In 1977 and 1978, when oil prices were more or less constant in nominal terms, double-digit inflation still existed in Italy and UK and high rates of inflation were common all over the main oil-importing countries. There is no meaningful evidence to suggest that, if oil prices were held constant, inflation would be nil. The upswing in inflation in the United States was well under way in 1978 without any oil price movements. This is not to say that oil price adjustments do not at all contribute to inflation, but it is widely accepted now by knowledgeable people that inflation as a general phenomenon has very little to do with oil price movements. But given the structural rigidity in the economies of the main oil-importing countries, increases in oil prices do tend to be passed on to the prices of finished goods.

The question then arises: by what magnitude do oil price adjustments affect the price of finished commodities? In some activities oil prices hardly matter at all. The energy content of agricultural products is minimal when compared

to the energy that is consumed in producing aluminium. The oil price adjustments of 1979 from $17.70/bbl in 1978 to the average of $18/bbl meant an incremental increase in the cost of oil imports of the United States equal to about 0.7 per cent of its GNP. In the case of Italy (with the highest percentage to GNP in the industrialized OECD countries) the increment represented 1.6 per cent of GNP. The maximum inflation impact of changing prices of oil cannot be much more than these percentages.

Some assessments of the impact of oil price changes with regard to inflation make the erroneous generealization of assuming that oil price adjustments by OPEC automatically would cause an increase in all energy inputs. There is no obvious reason why the cost of electricity from a nuclear plant should increase when prices of oil increase. It is only the prices of imported oil that have to increase and it is this component which should be examined in assessing the contribution of oil prices to inflation. During 1979 the average price of a composite barrel of oil in Europe to the final consumer was about $54/bbl. Out of this about $ 22/bbl was taken as taxes by the governments of the consuming countries themselves. These taxes could have been theoretically reduced to offset the final cost of petroleum products to the consumer. What actually took place is that, on the whole, taxes were increased by about $ 4/bbl during 1979. This segment contributed nearly as much to domestic inflation as OPEC price adjustments.

The increase in the taxes on petroleum products as well as the general rise in the cost level of domestic energy inputs may be considered commendable as part of the generally welcomed policy of creating a favourable environment for energy conservation. This does not mean, however, that one should jump to the conclusion that OPEC's oil-pricing actions are responsible for the total impact of energy costs on inflation. It is not reasonable for economists in OECD countries to accuse OPEC of causing inflation and applaud their governments for hiking energy costs.

In a detailed analysis of a number of OECD countries using input/output analysis, it was found that the contribution of imported oil to inflation in 1979 varied between 0.5 per cent for France and 0.7 per cent for Italy. During the same year the internal inflation of France increased by 10.2 per cent over 1978 and that of Italy by 15 percent.

The oil price adjustment of the early part of this year over 1979 from about $ 18/bbl to about $ 28/bbl resulted in a forecast contribution within the range of 1 per cent in Italy's inflation which is expected to be 16.7 per cent this year, over that of last year. In the case of France, the contribution of the oil price increase this year is forecast to be 0.7 per cent from oil imports within the general inflation rate of over 11 per cent. The highest percentage contribution of crude oil, products and gas imports to the internal inflation rate was found to be in the case of the Netherlands (2.2 per cent for 1980). Since a lot of exports of petroleum products and gas take place from there to the neighbouring countries of Northern Europe and elsewhere, an estimate was made to find the contribution of imported crude oil to the domestic consumer prices (1.2 per cent). In the case of the Federal Republic of Germany the reverse is noticed, the effect of imported crude oil, products and gas on internal inflation rate being less than 1 per cent, while the effect on the consumer prices is over 1.1 per cent. The reason for this in the German case is that this country imports a lot of products. Therefore, the latter number is more representative for the contribution in Germany. Naturally, if the average oil price from OPEC countries turns out to be higher than $ 28/bbl, the contribution of oil prices to inflation in OECD countries will also be that much higher.

In the case of developing countries, the same general frame of analysis would lead us to expect also minimal contrbutions from oil imports to domestic inflation. In many cases, the increases of oil prices to developing countries are more than offset by OPEC aid to those countries. On the other hand, the double-digit inflation from the industrialized countries will drastically overburden the import bills of developing countries whose exports do not reflect similar price adjustments.

This kind of deterioration in terms of trade was witnessed in the case of oil exports by developing countries during 1974 to 1978. The real value of oil exports by OPEC countries was deteriorating continuously, while OPEC's imports from the industrialised countries were jumping by leaps and bounds. Even the recent price adjustments do not make up for the steep costs of OPEC's imports from the industrialised countries. Even if we measure the imported inflation to OPEC countries by the export price indices indicated by OECD countries, rather than by the OPEC import price index, recent price adjustments just about make up for the deterioration in the real price of oil during the period of 1974 to 1978.

OPEC as a group has succeeded to some extent in arresting the deterioration in its terms of trade Other less-organized raw-material-exporting countries have not been as successful. Thus, the main offender in the global game of income redistrbution through inflation has not been OPEC, but the industrialized countries of the OECD, which continuously complain about OPEC's contribution to inflation.

Direct loans from the OPEC Special Fund to least developed countries as of 15 January 1980 (amount in $US million)

Country	BOP (1)	DPL (2)	Total
Afghanistan	3.75	3.55	7.30
Bangladesh	13.90	29.00	42.90
Benin	2.00	6.10	8.10
Botswana	2.00	1.00	3.00
Burundi	6.20	2.00	8.20
Cape Verde	3.55	—	3.55
Central African Republic	1.75	—	1.75
Chad	2.40	2.45	4.85
Comoros	1.00	1.00	2.00
Ethiopia	4.80	—	4.80
Gambia, The	4.65	—	4.65
Guinea	8.85	—	8.85
Haiti	3.15	4.00	7.15
Laos (People's Demo. Rep. of)	7.15	—	7.15
Lesotho	1.90	3.00	4.90
Malawi	—	1.80	1.80
Maldives	1.30	1.00	2.30
Mali	7.05	7.00	14.05
Nepal	4.15	9.30	13.45
Niger	6.75	—	6.75
Rwanda	6.20	2.35	8.55
Somalia	7.05	8.16	15.21
Sudan	7.45	20.45	27.90
Tanzania	10.45	5.00	15.45
Uganda	4.55	—	4.55
Upper Volta	6.75	4.50	11.25
Western Samoa	3.35	—	3.35
Yemen Arab. Rep.	2.25	8.70	10.95
Yemen, People's Demo. Rep.	8.40	—	8.40
TOTAL	142.75	120.36	263.11

(1) Balance of payments support loans.
(2) Development project loans.

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