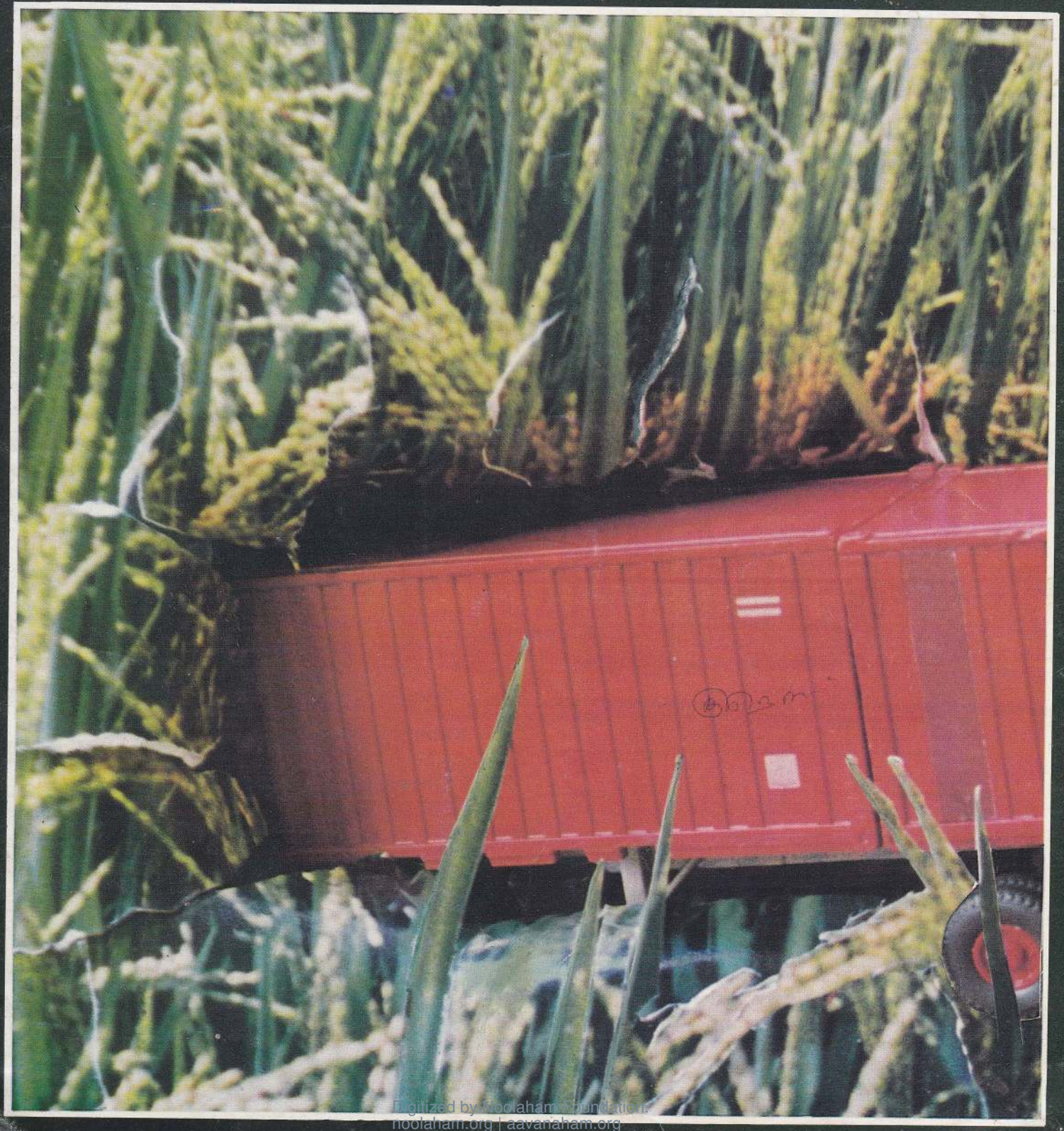
ECONOMIC REVIEW

1994 April

ECONOMY OF SRI LANKA
RECENT TRENDS



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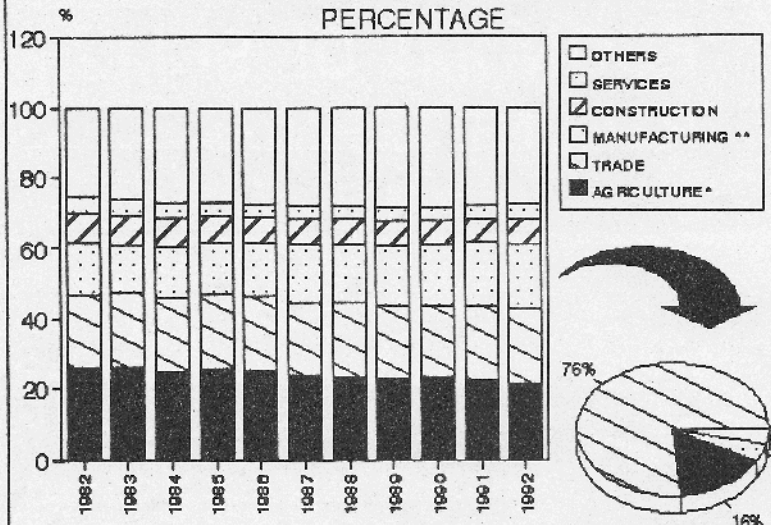
ECONOMIC INDICATORS

COMPOSITION OF GDP
PERCENTAGE



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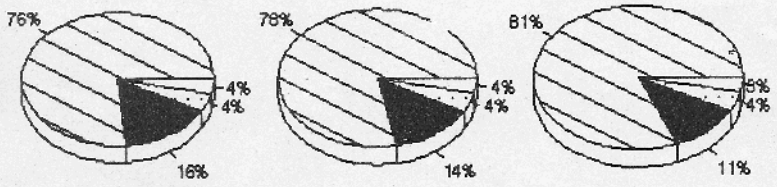

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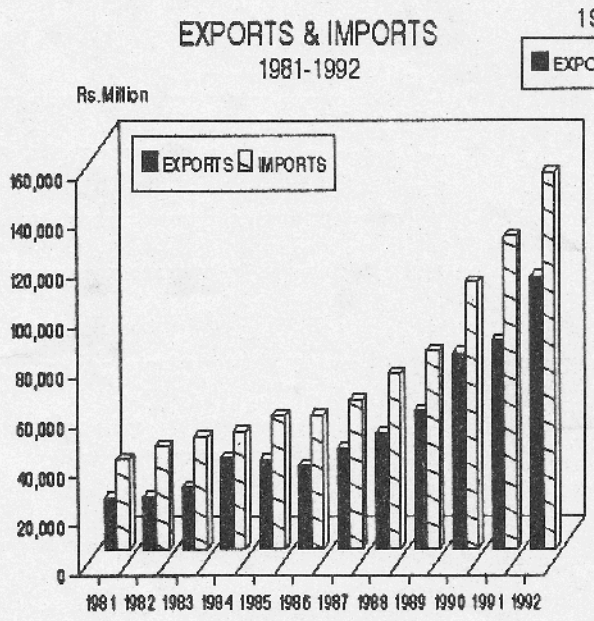

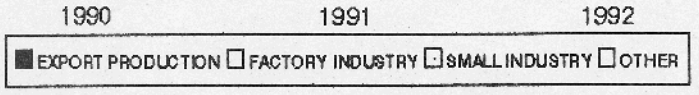

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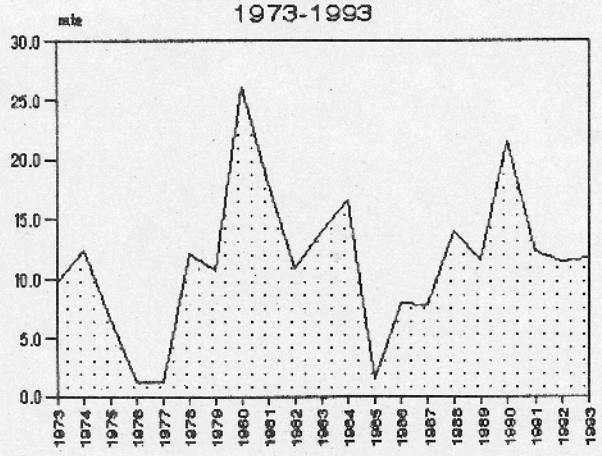

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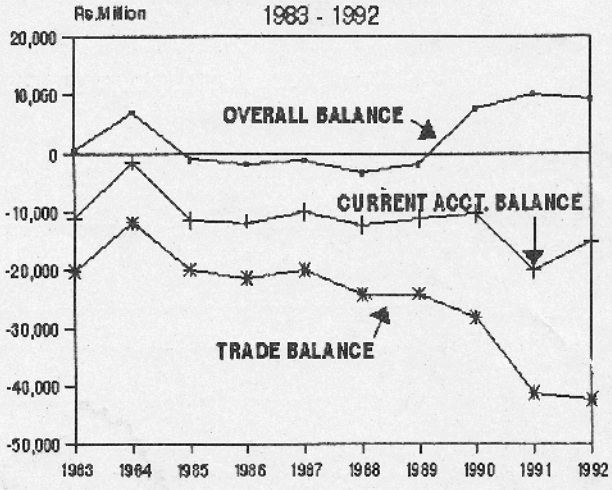

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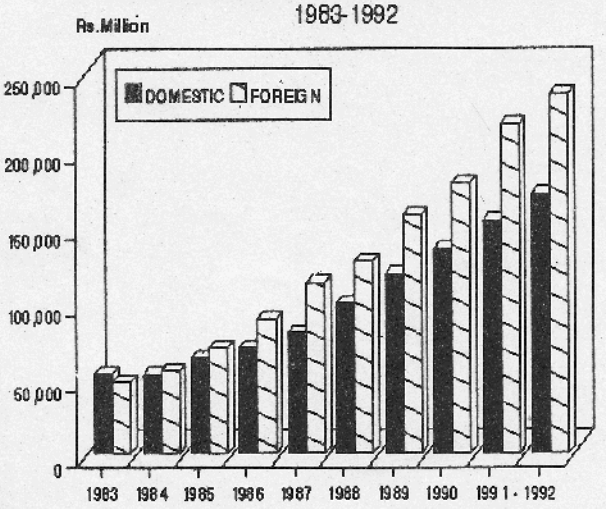

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THE ECONOMIC REVIEW is intended to promote an unbiased and informed view on economy and economic development process by a many sided presentation of views & reportage, facts and debate. THE ECONOMIC REVIEW is a community service project of the People's 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. Short contributions as well as comments and viewpoints are welcome. THE ECONOMIC REVIEW is published monthly and is available both on subscription and on direct sale.

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Education Today
- Impact of Private Tuition and the Educational Challenges

Cover - Bandu Gunaratne
Layout & page designing - Nirmal Gunawikrama

Development Policies - Salient Steps

* Starting in 1991, a number of restrictions on foreign exchange transactions by Sri Lanka residents were removed. Among the more important changes thus effected were the facility granted to exporters to contract foreign currency loans from local banks, and the increases in allowances for travel and education. The Government will continue to liberalize exchange transactions including those related to current transactions.

* The Government has also made significant changes in the sphere of estate workers' housing and social welfare. Ownership of estate housing and line gardens is to be transferred to workers. The Governments of the Netherlands and Norway have already pledged over Rs. 1,000 million over the next five years to continue technical and financial assistance to social welfare and estate housing development programmes.

* A Presidential Task Force on National Land Utilisation and Distribution was established in 1991 to resolve claims on land for smallholder agriculture. By March 1992, an extent of 283,181 allotments had been alienated. Lands owned by the Land Reform Commission are also being distributed to peasant and low income groups under the Land Grants (Special Provisions) Act. Considering that demand exceeds alienable land by a considerable order of magnitude, the allocation of state-owned land is now confined to Janasaviya recipients, landless families, unemployed youth, families receiving income of less than Rs. 12,000 per annum, and public sector employees.

* Among the policy changes made during 1991 and early 1992 were: (i) liberalization of the fertilizer trade, (ii) liberalization of the production, import, and distribution of seeds, and (iii) further removal of restrictions on the marketing system.

* The Sri Lanka Sugar Company, formerly the Sri Lanka Sugar Corporation, was first converted into a public company and thereafter converted into a holding company in January 1991. The three plantations as well as their factories were converted into three separate companies called the Sevanagala Sugar Industries Ltd., Kantale Sugar Industries Ltd., and the Hingurana Sugar Industries Ltd. Tenders have now been called for the sale of these three companies.

* Up to the end of 1991 the GOSL had approved 426 investment projects under Section 17 of the GCEC Act. In the first six months of 1992, a further 102 projects have been approved. The cumulative value of actual total investments up to end of 1991 was Rs. 56,034 million generating an export earning of Rs. 87,244 mn. The actual employment opportunities created up to the end of June 1992 was 314,980.

* Following the liberalisation in shipping, Ceylon Shipping Lines is being privatised. This process will be completed very shortly. The Ceylon Shipping Corporation has been turned into a company. Attempts are being made to form joint ventures between Colombo Dockyard and Dry Dock and foreign investors to make the enterprise more viable.

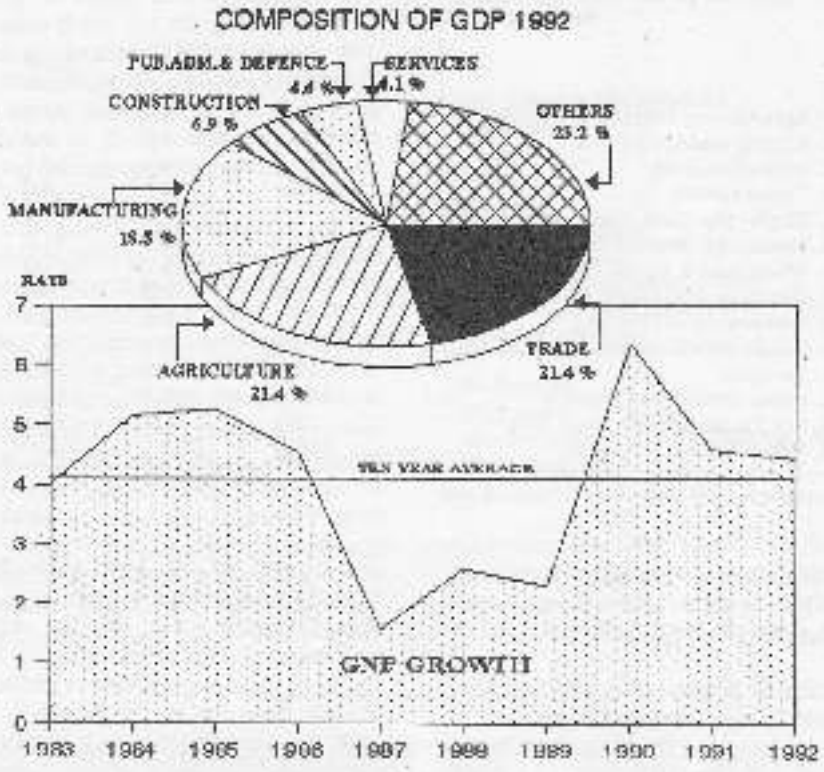
* In pursuance of the policy of economic liberalisation, the Government, in 1990, took a decision to liberalise freight. As a result, all airlines operating in Sri Lanka, enjoy liberalised carriage of air freight to and from Sri Lanka. Even air bus charter carriers have benefited by such liberalisation. Sri Lanka has adopted a stance very close to an 'Open Skies' policy since early last year. Very liberal bilateral Air Agreements have been concluded with Singapore, Germany, the Peoples Republic of China, India, Australia, and Vietnam. Liberal charter regulations which were introduced by the Department of Civil Aviation as early as 1st January 1989 continue to be in force stimulating tourist traffic which, from West Europe alone, accounts for about 60 percent of the Sri Lankan market.

* The Colombo General Hospital Development Project is being implemented with assistance from FINNIDA. Phase I of the project was completed in 1990 and Phase II and the Bridging Phase of the project are ongoing. The Finnish contribution to the cost of Phase II amounts to Rs. 567.20 (FM 56.72) million between 1990 - 1993 and the local contribution Rs. 45.00 (FM 4.50) million. The main areas of investment during Phase II will be the laying of a water supply line from Maligawatta and the supply of water throughout the hospital, sewerage repairs and upgrading of the waste disposal system, construction of a new stores building and a medical ward, and supply of equipment to the Medical Intensive Care Unit, Dialysis Unit, and Pathological Laboratory.

* The Asian Development Bank (ADB) and the United States Agency for International Development (USAID) have already agreed to assist the Government in the implementation of the new housing development strategy. ADB assistance is available to the two private sector housing financing institutions, the SMIB and the HDFC, upto US $ 20 million over a period of four years. Of this amount, US $ 11.75 million will be available as rediscount loans granted to the lower middle income group whose incomes are between the 26th and 55th percentiles.

* A National Environment Action Plan, based on the National Conservation Strategy finalised in 1988, has been prepared for implementation during the period 1992 - 96. The Plan includes both preventive and corrective measures for the protection of the environment in the development process and covers almost all sectors including land and water resources, industrial and urban pollution, forestry, education, and culture. The allocation of resources for the implementation of the Plan will depend on the identified priorities, after taking into consideration action that should be integrated with the ongoing development programmes in the various economic sectors.

* A national Plan of Action for Children has been developed for Sri Lanka in the context of the World Summit and the World Declaration on the Survival, Protection and Development of Children, of which Sri Lanka was a signatory. The Plan has identified weaknesses or gaps in the current programmes for children which have to be remedied through the strengthening of existing programmes or the initiation of new ones. In 1993, the more effective use of already budgeted resources will be attempted. Additional funds for these programmes will be provided from 1994 onwards.



Economy of Sri Lanka - Recent Trends

Background of the Economy

The current trend of Sri Lanka's economy should be viewed against the background of trade liberalization and economic restructuring policies implemented since the late 1970's. Broader objectives of the economic restructuring programme are -

(a) Achieve export-led industrial growth by opening up of the economy for both local and foreign investors.

(b) Create a business environment conducive to private sector development through tax, tariff, trade and fiscal reform together with other facilities and incentives.

(c) Removal of state control and the public sector involvement in economic activities by privatization of state owned enterprises.

These goals of open economic policies are also furthered by inflows of direct foreign investment, which assist in upgrading technical and management know-how and strengthening the role played by the private sector in stimulating the country's future growth.

After more than a decade of economic transformation through trade liberalization and structural reform measures, it is important to review the trend of the Sri Lankan economy at this critical stage of reordering the public/private sector balance.

The growth pattern

During the last ten years the annual growth rates of the Gross National Product Sri Lanka has recorded fluctuations ranging from 1.6% in 1987 to 8.6% in 1990. As shown in table 1 the average growth of GNP during the ten year period ending 1992 was 4.1 percent although a steady and faster growth was expected by the implementation of open economic policies.

In the five year period 1988-1992 economic growth averaged 4.1 percent per annum. Slowing down of expected growth of Sri Lanka's economy, in the recent past, was mainly caused by weak international commodity markets and the fall in domestic agricultural production brought about by drought. However, favourable weather prevailing in the current year 1993, is a sign of higher agricultural output.

Table 2 shows the contribution made by main economic sectors to the GNP. The agricultural sector continued to play a key role in the Sri Lankan economy, sharing the highest percentage of GNP growth. As this sector provides employment to the majority of Sri Lanka's labour force, a slow growth always had a significant impact on development and overall economic performance. The performance of the agricultural sector in 1991 and 1992, for example, was characterized by a significant reduction in output of all major agricultural crops. Hence the most pronounced impact was felt in the agricultural sector where the growth declined from 8.5% in 1990 to 1.9% in 1991 and -1.5% of negative growth in 1992.

Apart from unhospitable international and domestic conditions which affected the agricultural sector performance, the intention of Sri Lanka's economic policy after 1977 was to diversify the economy towards export led industrial development. To achieve this objective attempts have been made to increase investment opportunities in the manufacturing and export sectors. With several inducements and incentives made available the overall performance of the industrial sector has improved over the last five years. The contribution of the manufacturing sector to the GNP has increased from 17.7%

TABLE 1

Rates of Growth of GNP 1983-1992

1983	4.1	1988	2.5
1984	5.1	1989	2.3
1985	5.9	1990	6.6
1986	4.5	1991	4.6
1987	1.6	1992	4.4
5 Year Average	4.1		4.1
10 Year Average		4.1	

TABLE 2

Sectoral Contribution to the GNP

	1990	1991	1992
1. Agriculture, Forestry & Fishing	23.7	23.1	21.8
2. Mining and Quarrying	3.1	2.7	2.4
3. Manufacturing	17.7	18.1	18.9
4. Construction	6.9	6.8	8.0
5. Electricity, Gas, Water etc.	1.3	1.4	1.4
6. Transport, Storage & Communication	11.4	11.7	11.9
7. Wholesale & Retail Trade	21.0	21.6	21.9
8. Banking, Insurance & Real Estate	5.2	5.2	5.2
9. Ownership of Dwelling	2.9	2.8	2.7
10. Public Administration & Defence	5.0	4.8	4.7
11. Services	3.9	4.1	4.1
12. Gross Domestic Products	102.2	102.3	102.1
13. Net Factor Income from Abroad	-2.2	-2.2	-2.1
14. Gross National Product	100.0	100.0	100.0

Source: Annual Report of Central Bank

(1990) to 18.9% (1992), while the agricultural sector contribution to the GNP has declined from 23.7% in 1990 to 21.8% in 1992. The slow growth recorded in the industrial sector proved insufficient to offset the shortfall in the agricultural growth.

Due to various constraints the growth performance of the industrial sector was below expectations. On one hand constraints as the scarcity of capital, entrepreneurship, technology and skills and the inadequacy of physical infrastructure facilities were limiting factors. On the other hand constraints such as the size of the domestic market and growing restrictions of international markets continued to slow down the expected rapid industrial growth in the country.

The factory industry which is dominated by the ready-made garment industry has been the main contributing sector to the overall growth of the manufacturing industry. The growth in this sector to the GNP increased from 13.5 percent in 1990 to 15.3 percent in 1992. The other important segments of the manufacturing sector are the export processing and the small industrial sector. Both these sectors have contributed marginally to the overall growth of the GNP. The construction sector performance continued to improve with an increase share of the GNP growth since 1990.

Forecasting of Sri Lanka's Economic Performance

Econsult point of view

We remain of the view that output growth during 1993 will be around 6% if not higher. We are revising upward our forecast of agricultural growth, but revising downward our forecasts for industry.

Recent data confirm our earlier expectations of a rebound in agriculture. Tea output for 1993 is put at 232,000 Metric tons, representing a 30% increase over 1992; paddy output is estimated to be 872,000 metric tons, representing a 10% increase; and, the growth of value added at constant prices in the minor agricultural crop sub-sector is put at between 10% and 12.5% on the basis of third quarter export data. The only laggard in the sector is coconut production, which still reeling from the after effects of the 1992 drought, is now estimated to have contracted by 10%.

The estimate of industrial output growth remains around 7%, marginally below the rate of growth attained in 1992. Data showing a fall in earnings from manufactured exports, particularly textiles and garments, suggest a slowdown in the rate of growth of factory industry output. Our current estimate for factory industry output growth in 1993 is 9.8%, down from 10% in 1992. The recovery in the export processing sub-sector as a result of the recovery in tea production is likely to partly compensate.

We remain of the view that Services as a whole will do better than in 1993, with a year end figure in the range of 5.5% to 6%. Electricity supply between January and September of 1993 doubled as compared with the same period in the previous year. This improvement was directly a consequence of the improved weather conditions and augurs well for the year-end outturn of the sub-sector Electricity, Gas, Water, etc. The improvement in agricultural and industrial production should augur well for the sub sector Wholesale and Retail trade. On the basis of recent export and production figures the growth rate for this important sub sector is estimated to be 6.5%. If equity prices and the related performances of public quoted companies are anything to go by, the sub-sector Banking, Insurance and Real Estate should be the star performer of 1993. Interim results suggest that banks, insurance, leasing and finance companies have been experiencing record levels of profits and asset growth. The only underperformer in Serv-

tors could be tourism. The annual rate of growth in tourist arrivals slumped to a negative 0.4%, the poorest performance since the troubled 1987-89 period. Factors blamed for the underperformance in the tourist industry are the deepening recession in Europe and uncompetitive pricing policies of the resort hotels.

Our forecast for aggregate output growth in 1994 is lower than those of the government and most private forecasting services. We are of the view that political turmoil and adverse weather conditions permitting the growth rate will again be in the range of 6.5% and 8%. Government economists forecast a range of between 6.5% and 7%, and some private sector economists give a range of between 7% and 8%. Our reason for caution is that on the domestic front we expect a levelling off of the recovery in agriculture, and some economic fall out from the political uncertainty surrounding the forthcoming parliamentary and presidential elections. On the international front we see only a weak recovery in the world economy, and continuing difficulties in certain parts of the world of economic importance to Sri Lanka including, Europe and the countries which comprise the area occupied by the former Soviet Union.

Output growth and investment at constant prices, 1992, 1993 and 1994

	1992	1993*	1994#
Gross Domestic Product	**4.3**	**6.1**	**6.0**
Agriculture	**-2.3**	**5.3**	**3.0**
Tea	-25.7	30.0	10.0
Paddy	-2.0	6.8	7.0
Industry	**7.1**	**7.0**	**7.2**
Factory Industry	13.0	9.6	11.0
Services	**5.3**	**6.0**	**6.0**
Wholesale and Retail Trade	5.8	6.5	6.5
Banking, Insurance and Real Estate	6.0	7.0	7.0
Investment/GDP	**23.7**	**24.1**	**24.8**

*Estimates
#Forecasts
Source: Annual Report 1992 and Monthly Bulletins, Central Bank of Sri Lanka
Economist forecasting

Observations of the Department of National Planning, Ministry of Policy Planning and Implementation

"In the five year period 1987-1991, economic growth averaged 3.5 percent per annum. Available data for the current year 1992, suggests that the growth rate is likely to be better than this average but slightly lower than the performance in the last year. The major factor contributing to this slowing down is the fall in agricultural production caused by the severe drought in the early part of the year. Nevertheless, if normal weather prevails next year, the economic growth rate should record 5 to 5.5 percent, which represents return to the medium term potential of the economy.

The economic growth target for the period 1992-1996 has been set at an average of 6 percent per annum.Given normal weather conditions and potential stability this is an attainable target. A slightly higher rate may be achieved if there is an improvement in international economic conditions. However, if per capita income is to be doubled in real terms, and unemployment is to be reduced to a socially acceptable level of about 5 percent by the end of this decade, a higher rate of growth of about 9 percent per annum will be necessary.

A growth rate of this magnitude requires not only a much higher level of investment than the average 25 percent of GDP planned under the present programme, but also a marked improvement in overall efficiency in the use of investible resources.

In the context of slow growth, high inflation, and adverse movements in the terms of trade experienced in the past, the economy may not have the capacity to generate investment rates of this order. A higher rate of investments than what is now planned will require a massive transfer of resources from consumption to savings. Such a transfer would inflict severe burdens on the poorer groups of the people. Therefore, the more prudent approach is to follow a gradual improvement in economic growth rates over the next few years, so that growing incomes can be made to yield increased savings in the future which in turn will finance higher levels of investments.

In the immediate period ahead, there is, of course, the possibility of using foreign savings, particularly foreign investment, to fill the savings-investment gap. This has been already taken into account in the proposed 6 percent growth scenario. When planning for such capital inflows, it is necessary to be prepared for higher external deficits in order to absorb such foreign savings - with the attendant adverse impact on external debt and other accumulated foreign claims. These in turn would increase future outflows of capital and interest, as well as profits and dividends, to be financed again from national savings. This means that a proper balance between foreign and local financing of investment in the short to medium term is essential if Shri Lanka is to get into a higher growth path and have economic stability in the long term."

Planning Targets

The main planning indicators for the five year period 1992-1996 are shown below. These conform generally to the targets of the Policy Framework.

1. The Gross Domestic Product (GDP) is expected to increase at an average rate of 6 percent per annum. This implies a per capita income growth of about 4.5 percent.

2. The Gross Domestic Capital Formation is expected to be maintained at

Cont. on page 15

RECENT ECONOMIC POLICY CHANGES 1990-1993

Laxman Siriwardena
Director/Investment
Ministry of Industries, Science & Technology

Although Sri Lanka has been the pioneer among South Asian countries in the liberalisation of its trade regime, it was evident by 1989 that there was a need for the acceleration of the pace and a more focused approach to ensure the overall economic development in general and rapid industrialisation in particular. With the vision of an industrialising nation the Strategy for Industrialisation in Sri Lanka has been adopted by the Government in December 1989, marking the beginning of the implementation of several important liberalisation initiatives. Among the major issues addressed by the new Strategy are investment, fiscal and tariff policy, exchange controls, stock market development and the institutional re-orientation. As a follow up to the Strategy the Government also issued an Investment Policy Statement in October 1990, and proceeded with modification of rules, regulations and procedures relating to Foreign Direct Investment (FDI).

Most noteworthy achievements in economic policy sphere has been made in the area of liberalisation of foreign and local investment. Even prior to the adoption of strategy for industrialisation, i.e. in early 1990, the Ministry of Industries had done away with all the approval procedures required for the implementation of local investment projects. New and existing industries were also freed from various quota and licence requirements, controls and similar restrictions.

With regard to Foreign Direct Investment, more concerted policy action has to be taken to identify and streamline procedures and minimise the discretionary elements in granting various incentives and concessions. For the first time in the history a **Guideline to Foreign Investment** was published in November 1990. Under these Guidelines, Foreign Direct Investment of up to 100% of equity ownership has been permitted in a large number of sectors, except in a few areas where the case by case approval procedure and restriction on foreign equity upto 40% has been imposed. Such reserved areas include insurance, banking, and finance, mining and mineral development, mass communication etc. Only five areas, i.e. coastal fishing, money lending, pawn brokering, retail trade with a capital of less than US$. 1 million and personal services have been banned for foreign participation. Although foreign investment promotion is more targeted towards desired sectors, such as infrastructure development, tourism, value added manufacturing industries and specialised services, no foreign investment is discouraged in any other sector.

Establishment of the Secretariat for Infrastructure Development (SID) for the promotion and facilitation of foreign and local private sector participation in infrastructure development projects and ventures providing hitherto public sector monopolised utilities, in the form of Built Operations and Transfer (BOT) and Built Operations and Own (BOO) basis is another indication of the Government's commitment to create new investment opportunities for the private sector in these fields.

In addition to Foreign Direct Investment a remarkable achievement has been made in the opening of Colombo Stock Exchange operations to the foreign investors. There too the gradual lifting of the restrictions has culminated in creating a somewhat vibrant stock market environment and encouraging foreign and local portfolio investors, as well as, listing of new companies.

With these policy changes, the simplification of approval procedures of BOI by way of introducing **automatic approval** within 3 days submission of the application and improved facilitation to foreign investors could be noted in the recent past. Several concrete measures are now being taken to make the One-Stop concept a reality within BOI.

In the area of incentives, the noteworthy feature is the moving away from excessive tax holidays to a lower tax regime in general and preferred rate of taxation for the targeted or promoted sectors. As such, it appears that the Government is shifting away from a tax holiday based incentive structure to a more broadly focused promotion strategy such as provision of infrastructure and facilitation. In this direction, the emphasis being made on the development of industrial estates, parks and zones and simplification of procedures in customs, inland revenue and other relevant agencies. The new incentive structure is based on the realisation that as long as the lower rates and efficient administration is ensured, the primary determinant of foreign or local investment are factors other than the corporate income tax.

Another policy area identified in the Strategy for Industrialisation and certain action has been taken is the tariffs and import procedures. With the long term objective to transform the domestic industry to a export oriented one, the Government has introduced a four band tariff structure reducing the maximum tariff levels (with few exceptions) to 50%. With this year's budget the maximum tariff has been reduced to 45% and from January 1995 it is expected to be brought down to 35%. Although the maximum tariff has been reduced significantly, it appears that the Effective Rate of Protection has not changed commensurately. Together with impending tariff changes, the Government has also embarked upon procedural changes with regard to the

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The views expressed in this paper are those of the author and do not represent the position of the institution to which he belong.

Sri Lankan Economy - Growth Perspectives in the Nineties

Dr. J. B. Kelegama

An appraisal of Sri Lanka's economic performance, her achievements and failures in recent years in comparison with the rapidly growing Asian economies would be useful before formulating policies and measures to move on to the next stage of industrialization and higher growth.

Economic growth in Sri Lanka in recent years has been moderate; her average growth in the decade 1980-90 was 4.0 per cent a year which was not very different from her average growth of 4.1 per cent in 1970-80. Average annual growth of all other South Asian economies in 1980-90 exceeded that of Sri Lanka: Bangladesh 4.3 per cent, India 5.3 per cent and Pakistan 6.3 per cent. From 2.3 per cent in 1989 Sri Lanka's growth jumped to 6.2 per cent in 1990 but declined thereafter to 4.6 per cent in 1991 and 4.3 per cent in 1992. This modest performance is the result of three major factors: low level of savings and investment, sluggish growth of agriculture and slow growth of external trade.

Low Investment

Average investment in the last ten years has been around 24 per cent of GDP in contrast to 35-40 per cent in the rapidly growing Asian economies such as Singapore, Malaysia, Thailand, Indonesia, Republic of Korea and China. Further growth of investment in this period was as low as 1.2 per cent a year in Sri Lanka as compared to 9.8 per cent in Thailand. The high and growing levels of investment in all these countries are made possible by high and growing levels of domestic savings which are nearly equal to investment and even exceed investment as in China, Singapore and Indonesia in 1991. In Sri Lanka domestic savings by contrast form only 14 per cent of GDP which is far below investment of 24 per cent. The low level of savings is partly the result of high public borrowings to meet budget deficits exceeding 10 per cent of GDP in several years and partly the result of double digit inflation - which averaged 11.2 per cent a year in 1980-91 as compared to 3.7 per cent in Thailand and 1.7 per cent in Malaysia.

Agricultural Stagnation

The second factor underlying moderate economic growth is the poor performance of agriculture which forms 27 per cent of GDP. Average agricultural growth in 1980-90 was only 2.3 per cent a year which was lower than that of all other major South Asian countries. In 1990 agricultural production rose by 8.5 per cent but in 1991 it increased by only 1.9 per cent while in 1992 it actually declined by 1.5 per cent. Agricultural production in 1990-92 while higher than in 1980-82 except for rubber was in fact lower than in 1985-87 for paddy, rubber and coconut. This was caused partly by internal factors such as terrorist activities in the Northern and Eastern Provinces adversely affecting paddy production, diversion of coconut and rubber lands for other uses and lower productivity and partly by external factors such as unfavourable world market prices.

The secular decline in commodity prices, accentuated by the recession is reflected particularly in the case of tea and rubber whose prices in London in 1990-92 were lower than in 1989. In the case of tea average cost of production exceeds the average market price. Unfavourable world market prices have discouraged investment in export agriculture - in planting, replanting, land development and fertilizer application - which has resulted in stagnant or lower yields (1027 kg per hectare of tea as compared to 1746 kg in Kenya and 706 kg per hectare of rubber as compared to 1400 kg in Malaysia). This has been compounded by the marked fall in labour productivity arising from worsening labour relations.

Industrial Expansion

The country's economic growth would have been even lower had it not been for the better performance of the industrial and service sectors; industry forming 25 per cent of GDP and services forming 48 per cent of GDP grew at 4.8 per cent a year in 1980-90. Manufacturing growth accelerated in 1990-91 - 9.5 per cent, in 1990, 8.8 per cent in 1991 and 9.0 per cent in 1992 while services rose by 4.2 per cent, 5.9 per cent and 5.5 per cent respectively. The growth in manufactures in 1990 and 1992, it is relevant to note is comparable to the average annual growth of manufacturing in Malaysia and Thailand of 9 - 10 per cent. Prices of industrial exports do not appear to have been affected by the recession as they rose by 20.1 per cent in 1990, 10.0 per cent in 1991 and 22.2 per cent in 1992.

Trade Expansion

Thirdly, Sri Lanka's trade performance in the last decade was relatively mediocre. Her exports grew at an average rate of 6.3 per cent a year or lower than in the other major South Asian countries and her imports increased at even a lower rate of 2.1 per cent a year. In contrast exports grew at 14.4 per cent a year and imports at 11.1 per cent a year in Thailand in this period. Export performance improved in the early nineties. Volume of exports which had remained more or less stagnant in the period 1985-89 rose by 16.5 per cent in 1990, 4.1 per cent in 1991 and 15.0 per cent in 1992,

while the volume of imports which had declined from 1985 to 1990 witnessed an increase of 13.1 per cent in 1991 and 10.1 per cent in 1992. Higher growth of trade was entirely due to the marked increase in industrial exports while agricultural exports remained stagnant for nearly eight years and mineral exports declined in 1991 and 1992. Had it not been for industrial exports, the country's trade would have actually fallen in both 1991 and 1992 on account of the decline in agricultural exports.

Improvement in Debt Situation and Resource Inflows

There was an improvement in the debt situation. The county's total external debt rose from $ 5173 million in 1989 to $ 5844 million in 1990 and to $ 6553 million in 1991 but debt as a ratio to GNP declined from 74.6 per cent to 73.2 per cent and to 72.6 per cent respectively. In 1989 the country's debt service exceeded debt disbursement and consequently there was a negative net debt transfer of $ 74 million in that year. The situation was reversed in 1990 and 1991 when there were positive net debt transfers - $ 150 million and $ 400 million respectively. Debt service also declined from 18.6 per cent of exports of goods and services in 1989 to 14.1 per cent in 1991.

Net resource flows (loans, FDI and grants) nearly doubled between 1989 and 1991; from $ 465 million they rose to $ 565 million in 1990 and $ 887 million in 1991. This was mainly due to increase in long-term loans from $ 250 million in 1989 to $ 589 million in 1991. Grants remained more or less at the same level while foreign direct investment, though relatively small rose from $ 20 million in 1989 to $ 43 million in 1990 and to $ 98 million in 1991. Interest on long-term debt in 1991 amounted to 21.9 per cent of the net inflow of debt while profit remittances which exceeded investment inflow (FDI) in 1989 formed 21.4 per cent of net FDI in 1991. Thus, aggregate net transfers of resources (net resource flow minus debt service and profit remittances) more than doubled from $ 332 million in 1989 to $ 737 million in 1991.

A country like Sri Lanka with her low level of domestic savings can increase her investment to accelerate economic growth only by tapping external finance - grants, loans and FDI. Official grants which formed 22.5 per cent of net resource flow in 1991, have been practically stagnant for the last six years (SDR 130-150 million); further as Sri Lanka is receiving perhaps the highest ODA per capita in Asia of $ 47.4 in 1991 (India $ 3.2) any significant increases appear unlikely. Long-term loans formed 66.4 per cent of the net resource flow in 1991 demonstrating the high dependence of Sri Lanka on them for her external resource needs. Raising funds by loans, however, increases the country's debt service burden and can therefore be resorted to only within reasonable limits. Thus, there is no alternative to attracting FDI for increasing investment and economic growth.

Sri Lanka, however, has not attracted much FDI in recent years. In the six years 1985-90 for instance, average FDI amounted to $ 37.5 million a year. It began to rise, however, in 1991 to $ 98 million and in 1992 to $145 million, partly on account of portfolio investment but the level is still low when compared to Malaysia receiving $ 3455 million and Thailand with $ 2014 million in 1991. FDI formed only 11.0 per cent of net resource flow to Sri Lanka in 1991 whereas its share is much higher in the rapidly growing economies - 86.3 per cent in Malaysia and 38.4 per cent in Thailand.

Can Sri Lanka become a NIE by 2001?

No one disputes the need for Sri Lanka to be a Newly Industrializing Economy (NIE) but the question is whether she can become one in ten years time - by about 2001. It is generally assumed that to be classified as a NIE, a developing country should have over 25 per cent of its GDP in manufacturing and over US$ 2000 in per capita GNP. The "Four Little Tigers/Dragons" - Republic of Korea, Singapore, Hong Kong and Taiwan Province of China - have been for some time the NIEs of Asia. Their growth has been so rapid that their per capita GNP exceeded US$ 6000 by 1991 and some of them, having reached a high level of industrialization are now concentrating on expanding their services. In Hong Kong, for instance, the share of services in GDP rose from 62 per cent to 75 per cent between 1970 and 1991 while the share of manufacturing fell from 29 per cent to 17 per cent: a newcomer to NIE status is Malaysia and one who is close to attaining that status is Thailand as shown in Table 1.

It is clearly impossible for Sri Lanka to attain the per capita income levels of Singapore or the Republic of Korea in ten years as it would demand an average annual growth rate of GDP of about 42 per cent to reach the former and 31 per cent to reach the latter. The more modest goal of $ 2000 per capita can be achieved by an average growth rate of about 17 per cent a year but this is again not feasible. The highest sustained growth rates in the world in 1980-91 have been Botswana's 9.8 per cent, Republic of Korea's 9.6 per cent and China's 9.4 per cent and the highest in the decade 1970-80 was Botswana's 14.5 per cent. It would be unre-

TABLE 1

GNP per capita and Share of Manufacturing in GDP of Selected Asian Countries, 1991

Country	*GNP per capita 1991 US $*	*% Share of Manufacturing in GDP*
Singapore	14,210	29
Hong Kong	13,430	17
Taiwan Province	10,215+	38*
Republic of Korea	6,330	28
Malaysia	2,520	26*
Thailand	1,570	27
Indonesia	610	21
Sri Lanka	500	14
China	370	38
India	330	18

(World Bank)

*1988 +1992

alistic therefore to assume that Sri Lanka will attain NIE status by 2001.

The feasible economic growth rate in Sri Lanka, which falls far behind the desirable, appears to be one which will be certainly higher than the historical growth rate of 4 per cent, which is clearly unacceptable, but which will not make her a NIE in ten years' time. Under the most favourable external and internal conditions, the highest average growth rate Sri Lanka can reasonably hope to achieve would be around 8 per cent a year which is the average annual growth rate realized by Thailand in 1980-91 and by Malaysia in 1970-80. An average annual 8 per cent growth a year would double the income per capita in about eleven years to $ 1,000. In a less optimistic scenario where external factors [commodity prices, flow of resources and access to markets] and internal factors [internal security and weather] become less favourable, the country should be able to achieve around 6 per cent average growth per year which would double income per capita in about 15 years.

Achieving an average 6 per cent growth or something very close to it is indeed a formidable challenge as it means doubling of the historical growth rate of 4 per cent. What it involves as demonstrated by the rapidly growing economies of Asia is a dynamic development strategy to bring about the following conditions conducive to rapid growth: levels of gross domestic investment of over 35 per cent of GDP, levels of domestic savings over 30 per cent of GDP, average growth of investment of around 10 per cent a year, massive inflow of FDI, growth of exports and imports over 10 per cent a year, sound fiscal and monetary policies that reduce budget deficits and inflation, substantial investment in human capital and domestic peace and security. There are a few important issues among the above list that deserve to be emphasized.

Shifting to a Higher Stage of Industrialization

First is the urgent need to deepen and diversify the industrialization process by shifting to a higher stage. Sri Lanka has now matured in the first stage of industrialization involving the simplest forms of export processing in labour-intensive industries such as garments. This is a necessary stage which provides employment in large numbers and gives local entrepreneurs opportunities to interact with world makets, to gather experience and to learn modern entrepreneurial skills and management techniques. Its limitations, however, are several: footloose nature, low value added [about 30 per cent], low skills generation and little backward linkages with domestic industries. It is imperative therefore for the country to move up to the next stage of industrialization with more complex and technologically advanced forms of production with high value added, with backward linkages and with capacity to generate high skills which are indispensable to building up the country's industrial capabilities and skills essential for higher growth. The shift to more sophisticated forms of manufacture is also the most effective method of attracting larger inflows of FDI. The relatively low FDI at present reflects the fact that the bulk of FDI is in the simplest forms of export processing which require limited investment in fixed assets. The massive inflows of FDI into the rapidly developing countries of Asia are closely associated with the technologically advanced industries.

The rapidly developing economies of Asia who have moved to the second stage produce and export chemicals, machinery including electronics, transport equipment and a variety of manufactures other than garments, all of which require substantial capital investment.

TABLE 2

Structure of Merchandise Exports 1991
Percentage Shares of Merchandise Exports

Country	Fuels and Minerals	Other Primary Commodities	Textiles and Garments	Machinery and Equipment	Other Manufactures
Bangladesh	1	28	62	0	8
India	8	19	25	7	41
Pakistan	1	26	60	0	12
Sri Lanka	1	34	43	2	19
Indonesia	43	16	14	2	25
Malaysia	17	22	6	38	17
Philippines	9	20	9	14	48
Thailand	2	32	17	22	28
Rep. of Korea	3	4	21	38	34
Singapore	18	8	5	48	21
Hong Kong	2	3	40	24	32
Taiwan Province	2	6	16	38	39

(World Bank)

The share of textiles and garments in their exports is less and of machinery, equipment and other manufactures more than in South Asian countries like Sri Lanka as shown in Table 2. Sri Lanka's exports of machinery and equipment for instance is 2 per cent of total exports as compared with 22 per cent in Thailand and 38 per cent in Malaysia. Electronic machinery, components and parts [mainly electronic microcircuits] are the largest export of Malaysia, and the second largest export of Thailand and the Philippines.

Activating Agriculture

Second, it is necessary to take a closer look at the agricultural sector. However rapidly the country increases her industrial production, overall economic growth will not rise simultaneously so long as agriculture forming 27 per cent of GDP remains stagnant or sluggish in growth as in 1980-91. The drag of sluggish agriculture on growth will decline with increasing pace of industrialization and consequent reduction of the weightage of agriculture in output, but this will take time and offers little solution to pressing problems. Given unfavourable commodity prices and high cost of production, the need to raise productivity of both land and labour and to increase agricultural processing particularly of tea and rubber, assumes special importance. Of equal importance is the need to increase coconut production to meet the rapidly rising domestic

demand perhaps by using marginal tea and rubber lands. The stagnation of paddy yields (around 3400-3500kg per hectare) in the last ten years, the decline in production of minor food crops (e.g. maize, chillies, red onions, soya beans, potatoes, cowpea, black gram, kurakkan) and the marked fall over the years in the production of minor export crops such as cardamoms, sesame seed, cocoa products, papain, other oil seeds, coffee and arecanuts deserve careful study. The mobilization of Provincial Councils and Pradeshiya Sabhas to raise agricultural production in their respective areas and the incorporation of coconut and food production in the 15,000 Projects Programme would make a great contribution to activate the agricultural sector.

Role of the State

Third, the role of the State is crucial in moving to a higher stage of industrialization - in providing the infrastructure, in investing in human capital and in positive selective intervention apart from vigilance to prevent misuse of the country's assets. An essential prerequisite of high economic growth is an efficient infrastructure embracing power and water supply (without cuts in droughts) and communications (roads, harbours, airports and telecommunications free from congestion and causing no inconvenience to users). What is involved in providing power for high growth for instance is demonstrated by the higher level of commercial energy consumption per capita in countries such as Malaysia-1066 kg of oil equivalent and Thailand - 438 kg in 1991 as compared to 177 kg in Sri Lanka. Average annual growth rate of energy consumption in 1980-91 in these two countries was 7-8 per cent as compared to 4.9 per cent in Sri Lanka. Improvement of the infrastructure would of course involve substantial capital investment on the part of the State.

While foreign investors bring capital and transfer technologies, the task of building up indigenous capability embracing broader skill and supplier structures remains the responsibility of the State. This involves increasing investment in human capital - in education, training and research and development - to upgrade manpower skills and research capabilites. Educated and skilled workforce, it is hardly necessary to point out, is more productive and attracts FDI. The Republic of Korea for instance as mentioned earlier, has 47 scientists and technical personnel for 1000 people compared with an average less than 10 in the developing world as a whole; further the proportion of age group enrolled in tertiary education is 39 per cent as compared to 4 per cent in Sri Lanka. Korea spends 23.3 per cent of her public expenditure on education and Singapore 11.5 per cent as compared to 5.4 per cent in Sri Lanka.

Foreign capital cannot be expected to be involved in the production of all manufactures in the country. Whatever incentives are given, they will have their own set of priorities which may not accord with the national priorities. This is already demonstrated by their preference for garment industries. This leaves a vast field for indigenous enterprise where they can operate on their own or in partnership with foreign capital to manufacture goods for the domestic market or for export or to supply and service the export industries established by foreign capital, for example, quality textiles, thread, buttons and zip fasteners for the garment industry which are now being imported. By such complementation, indigenous enterprises would also learn to adapt and absorb foreign technology to build a lasting base for technological growth. The growth of dynamic indigenous enterprises capable of industrial complementation will also be an additional incentive to FDI. It is unlikely that where markets are underdeveloped, passive marketoriented policies alone will be enough to build up indigenous enterprises and technology without positive industrial promotion and selective intervention by the State to upgrade indigenous capability. Perhaps the best example is the Republic of Korea, which unlike Singapore that relies heavily on transnational corporations, intervened actively at every stage (through protection of infant industries, subsidized credit, targeted exports, promotion of large conglomerates, research and development, institution support and restricting foreign entry only to areas where indigenous enterprises would gain by foreign technology), to build a strong indigenous industrial capability which has made the country the tenth largest trading economy in the world.

Population Growth

Fourth, population growth needs to be controlled as Sri Lanka is relatively over-populated. It is a little known fact that Sri Lanka is the tenth most densely populated country in the world with her density of population of 267 per square kilometre in 1992 even exceeding India's 259. The density will become more acute with the growth of the country's population to about 20 million in 2001 and 24 million in 2025. This increase in population needs to be checked (as in China and Singapore, where two children per couple is encouraged) for two important reasons: the difficulty in finding employment to such large numbers even with rapid industrialization supplemented by support of skills training, small-scale enterprises, labour-intensive production, self-employment and foreign employment; and the grave threat to the environment posed by the poor and the underemployed in their search for residence and means of livelihood - deforestation (for squatter cultivation, fuelwood and timber), land, degradation by overuse of marginal land spread of slums on banks of city canals and lakes discharging raw sewage to water, destruction of coral reefs and consequent sea erosion and construction of residential buildings on the sea coast and pollution of the beaches.

Social and Environmental Costs

Fifth, high growth is not without social costs and Sri Lanka must be prepared to meet them. High growth as shown earlier tends to increase inequality of income. Even the modest growth in Sri Lanka resulted in the share of total income of the highest 20 per cent of the country's income receivers rising from 48.9 per cent in 1978-79 to 52.3 per cent in 1986-87, while the share of total income of the lowest 20 per cent declined from 6.3 per cent to 5.1 per cent. Secondly, there are the environmental costs of rapid development: rise of urban population; increase in motor traffic, congestion on the roads, higher road accidents and diminishing parking space in cities (which is already a fact in Colombo); increasing pollution of air and water by motor traffic, smoke and effluents of factories and workshops and weedicides and insecticides in agriculture; slaughter tapping of rubber trees and exploiting forest reserves on tea estates. Rapid growth will further accentuate the damage to the environment caused by the rising population such as deforestation, land degradation and slum dwelling.

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MONETARY AND FISCAL DEVELOPMENTS

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Monetary and fiscal policies in a liberalized economy assume a crucial role in setting up an economic climate conducive to market oriented activities. An ultimate objective of these policies is to facilitate the process of upgrading the living standards of the people. This could be achieved by raising domestic production and employment, paving the way to an acceleration of economic growth. For this purpose, larger amounts of savings and investments may be required. Since domestic savings in developing countries are generally inadequate to meet rising investment needs, financial resources from other countries would be necessary and these foreign savings are generally associated with balance of payments deficits. Monetary and fiscal policies could be used to help mobilizing domestic financial resources so as to meet increased capital requirements, and also to avoid excessive deficits in the balance of payments. An economy driving at a faster economic growth may also get caught up in an inflationary situation. In order to avoid acute inflation it would be necessary to control monetary expansion. In this regard, Government budget deficits which would lead to increased money supply should be regulated.

Unless the balance of payments deficits and inflation are contained to manageable levels, it would be difficult to sustain the growth momentum in the long run. The monetary and fiscal authorities, therefore, have a greater responsibility not only in maintaining stability in the fronts of balance of payments and price levels but also in helping to achieve the objectives of faster economic growth and increased employment opportunities.

Macroeconomic Trends

Key macroeconomic indicators of Sri Lanka for the last decade are summarised in Table 1. Economic growth as measured by the real GDP which is around 4.7 per cent per annum in the recent 5 years is higher than the earlier growth rate of 3.7 per cent. The major growing sub-sectors in recent years are paddy, subsidiary food crops, factory industry, banking and other financial services and infrastructure. Inflation accelerated in the second period, partly as a result of rising liquidity levels despite the implementation of demand management policies. The increase in liquidity is reflected in the faster rise in broad money supply in recent years. The budget deficits remained at high levels in both periods owing to increased current and capital expenditure. The current account of the balance of payments remained around 6 per cent of GDP. An increase in interest rates was seen in recent years reflecting the influence of market forces in determining the rates.

Money Supply

Money is generally treated as the most liquid asset among a wide spectrum of other assets. Conventionally, money supply consisted of notes, coins and demand deposits held by the public with commercial banks. However, assets such as time and savings deposits of commercial banks became easily convertible into currency in many countries and, therefore, they are also treated as a part of the money supply. Accordingly, two concepts of money supply namely, narrow money and broad money are used in Sri Lanka for monetary policy purposes as shown in Table 2. Narrow money supply (M1) is defined to include currency and demand deposits held by the public. In addition to narrow money, time and savings deposits held by the public are included in the broad money supply (M2). The time and savings deposits are also known as quasi money.

It is significant to note that, the importance of narrow money has declined gradually over the last two decades in Sri Lanka. Narrow money which accounted for more than 2/3 of broad money supply in the early Seventies has declined to a little over 1/3 by 1993. This indicates that quasi money consisting of time and savings deposits rose faster than the narrow money supply. This was largely due to the financial reforms adopted in the Eighties. Under these reforms interest rate controls were eliminated and thus, more attractive rates were available to depositors. The interest rate liberalization coupled with an expansion in the banking and financial facilities tended to raise time and savings deposits. The broad money supply increased at a rate of about 19 per cent per annum during the last five years.

The low level of financial savings has been a major set back to economic growth in Sri Lanka as in the case of many other developing countries. The financial reforms have helped to overcome this bottleneck to a certain extent. Since it is difficult to measure financial savings, a proxy may be used to ascertain the trend of such savings. The proxy used here is the ratio of M2 to Gross Domestic Product (GDP). As shown in Table 2, this ratio rose to an average of 0.30 in recent years from the low levels in the 1970's.

Note:
The opinions expressed in this paper are those of the author and do not necessarily reflect the views of the Central Bank of Sri Lanka.

Interest Rate Movements

With the economic liberalization, it became necessary to allow the market forces to determine interest rates so as to mobilize domestic savings to meet larger investment needs in the economy. Accordingly, measures have been taken to eliminate administrative controls on interest rates. This resulted in an increase in nominal interest rates. As shown in Table 3, interest rates were high enough to compensate for domestic inflation and therefore, real interest rates remained positive since the late 1970's with the exception of 3 years.

Demand and supply conditions in the market have a greater influence on interest rates following the reforms. In 1982, for instance, commercial banks initiated to reduce interest rates on all types of time deposits since they experienced an increase in liquidity due to a substantial growth of deposits and a significant deceleration in demand for credit from the private sector. It is significant to note that this change was implemented by commercial banks in the absence of any change in the Bank Rate. The downward adjustment of deposits rates continued until mid 1988.

The interest rate structure showed an upward trend by 1988 reflecting the reduced supply of funds in the market and growing inflationary pressure. The rise in interest rates was more prominent in those markets where interest rate determination was largely influenced by market forces. Interest rates became increasingly market determined in the Treasury Bill market with only minor interventions by the authorities. Interest rates further remained at high levels in 1990 due to acceleration of inflation and increased demand for funds. Meanwhile, the Bank Rate was increased from 14 to 15 per cent in July 1990. The interest rates in the Treasury Bill market rose, particularly during the second half of the year; the weighted average yield on Treasury Bills increased from a range 15.4 -16.9 per cent per annum in May 1990 to 17.4-18.4 per cent by the end of the year. Discount and rediscount rates in the secondary Treasury Bill market also rose accordingly. Interest rates in the inter-bank call money market fluctuated widely in 1990 and reached the highest range of 19-30 per cent per annum in August 1990. The minimum and maximum rates on 12 months fixed deposits declined in March 1990, but increased thereafter. The National Savings Bank raised its savings and fixed deposit rates by 2 percentage points per annum in July 1990.

The Central Bank further intensified its tight monetary policy stance in the first quarter of 1991. The Bank Rate was raised from 15 to 17 per cent in January 1991. Deposit rates continued to remain high in 1991-93. However, a decline in the rates was observed towards the end of 1993.

TABLE 1

Macroeconomic Indicators (Annual Averages)

Indicator	*1984-88*	*1989-93*
Percentage Changes		
Real GDP Growth	3.7	4.7
Inflation	9.6	13.7
Money Supply (M2)	12.9	19.0
Budget Deficit (as % of GDP)	-11.9	-10.1
Balance of Payments (Current Account Deficit as % of GDP)	-6.5	-6.3
Interest Rates (3 Month Treasury Bills)	12.6	17.7

Source: Derived from Central Bank Annual Reports

TABLE 2

Money Supply

Year	*Narrow Money (M1) Rs. Mn.*	*Quasi Money Rs. Mn*	*Broad Money (M2) Rs. Mn.*	*M1 as % of M2*	*% Change of M2*	*M2 as Ratio of GDP*
1970	1967	1148	3115	63.1	9.2	0.23
1971	2149	1286	3435	62.6	10.3	0.24
1972	2481	1493	3974	62.4	15.7	0.26
1973	2778	1376	4154	66.9	4.5	0.23
1974	2946	1623	4568	64.5	10.0	0.19
1975	3088	1669	4757	64.9	4.1	0.18
1976	4166	2155	6321	65.9	32.9	0.21
1977	5366	3351	8717	61.6	37.9	0.24
1978	5936	4956	10892	54.5	25.0	0.26
1979	7669	7388	15058	50.9	38.2	0.29
1980	9428	10432	19860	47.5	31.9	0.30
1981	10024	14422	24446	41.0	23.1	0.29
1982	11760	18750	30510	38.5	24.8	0.31
1983	14748	22509	37257	39.6	22.1	0.31
1984	16824	26603	43427	38.7	16.6	0.28
1985	18761	29648	48409	38.8	11.5	0.30
1986	21179	29681	50860	41.6	5.1	0.28
1987	25083	33252	58335	43.0	14.7	0.30
1988	32379	35567	67946	47.7	16.5	0.31
1989	35338	41096	76434	46.2	12.5	0.30
1990	39878	51139	91017	43.8	19.1	0.28
1991	47055	65043	112098	41.0	23.2	0.29
1992	50491	80211	130701	38.6	16.6	0.31
1993	60104	101258	161362	37.2	23.5	0.32

Source: Central Bank of Sri Lanka.

Management of Reserve Money

The success of the monetary authorities to control the money supply depends on their ability to regulate the stock of reserve money and money multiplier. The Central Bank can influence the stock of reserve money by managing its own balance sheet. The stock of reserve money

depends on net foreign assets of the Central Bank, net claims on Government, net claims on financial institutions and net other liabilities. The money multiplier indicates the number of times the money supply expands in relation to the reserve money stock.

The ability of the monetary authorities to influence each component of reserve money depends on various factors including the status of money and capital markets, the degree of trade and exchange liberalization and fiscal operations. The authorities have a greater control over net foreign assets in an economy with tight foreign trade and exchange controls than in a liberalized economy. Meanwhile, if the Government continues to rely on the Central Bank to finance its budget deficits, the component of net claims on Government tends to rise each year repeatedly thereby pushing up the reserve money stock. This implies that unless there is coordination between fiscal and monetary policies, the monetary measures will be frustrated. The changes in the reserve money stock of Sri Lanka during 1971-93 are shown in Table 4.

Net claims on Government was a major contributory factor for reserve money growth in several years, upto 1985. It remained high in the subsequent 2 years. Since 1986 the Central Bank has been able to contain net claims on Government at minimum levels, except for a few years. This was partly due to the Central Bank's efforts to popularise Treasury Bills in both primary and secondary markets. As a result, reserve money increased by only 6.7 per cent in 1986 and by 6.9 per cent in 1987. The attempt to control reserve money growth was nullified in 1988 by increased domestic financing needs of the Government which resulted in a 33 per cent increase in reserve money. In 1989 net claims on Government rose only by 3.3 per cent and this helped to restrict the reserve money growth to 4.8 per cent in that year. Government's net claims rose only by 1.9 per cent in 1990, and continued to remain low in recent years. In fact, in 1993 the Government component had a negative impact on reserve money. But considerable increases in net foreign assets tended to raise reserve money considerably since 1990.

TABLE 3

Interest Rates (Percentages)

End of Period	Deposit Rates	Rate of Inflation	Real Rate of Interest
1970	4.5	5.9	-1.4
1971	4.5	0.7	1.8
1972	4.5	6.3	-1.8
1973	4.5	9.7	-5.2
1974	4.5	12.3	7.8
1975	7.5	6.8	0.5
1976	7.5	1.3	11.0
1977	14.5	1.3	13.2
1978	14.5	12.1	2.4
1979	14.5	10.8	3.7
1980	20.0	26.1	-6.1
1981	21.0	18.0	3.0
1982	18.5	10.8	7.7
1983	19.0	14.0	5.0
1984	18.0	16.6	1.4
1985	15.0	1.5	13.5
1986	11.3	8.0	3.3
1987	11.3	7.8	3.5
1988	12.3	14.0	-1.7
1989	15.8	11.6	4.2
1990	16.0	21.4	-5.5
1991	16.0	14.0	2.0
1992	17.5	11.4	6.1
1993	15.5	11.7	3.8

Source: Derived from Central Bank Annual Reports.

Note: The deposit rates shown here are the average of maximum and minimum values of commercial banks' deposit rates for 24 months.
Real interest rate is the difference between deposit rate and inflation rate.

TABLE 4

Changes in Reserve Money (Percentage Changes)

Year	Net Foreign Assets	Net Claims on Government	Net Claims on Financial Institutions	Net Other Liabilities	Reserve Money
1971	-22.5	3.7	13.2	11.9	12.9
1972	-1.5	10.6	-45.1	-30.8	16.7
1973	-54.4	4.7	124.9	65.4	21.7
1974	111.0	2.5	214.7	36.5	4.5
1975	30.2	8.1	-12.8	7.0	-4.0
1976	41.4	12.4	32.3	-15.5	26.9
1977	-661.9	-7.9	127.7	456.0	42.2
1978	75.1	-30.7	21.6	30.1	11.0
1979	21.6	52.5	-39.8	17.2	24.1
1980	70.1	208.9	73.4	58.4	18.6
1981	-34.5	31.6	25.3	25.7	19.1
1982	87.5	34.0	0.8	21.2	21.5
1983	266.5	3.9	110.9	0.1	27.7
1984	1468.7	24.3	21.5	0.1	17.8
1985	-2.3	45.9	-7.6	27.6	23.2
1986	4.3	5.4	47.5	5.8	6.7
1987	-6.8	19.7	10.9	19.9	6.9
1988	-46.1	88.9	10.2	3.9	32.6
1989	-51.7	3.3	11.9	-10.2	4.8
1990	178.5	1.9	70.1	14.1	17.9
1991	166.5	6.8	-27.1	4.7	26.8
1992	56.1	2.7	7.8	26.5	12.0
1993	117.2	45.0	14.9	-24.5	25.9

Source: Derived from Central Bank Annual Reports.

A significant development experienced since 1990 is the rising capital inflows as reflected in the overall surplus of the balance of payments. The overall balance turned into a surplus of SDR 138 million in 1990. The surplus was SDR 152 million in 1991 and SDR 129 million in 1992. These surpluses were generated mainly by private capital inflows which was an insignificant item in the balance of payments years ago. Private capital flows mainly take the form of direct investment into various projects, portfolio investments in the share market and long term loans. It should also be mentioned here that the inward remittances made by the workers abroad, mainly in the Middle East, also helped to generate a capital surplus by way of mitigating the current account deficit in the balance of payments. As shown in Table 5, the total net inflow of private remittances and capital rose gradually from SDR 305 million in 1989 to SDR 380 million in 1991. A 36 per cent increase in the inflows to the level of SDR 518 million was observed in 1992. It rose by 52 per cent to SDR 790 million in 1993. Favourable investment climate and high domestic interest rates continued to encourage such capital flows.

In line with the increased capital inflows, the net foreign assets of the Central Bank have risen considerably in recent years. In Rupee terms the assets increased sharply in 1991 and in 1993. This, of course, tended to push up the reserve money stock by considerable magnitudes; 27 per cent increase in 1991, 12 per cent in 1992 and 26 per cent in 1993. In contrast, net claims on Government did not contribute to any increase in reserve money, particularly in the years of 1992 and 1993. This component had a negative impact on reserve money in 1993. However, this was not sufficient to offset the expansionary effect of foreign assets on the money supply.

Fiscal Operations

The Government Budgetary operations in recent years reflected attempts taken by the authorities to facilitate the activities of private enterprises while safeguarding economic stability. Accordingly,a wide range of tax reliefs including tax holidays and duty rebates were granted to export oriented activities and other production sectors. Import and export tariffs were rationalised.

TABLE 5

Private Remittances and Capital Inflows (SDR Mn.)

Item	*1989*	*1990*	*1991*	*1992*	*1993**
1. Private Remittances (Net)	**258**	**268**	**293**	**328**	**396**
2. Private Capital (Net)	**47**	**46**	**87**	**190**	**394**
Direct Investment	14	24	46	74	103
Portfolio Investment	-	7	24	29	78
Loans	**33**	**15**	**17**	**87**	**213**
Total	**305**	**314**	**380**	**518**	**790**

*Estimated.
Source: Central Bank of Sri Lanka.

TABLE 6

Government Revenue and Expenditure

Rs. Billion (GDP ratios within parentheses)

Item	*1984*	*1989*	*1993*
1. Revenue	37.7 (22)	56.7 (21)	106.3 (22)
2. Expenditure	53.6 (31)	94.4 (33)	196.8 (27)
2.1 Current	29.0 (16)	58.4 (23)	98.9 (20)
2.2 Capital	21.7 (15)	37.0 (10)	97.4 (7)
2.3 Advance Accounts	2.9	-1.0	0.5
Budget Deficit	-15.9 (-9)	-37.7 (-11)	-90.5 (-7)

Source: Central Bank of Sri Lanka.

TABLE 7

Financing of the Budget Deficit (Rs. Billion)

Source	*1984*	*1989*	*1993*
1. Domestic Non-Market Borrowings	0.9	5.3	0
2. Domestic Market Borrowings	3.1	18.7	55.9
2.1 Non Bank	5.7	17.6	57.4
2.2 Bank	-2.6	1.1	-1.5
3. Use of Cash Balances	0.7	-4.4	0
4. Foreign Loans and Grants	11.2	18.1	34.6
4.1 Loans	8.0	11.7	25.6
4.2 Grants	3.2	6.4	8.9
Budget Deficit	-15.9	-37.7	-90.5

Source: Central Bank of Sri Lanka.

Turnover and excise taxes were also revised so as to enhance revenue mobilisation.

The above measures have helped to maintain the Government revenue around 20 per cent of GDP (Table 6). Since the current expenditure of the Government also remains in that range, it was not possible to generate Government Savings (= Revenue - Current Expenditure). This means that the entire capital expenditure was to be met by domestic and foreign borrowings and grants. Both current and capital expenditure increased substantially and the increase in revenue was not sufficient to reduce the resulting budget deficit. The deficit rose from Rs. 15.9 billion in 1984 to Rs. 90.5 billion in 1993.

A remarkable feature that can be seen in the financing of the budget deficit in recent years is the reduced reliance on bank borrowings (Table 7). In the 1980's about 10 of the budget deficit was financed by bank borrowings. These borrowings have declined considerably and there were net repayments in 1992 and in 1993. This has helped to reduce the expansionary effect of fiscal operations on the money supply.

The popularisation of Treasury Bills was a major contributory factor for the decline in the reliance on the banking system to finance the budget deficits. Since the introduction of a secondary market in 1981, Treasury Bills have become a major money market instrument. Since then Treasury Bills have been more flexible in terms of maturity periods and yield rates. Treasury Bills are issued with maturities of 3 months, 6 months and 12 months. The yield rates are determined weekly through market forces. In order to activate the secondary market, the Central Bank introduced a repurchase window in 1993. Accordingly, the Central Bank started selling Treasury Bills from its portfolio with an agreement to buy back (repurchase) on an agreed date at a price higher than the selling price. These measures have helped the Central Bank which was almost the sole holder of Treasury Bills in the early eighties to transfer the entire stock to the non bank sector and commercial banks (Table 8). Thus, the expansionary effect on the money supply arising from Treasury Bill holdings has been eliminated.

TABLE 8

Treasury Bill Holdings
Rs. Billion (% within parentheses)

Holder	1984	1989	1993
1. Bank Sector	13.3 (90)	40.4 (71)	55.5 (57)
Central Bank	13.3 (90)	34.1 (60)	6.0 (6)
Commercial Banks	... (...)	6.3 (11)	49.5 (51)
2. Non-Bank Sector	1.5 (10)	16.8 (29)	41.7 (43)
Total	14.8 (100)	57.2 (100)	97.2 (100)

Source: Central Bank of Sri Lanka.

Conclusion

The recent experiences of Sri Lanka with regard to monetary and fiscal management reflect the implications of interactions among different sectors, namely Money and Capital markets, Government Finance and Balance of Payments. As the economy opens up further, these interactions tend to become more prominent. Monetary policies implemented in recent years were basically designed to improve money and capital markets and to regulate the overall liquidity in the economy. These measures have also helped to mobilize domestic financial resources from the non-bank sector to finance the Government budget deficits. As a result, the expansionary effect of fiscal operations have tended to decline in recent years. This analysis also revealed the fact that in an open economy, external factors have a greater influence on the domestic liquidity levels.

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about 25 percent of GDP, the total for the period being approximately Rs 700 billion. The larger share of this investment (about 59 percent) will be undertaken by the private sector. The share of the public sector will stabilize around 10 percent of GDP.

3. The National Savings ratio is expected to reach an average of 19 percent in the five year period. Thus, the foreign savings requirement will be about 8 percent, an increased share of which is likely to be Direct Foreign Investment.

4. Public Consumption will amount, on an average, to about 8 percent of GDP. This means that the government budget will generate a surplus on the current account in the latter half of the five year period.

5. The Current Account deficit in the balance of payments is likely to decline relative to the GDP. Thus, (CA Deficit/GDP) ratio will be about 5.3 percent in 1996 compared with 7.8 in 1991. This is basically an outcome of a very satisfactory expansion of the exports of goods and services. Continuing the trend of the past few years, imports will grow at a rate lower than that of exports.

6. The overall deficit in the government budget will decline from 11.5 percent of GDP in 1991 to 6.8 percent in 1996. This is made possible by a gradual reduction in current expenditure while maintaining capital expenditure at 9 percent of GDP.

INCOME DISTRIBUTION AND INCIDENCE OF POVERTY OVER THE LAST THREE DECADES IN SRI LANKA

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Introduction

Trade liberalisation in a developing country, according to the conventional wisdom, must lead to more equitable distribution of income (World Bank 1987, Krueger 1978, Keesing 1967). The reason being such liberalisation, permits the economy to move along its comparative advantage, which lies on the labour intensive industrialisation, as they are labour surplus economies. However, in Sri Lanka according to the surveys conducted by both the Central Bank and the Department of Census and Statistics, until very recently, income distribution after the policy reform in 1977. has shown a tendency towards greater inequality.

According to Kuznet a rapidly developing economy's initial income distribution gets skewed but subsequently the distribution becomes more dispersed. So called Kuznet Curves have been found in almost all rapidly developing economies. However, the rapidity and magnitude of worsening income distribution depend on the strategy adopted. Skeweness can be minimised, if labour intensive technology is adopted. Do the latest figures in Sri Lanka support the Kuznet Curve version of income distribution?

Trade liberalisation in Sri Lanka was unauthodox in many respects (Wickramasinghe 1994). Imports and domestic sectors were liberalised, but the export sector, in particular non-traditional export sector, was discriminated as the import substitution (IS) activities received more incentives than what non-traditional exports could receive. With the introduction of Board of Investment (BOI) in late 1980s, and the adoption of IMF - IBRD sponsored restructuring five year package, liberalisation of the export sector, in particular the manufactured export sector, was intensified.

Concept of poverty, which is presented in two different forms, is not easy to define. One is absolute poverty, which is defined on the basis of income received by or expenditure made by, an individual or a household. If an individual or a household obtains sufficient income or spends sufficient to consume a predetermined minimum level of energy of calories, such an individual or household is not poor. Level of energy is the minimum quantity of calories required to maintain health and working ability (WHO and ILO specifications), Poverty here means non availablity of resources to obtain minimum calories, to maintain health and working capacity, in accordance with the prevailing food culture of the community.

On the other hand, relative poverty is measured by the deviation or different classes from a predetermined group, invariably the mean income class. If the number of classes or people falling below this predetermined class increases over time, incidence of relative poverty gets worsened and vice versa.

Certain degree of ambiguity remains with regard to the conceptualisation and estimation of poverty. No definite level of income can be determined which ensures a given energy level, as different combinations of commodities can ensure the same level of energy. Wastage at different stages is high so that actual quantity which guarantees the minimum energy level cannot accurately be estimated.

On the other hand, the distribution of different groups below the poverty line creates another problem. If a poor person passes the poverty line by having been able to command sufficient resources, the head count method would indicate that there is a reduction in poverty. What happens if a person improves his income but that is insufficient for him to cross the poverty line? Head count method indicates that there is no change in poverty. For this problem Sen introduced a different method of calculation, an ordinal approach to measure poverty.

The purpose of this paper is to examine the income distribution and poverty in Sri Lanka after the policy reforms in 1977, and compare it with the pre-policy reform period.

Income distribution before and after the policy reform

Central Bank has conducted a number of Consumer Finance Surveys (CCFS) starting from 1953 upto 1981. In more recent times the Department of Census and Statistics too has conducted three surveys, in 1980/81, 1985/86 and 1990/1991. Table 1 gives the different deciles of population with their respective shares of the total income, from 1953 to 1990/ 1991.[1] According to these figues, a sharp drop in the share of the income received by the two lowest, the fifth and the highest income deciles, can be observed from 1953 to 1963 ; middle income receivers position has improved during the same period; thereafter until 1973 income distribution in Sri Lanka

has moved towards greater equality. This again is unconventional as Sri Lanka has adopted IS strategy during this period.

According to more recent figures, in 1985 the share of the lowest decile has fallen dramatically from 1.4% to 0.4%, a fall of 71%, and in 1990/91 the share of the lowest income decile has again increased dramatically to 1.6%. However, this was about 88% of the highest ever percentage received by this decile in 1973, ie, 1.8% of the total income. This increase in the share of the lowest decile may be the result of poverty alleviation programme initiated during the latter part of 1980s and the expansion of employment opportunities for low income people. In 1985 the share of the highest decile increase dramatically from 33.6% to 49.3%, an increase of 46% from 1981 value. This gain in the highest decile is at the cost of all the other deciles, as none of them showed any increase in its share over 1981. However, in 1990/91 only in the eighth decile that the share of the income has fallen marginally from their corresponding value of 1985. In all the others but one, the highest shares, were larger. The share of the highest decile fell dramatically, by 21% from 49.2 to 40.5. If these figures are correct, the income distribution in Sri Lanka again is heading towards a more equitable path.

The percentage of population lying below the average income in 1990/91 was 70%. This has remained almost unchanged from 1985. It is pertinent to cognise the fact that both in 1985 and 1990/91, the figures presented here are based on the surveys conducted by a government department.]

The share of the total income received by the highest decile in 1953 was 28 times that of the lowest decile. This rose to 33.5 in 1963. However, a dramatic drop in this quotient can be seen in 1973; it fell by 50% to 16.66. A sudden spurt in this quotient can be seen again in 1978/79, an increase by 95% to 32.5. In more recent years it stood around 25. This suggests that a dramatic reduction in inequality has been observed between 1963-73 period. Unfortunately we do not have data for any other year of the IS regime, after 1973. Hence, no concrete assessment of the movement of this instrument can be made over the entire IS period. The next available figures refer to 1978/79, that is the second and third years of the new policy regime. However, as will be shown later, the reversal trend emerged after the 1977 reforms; this quotient rose by 95% to 32.5 within a matter of five years.

Gini ratio crystalises the distribution of income into one figure, hence the movement of its value is a better barometer to measure changes in the distribution of income. Gini ratio in 1953 was 0.50 for income receivers. This fell to 0.49 in 1963 and a dramatic fall of 16% was recorded between 1963 and 1973 to 0.41. In 1978/79 the gini ratio rose again to the previous value of 0.49. Further increase in the value of gini ratio can be found in 1980/81 to 0.52. Department of Census and Statistics in its Labour Force and Socio-Economic Survey shows that the gini ratio for income receivers in 1985/86 was 0.56 and 0.43 for total household income, the corresponding figures were 0.42 for the former and 0.31 for the latter in 1981, which suggests an increase of about 40% in its value within a matter of four years.

However, Household Income and Expenditure Survey of 1990/91 from the same source brings a different value of gini ratio for 1985 as 0.46 for households. Nonetheless, the value of the gini ratio presented for 1990 in the same source is 2.3% higher 0.47. A confusing picture arises from these figures as the income received by the lower deciles have improved their positions and also the share of the highest decile has fallen dramatically, during this period. Hence, there are no reasons to believe that the gini ratio in fact has increased during this period.

Another important index which could shed some light on to the movement of the distribution of income is the share of the total income received by the lowest 40% of the population. The highest share of the total income received by this group was in 1973, 19.20% of the total income. A declining trend can be seen thereafter, from 1978/79 to 1981/82 from 16.06% to 15.32% and around 7% of income receivers in 1985/86 and in 1990/91 a turnaround took place, as it stood at 13%, same values as that in 1953. The worst situation for the poorest 40% was found in 1985, in which year this group got only 7% of the total income.

These figures can be compared with those of some selected low income developing countries. In Bangladesh lowest 40% received 23.7% in 1985/86. In India in 1983, 20.4% of the total income went to this group. In Pakistan in 1984-85, 19% was received by this group. In fact, Sri Lanka recorded the lowest share of income received by the lowest 40% of the population; among the low income economies, as reported by the World Development Report 1992. [Share of the lowest 40% in Sri Lanka is given as 11%]

General consensus among the economists is that the import substitution policies would lead to inequitable distribution of income. (Little et al 1970) However, Sri Lanka was unique in the sense the IS policies were accompanied with a very comprehensive egalitarian welfare package from the state. For example, free or subsidised food, free education, almost universal free state medical service. In addition to this welfare package, more direct measures to reduce income distribution inequalities, such as ceiling on ownership and rent chargeable on dwelling houses, land reforms and price control of basic food items, were also implemented in the 1970s. All these were responsible for bringing about a more equitable distribution of income during the IS.

The turnaround of the existing trend of more equitable distribution of income is to be seen from 1978/79. The exact year of reversal cannot be determined from these figures. However, if circumstantial evidence is accepted, ie, the change in economic policy after the policy reforms, it can be proved that this turnaround has taken place some time after 1977. Reasons being, that the welfare package was cut into bones after 1977. The price control was lifted. New industries which started after 1977 were mostly large scale units with high capital intensity. A large number of small and domestic industries went out of production after the policy reforms. [IDB 1983]

The reasons for further increase in disparities in income distribution in more recent years were the removal of most of the retained subsidies, in particular subsidy on fertilizer and agricultural credit. The inflationary trend has pushed up wages of the agricultural workers and the small farmers being unable to hire outside labour as it was more expensive.

substituted family labour. This increased unemployment and under - employment among the landless agricultural workers. Government policy of wages containing to attract foreign investment prevented the wages from rising to beat the inflation. This resulted in falling real wages. Income tax rate has been lowered consistently leaving the income of the rich at a higher level.

Highest disparity in the urban sector was the result of high rent on real estate, high profit rates on service ventures and high unemployment. The impact of the modernised share market permited a large number of hitherto non investing middle class people to investment in private industries. The 'share boom' which spurt the market price of shares by manifold, increased the income of the shareholders, who are mainly urban higher and middle classes.

Sectoral differences

Table 2 shows the shares of each quintile of income receivers in 1973, 1978/79, 1985 and 1990/91 urban, rural and estate sectors. The income inequality in the urban sector has increased from 1973 to 1978/79; it is only the top quintile in this sector, which improved its relative share. The lowest quintile in the estate sector received a greater share than their counterparts in urban or rural sectors. Income from property was an important source of income for the high income category in the urban sector. After the policy reforms in 1977, rent in urban property shot up and the imputed income of the owner - occupied dwelling houses increased.This partly explains the high disparity income distribution between urban and the other two sectors and also increase in the income of the highest quintile in the urban sector.

In 1985 highest inequality of income distribution was found in the urban sector. In 1978/79 too, the same picture was to be found and according to CCFCs a similar trend had been observed even in 1953, 1963 and 1973 surveys. Understandably this was due to the heterogeneity of the groups living in that sector. In 1985 nearly 80% of the income receivers. in the urban sector received a mean income less than the mean income of all income receivers. The corresponding figures for rural and estate sectors were 70 and 60 percents respectively. This in 1990/91 increased marginally in the urban sector to 80.7%. The corresponding figures for rural and estate sector in 1990/91 were 63% and 54% respectively. In 1990/91 nearly 77% of the urban households received an average income less than the average for the whole of the urban sector, which was almost the same in 1985/86. The corresponding percentages for the rural and estate sectors were 64% and 52% respectively.

TABLE 1

Sri Lanka: Relative Income Distribution Data, 1953 - 1990/91

Decile	*1953*	*1963*	*1973*	*1978/ 79*	*1981/* 82*	*1985/* 86*	*1990/* 91*
Lowest	1.51	1.17	1.80	1.20	1.40	0.40	1.60
Second	3.56	2.70	3.17	2.56	3.10	1.10	3.20
Third	3.56	3.56	4.38	3.60	4.40	2.00	3.90
Fourth	4.37	4.57	5.70	4.76	7.40	3.60	5.00
Fifth	5.71	5.55	7.10	5.93	5.80	4.90	6.10
Sixth	6.31	6.82	8.75	7.29	8.10	6.80	6.93
Seventh	7.94	8.96	10.56	9.2	8.60	8.10	8.27
Eighth	10.39	11.46	12.65	11.23	13.70	11.10	10.27
Nineth	14.16	16.01	15.26	15.26	13.70	12.70	14.10
Highest	42.49	39.24	29.28	39.05	33.80	49.30	40.58
Gini coef.	0.50	0.49	0.41	0.49	0.52	0.58	0.47

Source: Central Bank of Ceylon, Consumer Finance Surveys
*Department of Census & Statistics.

The mean income of the richest quintile in the urban sector was markedly higher than the mean income of the rest, suggesting that the rent component of the owner occupied houses is still a significant factor and also that all high income economic activities are still concentrated in this sector. The expansion of the service sector, in particular financial institutions, must have been responsible for this situation. The average income of the urban richest group in 1990/91, was almost double that of the rural highest income group. Another striking thing found in the relative distribution of income among sectors was that the relative importance of the urban sector improved from 28.2% in 1981 to 35.6% in 1985. This position must have further improved in 1990/91, as the highest increase in mean income between 1985 and 1990 was found in that sector.

The highest rate of increase in average income between 1985 and 1990 was found in the urban sector with 113%; 57% in the rural sector and 55% in the estate sector, according to the Department of Census and Statistics. This shift of higher mean income towards the urban sector is the result of expansion of services sector, in particular banking and other financial services in the urban sector in the more recent years and also sky rocketing of rent. Spreading of economic activities to the other areas after the policy change was very slow. However, it can be surmised that the current position may be slightly different, as a large number of garment factorries have moved into the rural sector in last few years, during or after 1990. The figures for the earlier years are not available.

In the rural sector the share of the lowest quintile has decreased from 5.39% in 1973 to 3.34% in 1978/79. The income of the highest quintile rose by 24% to 52.98% during the same period. The average income received by the rural sector during this period increased in absolute terms as a result of increase in

productivity in paddy cultivation. However, this has not improved the economic position of landless labourers. In 1978/79, 21% of the income receivers was from casual employment in the agricultural sector.. but their contribution to rural income was only 10%.[3] This sheds some light on to the cause of high disparity in distribution of income in the rural sector.

In 1985 the rural sector recorded the lowest ever share to the lowest quintile, 1.4%. In 1990 this position improved marginally to 1.5%. However, the share of the highest quintile fell by 10% to 53% in 1990 from 59% of the total in 1985. In all the other quintiles 1990 share was higher than respective 1985 values.

In the estate sector the highest quintile received less income in 1978/79 than what they received in 1973. The emerging crisis in the tea estates must be the reason of fall in income of the highest quintile. The mean income for the lowest quintile was higher than that in 1973 owing to a sharp increase in estate wages between 1973 and 1978/79. High female activity rate and narrowing of the wage differentials between male and female wage in the estates too, have contributed to this situation. Income distribution in the estate sector in 1985 worsened at a considerably higher rate than in other two sectors.

Another interesting feature is that in 1978/79 the mean income of the poorest 60% of the estate sector income receivers was higher than that of the rural and urban sector income receivers. This suggests that the income position of the poorest people in the estate sector was better than the counterparts of the rural sector, as a result of recent wage increases in that sector. Wage income is the most important source of income in this sector. However, despite this higher share of the total, actual income received by this group was significantly lower: the mean income of the deciles falling in to this category in the estate sector was significantly lower than corresponding income of the other two sectors.

Estate sector too recorded the lowest ever share of the lowest quintile in 1985 with 1.8% of the total income. In 1990 this improved to 5.9% an increase of 228%, remarkable achievement. This was mainly due to dramatic rise in the wages

TABLE 2

Mean Income Received by Each Quintile of Income Receivers by Sectors 1973, 1978/79, 1985/86 and 1990/91

Year	Quintile	Urban	Rural	Estate
1973	Lowest	5.39	5.35	7.51
	Second	10.74	11.60	11.73
	Third	16.13	16.95	14.90
	Fourth	22.12	23.39	20.65
	Highest	45.32	42.71	45.21
1978/79	Lowest	3.34	3.49	7.73
	Second	8.40	8.60	13.21
	Third	13.24	14.11	16.76
	Fourth	19.26	20.82	22.22
	Highest	55.67	52.98	40.07
1985/86	Lowest	1.20	1.40	1.80
	Second	5.20	5.60	12.10
	Third	9.80	12.20	18.10
	Fourth	15.80	21.00	23.40
	Highest	67.50	59.40	44.60
1990/91	Lowest	1.4	1.5	5.9
	Second	6.0	8.0	18.0
	Third	11.0	13.0	20.0
	Fourth	15.0	25.0	26.0
	Highest	66.0	53.0	31.0

Source: Department of Census & Statistics
Labour Force and Socio-Economic Survey - 1985/86
Household Income and Expenditure Survey- 1990/91

during the latter part of 1980s. The highest quintile share fell dramatically in 1990, from 44% to 31%, a fall of nearly 30%. This probably reflects the crisis in the tea estates where apparently the profit rates have taken a downward turn.

Incidence of Poverty

According to a study published in Asian Development Review (ADR) the poverty level in Sri Lanka has persisted over 1970s and 1980s, with a slight drop in 1970s.[4] And according to the studies cited in that article, poverty was highest in the rural sector with about 23% of the population suffering from absolute poverty and lowest was in the urban sector. Incidence of poverty in 1986/87 was between 28 - 32%.

Another study on poverty in Sri Lanka, Marga put the poverty line at Rs.37 per capita per month food expenditure in 1973 prices. Gunaratne determined Rs. 70 per capita per month food expenditure as the poverty line in 1978/79. And this was extrapolated both ways by ADR; for 1969/70 the poverty line was estimated as Rs.21 and for 1980/81 Rs.106. The figure for the year 1973 was Rs.26.17. This can be further extrapolated by using the index of food expenditure to 1992 and its value in 1990/91 Rs.331, and Rs.392 per capita per month 1992. According to the Household Income and Expenditure Survey 1990/91, 59.2% of the total expenditure went for food and drinks. By using these figures we can estimate the total expenditure of the poverty line as Rs.559.12, per capita per month, and this works out to Rs.1848.44 per household per month.

If the figures presented by Marga study are extrapolated to 1990/91 the expenditure level of the poverty line is Rs.462.80 per capita per month and Rs.1527.24 per household.

The extrapolation used here is a very crude method of estimating poverty because the food habits during this period have changed and the relative importance of different food items would also have changed, resulting in different levels of energy intake for the extrapolated

values. The difference in the values shown by the Marga study and the other study was due to the difference in the methodology of estimating expenditure, as well as the acceptance of different quantities as minimum calorie requirement to qualify to be non poor.

According to the Household Income and Expenditure Survey 1990/91, per capita expenditure range of Rs.545 - 623 and below accounts for about 45% of the population or more than seven million people. This suggests that 45% of the population in 1990/91 fall to the category of the absolute poor. However, according to Marga estimates only 23.8% of 3.38 million people are poor in 1990/91. This obviously is an under - estimate of the incidence of poverty in Sri Lanka.

The changes in the incidence of relative poverty can be estimated by examining the changes in the percentage of population falling below the mean or average income for all island. If the mean income is assumed as the poverty level in 1985/86, about 70% of the population was earning an income less than the mean income for the whole island. This means the relative poverty can be determined as 70%. This percentage has remained almost constant even up till 1990/91, according to the Household Income and Expenditure Survey. The relative poverty estimated by this method is highest in the urban sector with 80% in 1985/86, that fell very marginally in 1990/91 to 77%. The corresponding percentages for the rural and estate sectors in 1985 were 70 and 60 percent respectively. The figures for 1990/91 were 63 and 54 percents respectively.

If these figures are correct the relative poverty in all three sectors have fallen from 1985/86 to 1990/91. Not only that the relative poverty has fallen in two sectors, rural and estate sectors, the percentage points of the fall are also almost the same. However, the fall in relative poverty in the urban sector is relatively less, only by 3 percentage points.

Concluding Note

In this article the income distribution in Sri Lanka has been examined, by using both Central Bank Consumer Finance and Department of Census and Statistics Survey's data. The data from the two sources, and from two surveys from the same source, cannot strictly be compared owing to the differences in the methodology used. Nevertheless, data suggests that a trend of more equitable distribution of income has emerged after 1963 up till about 1977. Subsequently, a reversal trend has emerged and the distribution of income has moved to a more unequal trend up till about 1990. Most recent data, 1990/91, suggests that a reversal trend is slowly emerging, though some inconsistency in the data is suspected. This may prove Kuznet Curves are even true for Sri Lanka.

However, the data on more recent years came from a government department which leaves some room for suspicion for their accuracy. The egalitarian policies of the 1960s and 1970s were responsible for the equitable distribution of income during the IS period. The policy reforms in 1977 were responsible for skewing of the distribution in the late 1970s and the whole of 1980 decade. If the recently emerged equalising trend continues, the credit will go to the labour intensive economic activities, emerged out of less controlled trade regime initiated very recently, in particular in the latter part of 1980s.

References

Central Bank of Ceylon - Consumer Finance Survey of 1953, 1963, 1978/79, 1980/81.

Department of Census & Statistics, Labour Force and Socio - Economic Survey - 1985/86, Household Income and Expenditure Survey 1990/91.

Industrial Development Board (1983), Survey of Effects of Liberalisation of imports on Local Industry, Colombo.

Gunatratne L. (1985)- Measurement of Poverty in Sri Lanka, mimeo.

Gunatilake G. et al, (1992),- "Rural Poverty in Sri Lanka: Priority Issues and Policy Measures, Asian Development Review, Vol. 10, 1.

Keesing D.B. (1967), Outward - Looking Policies and Economic Development", Economic Journal, Vol. 77.

Krueger A. O. (1978), Foreign Trade Regimes and Economic Development: Liberalisation Attempts and Consequences, Cambridge, Mass.

Marga (1981), An Analytical Description of Poverty in Sri Lanka,

Little I. M. D., Scitovsky T., & Scott M., Industry and Trade in Some Developing Countries, Oxford University Press, London.

Sen A. (1976) Poverty: An Ordinal Approach to Measurement, Econometrica, Vol. 44, 2.

Wickramasinghe J. W. (1994), Economic Consequences of the Policy Shift from Import Substitution to Liberalised Imports - Case of Sri Lanka - 1960 - 1984, S. Godage & Bro. Colombo.

World Bank (1987), World Development Report.

Notes

1. These figures from the two sources, and also between surveys of the same institution, are not strictly comparable owing to differences in conceptualisation and methodology used by these two institutions for different surveys.
2. Central Bank, Report on Consumer Finances and Socio - Economic Survey, 1978/79, p. 105.
3. Gunatilake G. et al, (1992), "Rural Poverty in Sri Lanka: Priority Issues and Policy Measures, Asian Development Review, Vol. 10, 1.

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While all these social and environmental costs cannot be entirely avoided, care should be taken to ensure as far as possible that rapid growth ensures equity and does minimum damage to the environment.

The purpose of rapid economic development is basically to improve people's lives, to create an enabling environment for people to enjoy long, healthy and creative lives free from want. Thus, economic development should ensure an equitable distribution of the benefits of economic growth. It will be socially unacceptable if the benefits of rapid growth accrue to a few and fail to reach those living in poverty. Besides, people will support rapid growth and the sacrifices in entails only if they have a stake in it - if they too share its fruits. As all may not share these benefits in terms of employment and income, poverty alleviation programmes and social safety nets embracing labour-intensive public works projects, nutrition programmes, family benefits and pensions, human resource development schemes and targeted food subsidies focussed on the lowest income groups will need to be deployed in combination with population control measures and progressive taxation. As human life can thrive only in a friendly environment, rapid economic growth should also be ecologically sustainable; it should as far as possible fulfil the needs of the present without polluting, overexploiting and destroying our finite natural resources thereby reducing the quality of life and limiting the potential for meeting the needs of future generations.

Traffic Congestion in the Greater Colombo Area: A Major Bottleneck to Achieving NIC Status at the Turn of the Century?

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Transport - A Major Factor Improving the Economy and Social Life

Transport provides mobility to commuters who may be employees in industry and commerce or in administration, finance, or other services, and even to those commuters who are also consumers needing smooth the mobility from their homes to work places and markets. Furthermore, raw materials (both imported and local) need to flow to factories and end products need to flow to the domestic market as well as to foreign markets through ports.

Major technological breakthroughs realised in the automobile as well as the railway locomotive industry have made the two most commonly used modes of domestic transport cheaper and faster and have contracted distances between distant places. These have now moved much further with the introduction of the "Train de Grand Vitesse" (TGV) in France and the Bullet Train in Japan. These trains have been able to open access to hinterlands which had hitherto remained unmobilised and this has led to the commercialisation of agriculture and the establishment of industrial enterprises integrating them with the old traditional capital and suburb driven national economies.

Technological innovations experienced in the automobile and railway industry generated waves of centrifugal forces removing the old industries and business establishments from the city centres and reestablishing them, and also locating new industries away from urban centres. Moreover surrounding residential belts have moved further back to peripheral areas which had been hitherto under developed. At the same time the abundant low cost labour, spacious land, raw material and localized market in the hinterland generated a centripetal force attracting industries, business and people to those areas.

Equal opportunities were provided to the citizens who lived in enclaves alienated from traditional national business/industry/urban activity areas. Thus the impact of technological improvements in the transport industry led to new locations for new industrial and business centres with residential zones surrounding them, opening new vistas in industrial, agricultural and business enterprises generating dynamism in the hinterland and integrating it into the national economy.

Other than these far reaching economy-wide effects through providing the most essential mobility, and acting as a lubricant blending resources together for enhanced production, the efficient, least cost, and least time consuming transport network gave opportunities to workers and employees to possess separate housing units in the pleasant rural suburban areas also equipped with urban amenities such as electricity, in contrast with the pressurised, unpleasant life of city high rises. This again resulted in a dampening effect on the exorbitant land rent experienced in the old city centres thereby generating a fresh momentum to the city economy.

The Sri Lankan Case

In the light of this background demonstrating the impact of transport on the national economy it is appropriate to look into the Sri Lankan Transport Network exposing some burning problems and seeking alternative solutions for further investigations and dialogue for successful planning and implementation.

The Transport Need of Men and Material Increased

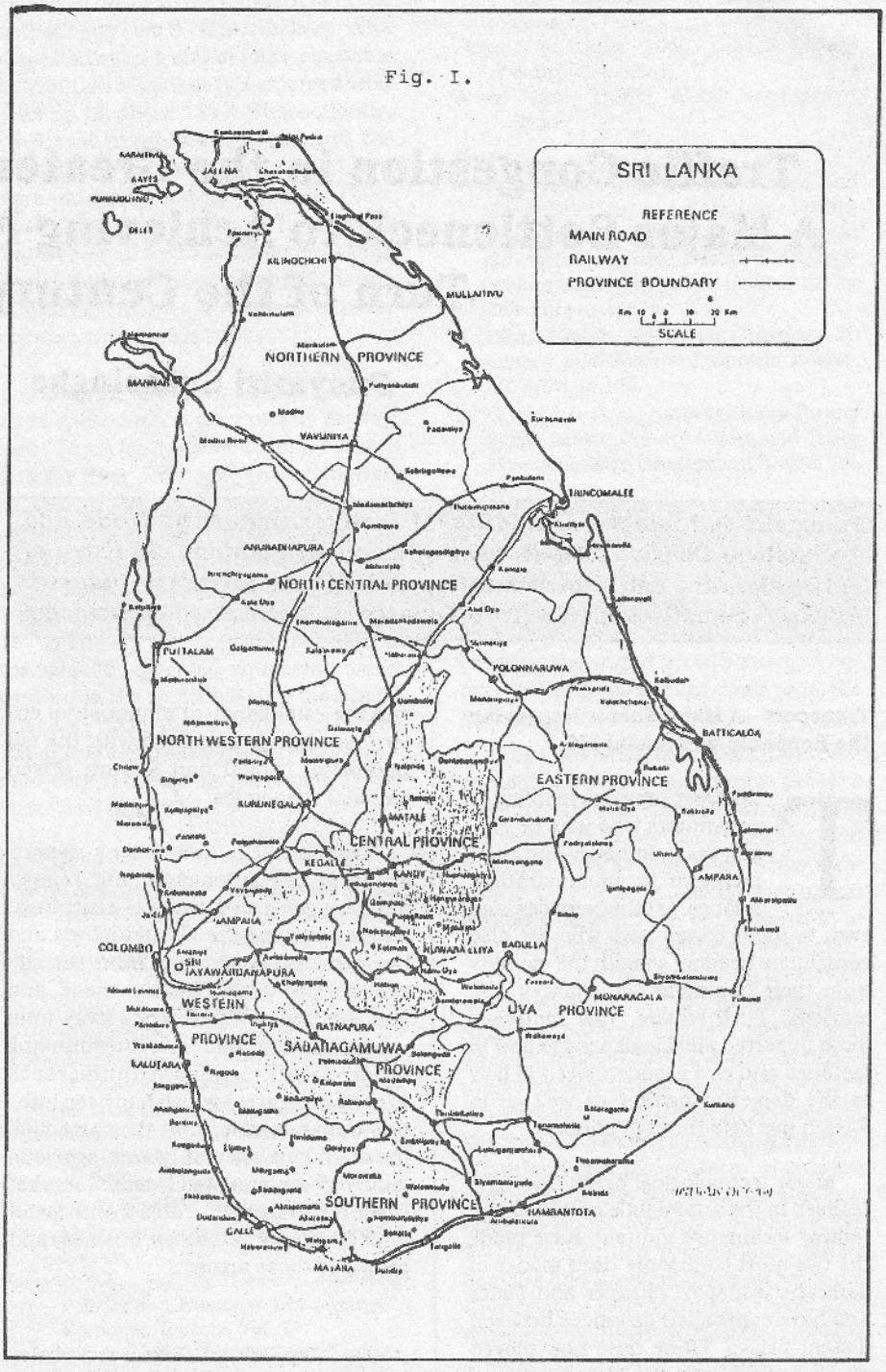
Prior to 1977 the inward looking import substitution economic policy identifying the domestic needs attempted to satisfy them by releasing productive forces to improve agricultural and industrial enterprises catering to domestic needs. These enterprises were insulated from the competition arising from imported products by erecting tariff and non-tariff walls against them.

The ideas and opinions expressed here are personal to the author and they do not reflect or express the opinions of the institutions he serves.

The post 1977 period was marked by a newly generated economic momentum based on an export oriented, open economic policy improving the international competitiveness of our industries. The conventional export import economic policy founded on the plantation economy was restructured to emerge as an industrial economy based on market forces. Liberalisation of imports from their tariff and non-tariff saddle led to the exposure of domestic industries to international competition urging them to improve their efficiency as well as providing them with low priced inputs to build strong domestic industries producing low priced quality products for international markets. The Free Trade Zones established in Katunayake and Biyagama and presently at Koggala gave numerous incentives to attract foreign investments and technological expertise and business acumen to Sri Lanka. Thousands of workers started to move to Colombo and its newly built adjacent industrial zones.

The second phase of this industrial strategy started after 1989 with the establishment of 200 garment factories in the hinterland scattered all over the island, making the whole island a free trade zone. Other than the tree crop economy dominated by exports of tea, rubber and coconut products, the transport network has to cater to the manufactured products dominated by garments. Although it would be appropriate to develop Galle and Trincomalee as other ports in Sri Lanka, this has not yet been realized mainly due to financial constraints. Hence, though production capacities were distributed throughout the island, the products manufactured had to be exported through the only port in Sri Lanka - Colombo. The inputs thus imported for these industries have likewise to come through the port of Colombo and be despatched to those centres. Hence, Colombo strengthened its position as the gate way to this rapidly flourishing import-export economy.

Fig. I.



The road users doubled, trebled, quadrupled, and increased even more rapidly with the new users emerging from these industrial activities and highly promoted tourism specially concentrated in the island's west coast. Other than these economic activities oriented to export and import through the Colombo port, the traffic requirements again moved towards Colombo with the flourishing of commercial and financial activity as the hub of the economy and also almost all the major administrative establishments being located in Colombo or nearby at Sri Jayawardanapura. Education and health institutions located in Colombo and the suburbs increased commuter travelling incessantly. Traders and consumers flocked again towards Colombo and its suburbs looking for consumables freely available under the economic policy. However, the increased transport needs have to be met utilising the existing road and rail network developed in the colonial times.

The Vehicle Population on the Roads Has Increased

It was evident that the greatly increased motor transport needs could not be satisfactorily met by the Sri Lanka

Transport Board. The Government's passenger transport monopoly was terminated and all encouragement was given to the private sector, removing import restrictions allowing the import of great numbers of passenger vehicles in a very short period of time. Other than this large fleet of ever increasing buses and passenger vans, a heavy influx of other vehicles like cars and motor bicycles also took place under special privileges to import automobiles given to export oriented industries and certain categories of public servants. The present traffic survey in Colombo reported that light vehicles were covering most of the road surface in the city. The impact of substantial recent reduction in tariffs on lighter vehicles, will also be seen before long. The giant construction vehicles, petrol, milk, and rubber latex bowsers/tankers and long containers are frequently seen congesting traffic on the already congested roads in the city and suburban complex. Although the vehicle population on the roads has increased incessantly the existing road network has not changed to accommodate them, but been subjected only to marginal improvements such as straightening and widening and putting on of rubber mixed surfaces and creating short new deviations, such as Duplication Road which are highly insufficient.

The Automobile and Rail Network has Basically Not Changed

Although the traffic on the roads has increased at a very great speed the automobile and railway network (see Fig. 1) dating back to the colonial days has remained almost unchanged except for marginal improvements.

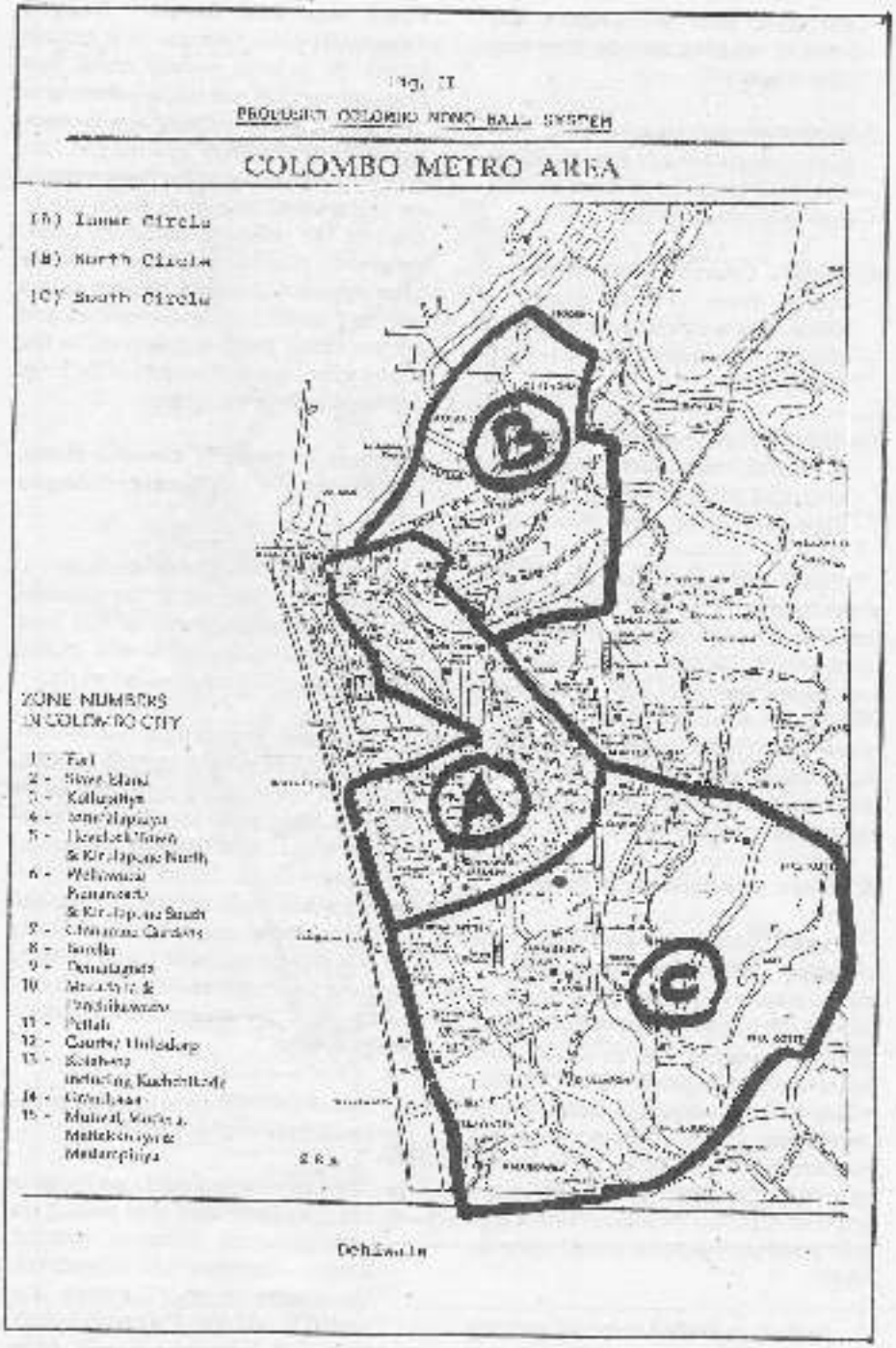
Except for the proposed Southern and Colombo Katunayake Express Ways (both of them are proposed toll roads) all other World Bank sponsored,

(1) Colombo - Kandy
(2) Colombo - Hanguranketa
(3) Greater Colombo and Southern Province Road Linkages (500 km)

and Asian Development Bank sponsored,

(1) Colombo - Ratnapura - Wellawaya
(2) Ambepussa - Hatton
(3) Dambulla - Anuradhapura

projects are meant to rehabilitate the existing road network, improving the surface but not widening them. The shadow projects proposing to divert the out going traffic through inner and outer



circles would not give much help to ease the traffic congestion in the city and Greater Colombo Area as the bulk of the activities needing transport are located within the Greater Colombo Area.

The Current Transport Crisis in the Greater Colombo Area Emerged Wasting Thousands of Productive Manhours on Roads

The present transport crisis/impasse/breakdown in the Greater Colombo Area could be quite clearly seen in the traffic congestion along almost all the major trunk roads leading to Colombo.

(1) Galle Road congestion starts from Kalutara - Panadura, is intensified after Ratmalana, and leads to vehicles inching their way after Dehiwala.

(2) High Level Road congestion starts from Hanwella - Kottawa area, is

intensified after Maharagama and leads to vehicles inching their way after Nugegoda.

(3) Negombo - Katunayake Road congestion starts from Ja-Ela - Kandana area and leads to vehicles inching their way after Wattala.

(4) Kandy - Colombo Road congestion starts from Yakkalamulla - Kadawatha area makes another procession towards Colombo from Kiribathgoda.

(5) Hanwella Low Lying Road congestion starts from Habarakada - Aturugiriya area and leads to vehicles inching their way after Malabe - Koswatta.

This traffic congestion starts from about 6 a.m. almost on all the roads with fleets of school vehicles and continues until about 10 p.m. with returning evening workers with intermittent brief respites. In a congested hour it takes nearly two hours to reach Colombo from Panadura whereas the train takes only 45 minutes and only about 20 minutes by the electric train.

A Satisfactory Solution is Needed

Hence, there is a burning need for planning and implementing a proper transport project involving the City area, solving the transport impasse now being experienced which will be much more aggravated by not providing the required commuter and material mobility and be debilitating to the national economic performance. In order to maintain the economic dynamism generated in the national economy this aggravated transport problem has to be solved immediately.

As there is limited scope for evolving alternative motorways correcting the zig zag motorways leading to traffic congestion due to financial and social constraints involving the acquisition of high value land displacing a large number of families, one has to look at the other alternative which is that the railway system be overhauled to suit the present needs.The present railway projects envisage extensions of the railway from terminal points to join Kataragama, Potuwil, Nanuoya - Ragala and won't ease nodal traffic congestion, except in the cases of the Ragama - Maradana Third Line and Broad - Gauged Avissawella Line projects, to a certain extent. At present railway traffic has been improved to run trains adhering to the time table and utilising new locomotives. But the railway has not yet had much of an effect on attracting commuters and material transport which can be done by the railways easing the traffic congestion evident in the city area. It has been reported that the railway caters only to 7 percent of the commuters and 15 percent of goods transported in the island which is a tiny fraction of the huge potential railway capability.

An Electric Two-way Circular Monorail System for the Greater Colombo Area

Therefore it is suggested that a monorail system be adopted in the Colombo city and suburban areas, as has been done in Sydney, Australia and capital cities in the other parts of the world.

The underground city suburban railway metro grid system seen in London, Paris and other major cities cannot be adopted here as it involves excessive funds which cannot be met by a developing country like Sri Lanka. The monorail system which could be erected along and over the existing one, as much as using the not much congested roads utilising concrete grid work could be much less costly than the subterranean railway metro system.

It is proposed to have three monorail circles as indicated in Fig. II.

(A) The Inner Circle would ease the most congested city core area joining the port, financial, business, judicial, health, education and administration concentrations. The circle suggested would join Fort with Pettah, Hultsdorf, Maradana, Borella, Independence Square, Bambalapitiya, Kollupitiya, Town Hall, Union Place and Slave Island area.

(B) A North Circle is suggested joining the Fort with the Port and storing establishments, sundry industrial establishments,motor and spare parts establishments located along Aluthmawata Road, Modera, Sedawattha, Dematagoda - Kolonnawa area, Panchikawatta and Maradana.

(C) The South Circle could serve them extensive business, administration and residential concentrations along the line Borella, Rajagiriya, Jayawardanapura Kotte, Etul Kotte, Pita Kotte, Nugegoda, Kalubowila, Dehiwala, Wellawatta joining the inner circle at Bambalapitiya or diverting from Wellawatta to join Narahenpita area with Borella.

A non-stop two way electrified monorail system could ease the almost stationary traffic originating along those noted trunk motor roads leading to the city. This will ease the city area not only from traffic congestion but also from noise and air pollution emanating from stationary motor vehicles.

An Electrified Two Way Circular Railway Line to Cover the Greater Colombo Hinterland

The electrification of existing railways has been proposed in a number of studies and the most recent ones are as follows:

(1) Sofrerail, France (1991) - Rs. 17.5 bn.
(2) Japanese Transport Consultation Association (1990) - Rs. 15.0 bn.
(3) Sri Lanka Railway (SLR) - Ceylon Electricity Board (CEB) (1991) - - Rs. 8.4 bn.

Although there are differences in those detailed projects they basically suggest the electrification of the Colombo based coastal railway lines.

For example the SLR/CEB railway electrification project consists of four phases as follows:

Phase 1 - Colombo Fort to Ragama	Rs. 1.3 bn.
Phase 2 - Colombo Fort to Kalutara South	Rs. 2.2 bn.
Phase 3 - Ragama to Polgahawela	Rs. 3.5 bn.
Phase 4 - Ragama to Negombo (including Airport Branch Line)	Rs. 1.4 bn
Total	Rs. 8.4 bn.

It must be emphasised that these electrification projects will improve the speed of commuter travel and material transport, at higher frequencies, contracting distances, thereby spreading industrial and business activities to those

areas which lag behind, covering large parts of the Colombo - Gampaha and Kalutara administrative districts.

Although the initial costs are high the electrified railway would provide a cost effective and environmentally sound transport mode reducing transport fuel costs by large amounts and utilizing cheap non peak hour electricity to improve the transport of men and material which really is the prime factor moving the wheels of industrialisation of Sri Lanka.

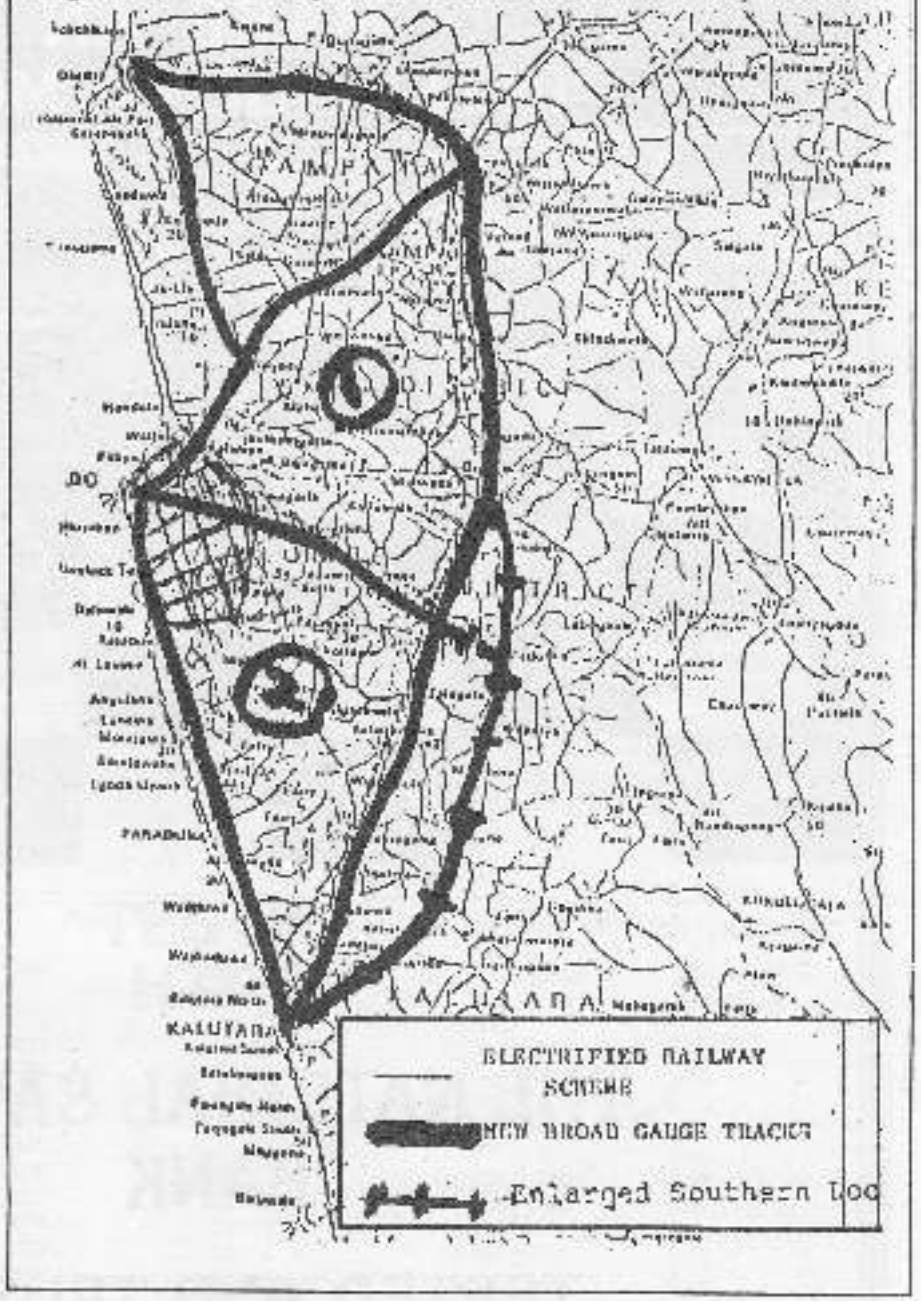
As suggested by Mr. P. Rajagopal (1993) (see Fig. (II) this railway electrification project could be extended to serve the greater hinterland not only ease in the traffic congestion but giving a greater impetus to a rapid industrialisation programme at a much lower cost involving a Colombo-based larger hinterland providing employment and pleasant residences as indicated in the preamble to this paper. The proposed efficient low cost modern faster electrified railway transport system opening new areas exposing their low cost human and rich natural resources and most of which are already served by the national hydro-electricity grid would definitely be a magnet pulling a larger influx of foreign investors as well as local investors to these areas, integrating them closely into the national economy. This concept of attracting industries to earlier "backwash" areas utilising their labour, raw materials and markets to develop these areas hitherto utilised to serve the industries centered in the Greater Colombo Area could be spreaded to further distant areas constructing new electric railway lines for every 25 or 30 or 50 miles parallel to this proposed circular railways in the years to come.

(1) The two way North Circle (loop) joins Colombo with Negombo and opens new areas of Katana - Dunagaha, Divulapitiya, Veyangoda to join the existing rail track to Colombo. Again it starts from Veyangoda opening new areas of Radawana, Pugoda, Dompe, Homagama, Sri Jayawardenapura Kotte, Talangama.

(2) The two way South Circle joins the Colombo-Homagama stretch opening new areas of Polgasowita, Kahatuduwa, Gonapola Bandaragama, Gonaduwa, Kalutara joining the existing Southern coastal railway. As the proposed Southern Express Way runs through Bandaragama serving those areas, it may be appropriate to extend the Colombo - Homagama track to Padukka and join with Hanwella, Kindelpitiya, Horana, Kehelkenawa, Galpatha and Kalutara, expanding the proposed Southern Loop.

Appropriately joining these two projects,

Fig. III The Proposed Electrified Railway Scheme.



(1) Two Way Electrified Monorail Circular System for Greater Colombo Area (3 circles)

(2) Two Way Electrified Railway Circular System for a Greater Colombo Hinterland (2 circles)

could not only solve the threat of a collapsing transport system but also could provide a greater impetus to another phase of the much needed industrialisation programme assisting to establish

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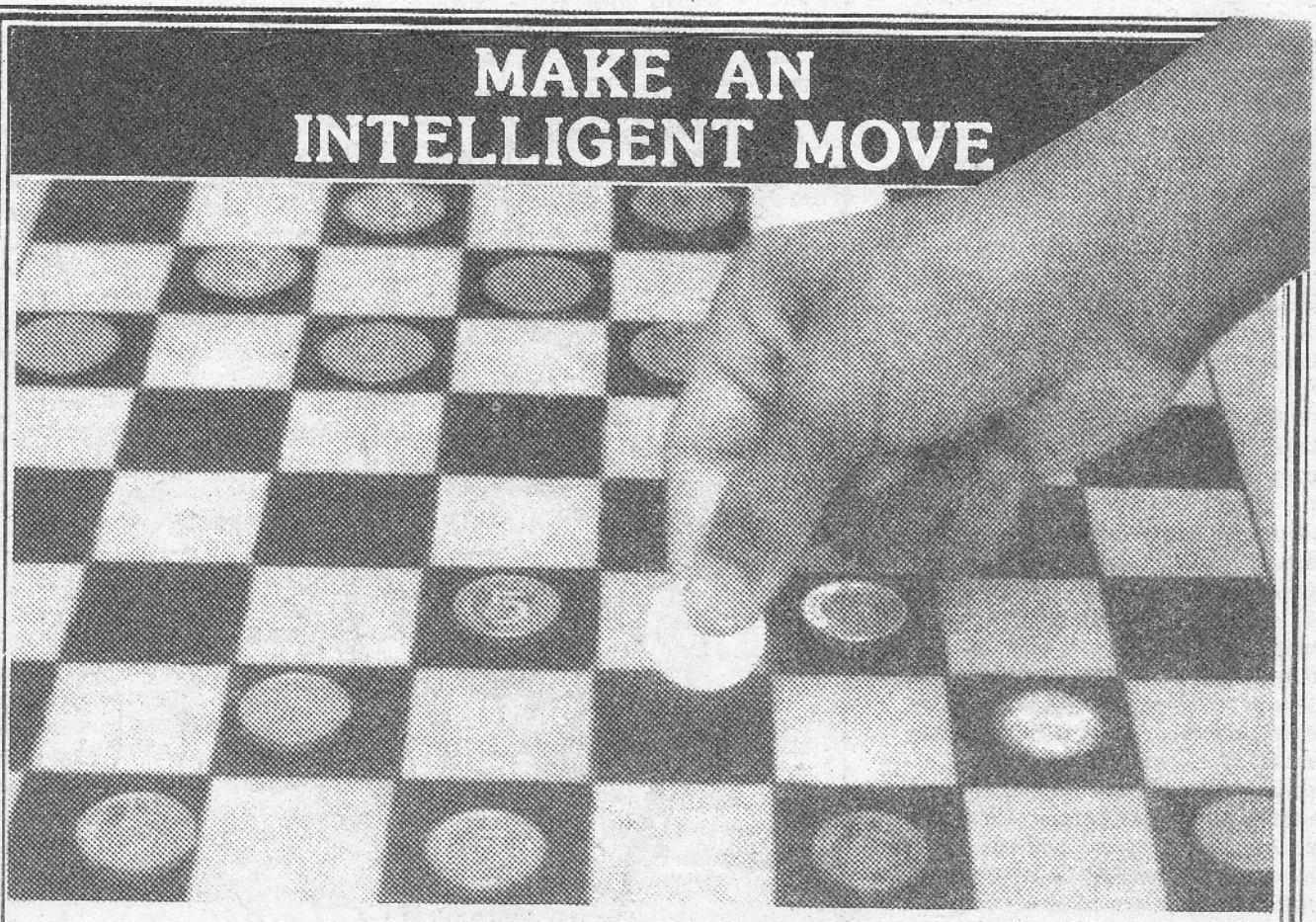
MAKE AN INTELLIGENT MOVE



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Rice Self Sufficiency and Food Security

Dr. Fredrick Abeyratne

Rice and Self Sufficiency are two terms which are politically, economically, and culturally very sensitive. There have been various arguments in the recent past with regard to these two terms. One school of thought believes that in food security terms (as well as for cultural reasons), we should meet rice self sufficiency at 'any cost'. On the other hand some economists and donor agencies argue that there can be serious mis-allocation of scarce resources in trying to meet the goal of rice self sufficiency, and that it will have serious implications in the long-run, especially in respect of the growth of the agricultural sector which is a major contributor to the GNP. There is an element of truth in both these arguments. Hence, one needs to strike a balance, i.e., while not jeopardizing the food security aspect, efforts must be taken not to mis-allocate resources. Obviously this is a daunting task, given the political and cultural dimensions as well.

To add to the multiplicity of goods there have been a number of other confusing signals. Since the mid 1980's, there has been much talk about reaching near self-sufficiency levels and various projections and predictions made with respect to reaching self sufficiency. Also there was the fear that we will be producing excess rice which will not have an export market due to 'low quality'. 'Self-Sufficiency' in all these news items refers to local production as a percentage of the total rice requirement, i.e. local production plus imports. Given the above scenario two questions come to mind: (1) Is rice self sufficiency as defined above a good indicator of food security? (2). Secondly, are there significant economic reasons why we should not increase rice production to reach rice self sufficiency levels? These two aspects are discussed briefly in this paper.

Firstly the issue whether self sufficiency in rice alone is a good indicator of food security is discussed. The growth in paddy production Sri Lanka has achieved over the last three decades is remarkable (Table 1). It is due mainly to the excellent work of our rice researchers and the provision of infrastructure facilities, such as irrigation, by successive governments. Local paddy production which was around 0.9 million metric tons in 1960/61 has increased to about 2.5 million metric tons by 1990. Based on these figures Sri Lanka has reached well over 90% self-sufficiency in rice. However, this cannot be taken as a true indicator of food security due to several reasons. In the past, cereal production which generally looked after the food security concerns, mainly comprised of locally produced rice and other cereals such as millets. However, over the years the cereal category other than rice seems to have been substituted by imported wheat. Which means that we are only partially self-sufficient in varieties of locally produced cereals mainly rice. Published statistics indicate that inspite of production growth in rice and concurrent reduction in rice imports, wheat imports to the country too have been maintained at

TABLE 1

Paddy Production and Population Over The Period 1970-1991 in Sri Lanka

Year	** Production ('000mt)	*Population ('000)	Prod./Popn.
1970	1615	12,514	0.12
1971	1398 (13.5)	12,702 (1.48)	0.10
1972	1312 (6.2)	12,902 (1.56)	0.10
1973	1312 (0)	13,170 (2.00)	0.09
1974	1002 (23.1)	13,381 (1.60)	0.11
1975	1154 (-27.5)	13,003 (1.65)	0.08
1976	1452 (15.5)	13,825 (1.63)	0.09
1977	1977 (3.32)	14,053 (1.64)	0.11
1978	1880 (12.7)	14,202 (1.70)	0.13
1979	1917 (1.4)	14,546 (1.73)	0.13
1980	2133 (11.3)	14,819 (1.87)	0.14
1981	2329 (8.5)	15,132 (1.80)	0.14
1982	2155 (-8.3)	15,359 (1.8)	0.14
1983	2483 (15.2)	15,133 (1.8)	0.16
1984	2413 (-2.8)	15,318 (1.80)	0.15
1985	2034 (0.2)	16,205 (1.77)	0.15
1986	2500 (-1.7)	16,117 (1.54)	0.16
1987	2128 (-17.8)	16,361 (1.5)	0.13
1988	2477 (16.4)	16,580 (1.37)	0.14
1989	2063(e) (-16.7)	16,813 (1.37)	0.12
1990	2538 (23.0)	16,893 (1.3)	0.14
1991	2391 (-5.8)	17,247 (1.3)	0.13

Source : *FAO Computer Services, Rome, Italy
** FAO Computer Services, Rome, Italy and Central Bank Reports.
In parenthesis the percentage of decrease/increase of reduction/population over the preceding year.

very high levels. For example with the increase in local production, rice imports have come down drastically to about 175,000 metric tons per annum in the 1980's compared to around 450,000 metric tons per annum imported in the mid 1970's. But we do not see a commensurate reduction in wheat imports. In fact wheat imports have been maintained at high levels around 600,000 to 700,000 metric tons per annum of wheat flour and raw wheat (Table 2). Hence, roughly the total cereal requirement at present is the sum total of locally produced rice, imported rice and wheat. Of course, one can argue that rice and wheat cannot be added using simple arithmetic due to differences in nutritive value, difference in consumer preference, and other non-economic factors. While accepting this argument, one has to accept that wheat is a close substitute to rice and simple summation would give us a rough indication of the quantum of rice required for our food security. This very rough and simple exercise would demonstrate that locally produced rice has contributed only around 65% to the total cereal requirement over the last decade (Table 3).

TABLE 2

Imports of Rice and Wheat Flour, Sri Lanka, 1975-1991

Year	Rice Imports ('000' m.t.)	Wheat equivalents ('000' m.t.) (wheat + flour)
1975	449.9	198.7
1976	436.2	548.7
1977	528.6	877.4
1978	106.5	959.6
1979	208.2	791.5
1980	230.9	711.6
1981	156.8	513.9
1982	160.9	604.7
1983	124.2	598.2
1984	26.5	600.4
1985	182.3	723.8
1986	220.1	691.3
1987	102.4	588.6
1988	186.6	647.9
1989	313.4	726
1990	172	577
1991	133	670

Source : FAO. FAO Trade Year Book (Rome: FAO, 1971-1989)

TABLE 3

An Assessment of the Status of 'Self-sufficiency' of Rice in Sri Lanka 1981-1991

	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
Imports											
a) Rice ('000'mt)	156	160	124	26	182	220	102	186	313	172	133
b) Wheat/ flour ('000' mt)	513	504	598	600	723	691	588	647	726	577	670
Production											
c) Paddy (mt)	2230	2155	2483	2413	2834	2500	2128	2477	2003	2538	2389
d) Paddy available for consumption (allow 10% wastage etc.)	2007	1940	2235	2172	2371	2331	1916	2230	1857	2285	2151
e) Rice available for consumption (d) x .68	1364	1319	1519	1476	1612	1585	1302	1516	1262	1553	1462
f) Total starch consumption (a) + (b) + (c)	2033	1983	2241	2102	2517	2496	1992	2351	2301	2302	2265
g) Total prod. as a % of total starch consumed	67	66	67	68	64	63	65	64	54	67	64

Source: *FAO, FAO Trade Year Book (Rome, 1971, 1985)
& Economic and Social Statistics of Sri Lanka, Central Bank Reports.

TABLE 4

Domestic Resource Cost Ratios by Region Under Different Assumptions on Irrigation and Wage Rates

		With New Irrigation		With Irrigation Rehabilitation		
	Wage at	DRC[1]	RCR[2]	DRC[1]	RCR[2]	Yield (mt/ha)
Kalawewa	Market Rate	49.42	1.21	33.11	0.79	5.026
	Shadow Rate	42.94	1.09	26.41	0.65	
Polonnaruwa	Market Rate	63.44	1.56	38.80	0.96	4.111
	Shadow Rate	52.83	1.30	29.53	0.73	
Hambantota	Market Rate	64.01	1.40	41.75	1.03	4.139
	Shadow Rate	53.93	1.33	32.34	0.80	
Anuradhapura	Market Rate	-	- -	49.47	1.22	2.033
	Shadow Rate			39.16	0.96	
Kurunegala	Market Rate	- -	- -	54.00	1.34	3.276
	Shadow Rate			43.07	1.07	
Kegalle (Rainfed)	Market Rate	68.69	1.57	- -	- -	2.587
	Shadow Rate	48.04	1.18			
Weighted Average	Market Rate	- -	- -	45.78	1.12	- -
	Shadow Rate			30.33	0.88	

Source: ARTI/IFPRI Study 1990/90

This involves a number of implications. Most importantly the contribution by local rice production towards food security is less than what was thought. Also increasing rice production will not pose the immediate danger of over production. With the increase in production relative prices will move in favour of rice, resulting in an increase in demand. Of course, consumer preference and other non-economic factors will play a part in deciding the extent to which there will be a shift. Therefore, a deeper study in this area is required.

The second question was related to the economic feasibility of self-sufficiency in rice. This is based on the concept of comparative advantage. Economists will argue that where a country has a comparative advantage in the production of a particular commodity, allocation of resource for the production of such commodities should be strengthened. With regard to rice, the argument was that Sri Lanka does not have a comparative advantage in growing rice. Hence, it is much more economical to import rice and diversify the resources to produce other commodities. According to the limited studies conducted recently by the Agrarian Research and Training Institute (ARTI) this statement is only partially true. These studies using **Resource Cost Ratios** (RCR) and **Domestic Resources Cost ratios** (DRC) as indicators of efficiency or comparative advantage, indicate that Sri Lanka as a whole has a comparative advantage in producing rice (Table 4). However, a desegregated analysis indicates that this comparative advantage is found mostly under major irrigated conditions, where productivity is high due to assured supplies of irrigation water.

This finding has several implications. Firstly, there is a possibility and economic rationale to produce and increase production at least in the major irrigation areas. At present due to various reasons there is a stagnation in rice productivity. Hence, every effort should be made to advance the production frontier. Secondly, in areas where there is a low efficiency, mainly in the minor irrigation and rainfed areas, soil type permitting, more water efficient crops should be tried out. It should be taken into account that nearly half the paddy lands in this country are undiversifiable', since they comprise mostly of low-humic-gley soils. In fact although a land rent has been included for the Comparative Advantage Studies conducted by the ARTI the opportunity cost of land is zero for low-humic gley soils, since the possibility of growing other crops in these soils is very remote. Hence, if this factor is considered the RCR and DRC figures will be more favourable towards rice. More desegregated studies, stratified according to soil type, are needed to identify areas which have a comparative advantage.

In conclusion one can say that with respect to food security, local rice production can and must play a bigger role in the future. Sri Lanka must try to exploit the comparative advantage it has in certain geographical areas by continuing to grow rice and by increasing it further through increased productivity. It can also diversify cultivation in some of the rice lands by growing other substitute crops to increase income of the farmers.

A PREVENTIVE APPROACH TO REDUCE URBAN AIR POLLUTION

Mallika Karunaratne
Additional Director, Department of National Planning

Air is a free good. One person's consumption does not reduce the consumption of another. It regenerates itself and supports all forms of life on earth.

Although a person's consumption does not affect the quantity of air for that matter the quality, a person's course of action can surely affect its quality. If a person, for example, burns up some substance it emits into the air smoke, fumes or other gaseous emissions causing air pollution. Such polluted air alters the ambient quality of air in a given locality. The polluted air is a negative externality consequent upon of a certain course of action which affects not only the polluter himself but in fact the others in the vicinity as well. This non exclusive nature of natural resources amply justifies state intervention in dealing with the problem of air pollution.

Air pollution is caused by natural causes and man-made causes (economic activities). Air pollution problems arising from economic activities are far more severe than those arising from natural causes. Activities geared to for industrial production today are not as severe in causing air pollution as they used to be in the early years of industrialization in the West, due to improved science and technology. However, developing countries in their pursuit for rapid industrialization and consequent urbanization, have unconsciously caused a stress on the natural resources and the environment. As a result, air pollution primarily due to vehicle emission has been found to be a significant environmental problem in big cities in the developing world, like Bombay, Bangkok, Beijing,and Mexico City.

In the case of Sri Lanka, air pollution has received attention mainly on account of growing vehicular traffic in the City of Colombo and in some other towns. Data on a Traffic Count undertaken in 1993 shows that over 173,600 vehicles pass through 8 points on the main access roads to the City of Colombo. Table 1 shows that the most heavily congested roads are Galle Rd, Puttalam Rd and Kandy road at the respective check points.

A pilot survey was carried out by the CISIR to measure air quality in selected locations in the City of Colombo in 1991. Seven sampling sites were selected namely: Thummulla Junction, Wellawatta, Maradana, Eye Hospital Junction, Slave Island, Borella, and Fort. The findings of this survey have shown that even in the most congested locations, the exposure levels have not reached dangerous proportions. However, the current rate of vehicle growth and change in the composition of the vehicle fleet could have a significant impact on the deterioration of air quality in the near future. Therefore, it is justifiable from the societal point of view to intervene in the protection of people from the possible ill effects of air pollution.

Diesel and petrol are the main source of vehicle emission. In the process of generating motive power through combustion, the fuel releases emissions into the air in the form of smoke and other gaseous substances.These emissions are identified as Oxides of Sulphur (SOx), Oxides of Nitrogen (NOx), Carbon monoxide (CO), Hydro carbon and lead (PB). Suspended Particulate Matter (SPM) is common in tropical weather where dust particles are suspended within a close range of about 30 feet from the ground level.

Pedestrians, vehicle riders and people living by road sides are subject to exposure to this polluted air. There is a health risk associated with breathing polluted air. Medical studies have established a close association between diseases in the respiratory track and blood cancer from exposure to high doses of emissions. Air pollution also affects productivity. Loss of income due to illness or poor health from exposure to polluted air has been established having a negative effect on productivity. Pilot studies have been undertaken elsewhere to measure the cost of air pollution taking into account medical expenses and the loss of earnings. Prevalence of excessive amounts of carbon dioxide in the air is feared for possible adverse effects such as ozone depletion and global warming. To check this situation international organizations like WHO and UNIDO have set up minimum air quality standards required to be adopted by countries.

The degree of vehicle emission is dependent on several factors; most crucial amongst them are the type of fuel used, the age of the vehicle, the condition of the engine, the condition of the road, and the efficiency of the traffic flow. Intervention in the efficient control of air pollution should comprise one or several measures that are able to deal with these conditions.

Vehicular traffic movement on Sri Lanka's roads has increased significantly during the past 10 years. The total stock of registered vehicles (excluding motor cycles) has doubled from 331,000 to 670,000 during the period 1980-90. The annual growth rate of vehicles is around 7.6% during the period 1989-1993. Please see Table 2.

It is noted that out of the total new registrations around 60% are registered in the Colombo District alone, suggesting a heavy traffic concentration on roads in the City of Colombo.

TABLE 1

In and Out Traffic Count on Main Approach Roads (24 hrs) 1993

Access Road	*Count*
Kandy Rd (Peliyagoda)	45,258
Galle Rd (Dehiwala Bridge)	43,511
Puttalam Rd (Peliyagoda)	38,020
Highlevel Rd (Kirillapone)	28,490
Low level Rd (Orugodawatta)	9,911
Horana Rd (Pamankada)	8,420
Total	173,611

Source: Transport Study and Planning Division, Ministry of Transport & Highways.

TABLE 2

New Vehicle Registration by Type 1989 - 1993

Type		*1989*	*1990*	*1991*	*1992*	*1993*	*1989-93 % change*
Cars	Petrol	7,304	8,757	4,745	2,895	2,655	- 64.0
	Diesel	1,468	1,074	1,875	3,358	2,374	+ 62.0
Dual-Purp:	Petrol	514	637	283	103	36	- 93.0
	Diesel	2,635	4,588	8,173	728	8,937	+266.0
Buses	Petrol	4	3	2	3	7	+ 75.0
	Diesel	700	1,234	3,446	2,901	2,123	+203.0
Lorry	Petrol	11	29	40	47	43	+290.0
	Diesel	2,403	2,727	3,052	3,842	4,610	+ 92.0
Sub Total	Petrol	7,833	9,426	5,070	3,048	2,741	- 65.0
	Diesel	7,706	9,623	16,546	10,829	18,044	+150.0
	Grand Total	15,039	19,049	21,616	23,877	20,785	+ 38.0

Source: Department of Motor Traffic

TABLE 3

Composition of New Vehicles by Source of Fuel

	1989	*1990*	*1991*	*1992*	*1993*
Type	%	%	%	%	%
Petrol	52	49	23	13	13
Diesel	48	51	77	87	87
Total	100	100	100	100	100

The composition of vehicles also is significantly relevant to the question of air pollution. Data on new vehicle registration shows that there is an increasing share of diesel driven vehicles in the total vehicle population.

As shown in Table 3 the share of diesel vehicles in the total vehicle population is increasing. The share of petrol driven vehicles has reduced from 52% to 13% where as the share of diesel vehicle has increased from 47 to 87%.

Diesel tends to emit unburnt fuel by way of dark brown or black smoke. Dust particles get trapped in this smoke causing eye irritation and problems of visibility. Emission of offensive odour is also a common feature. Regular engine maintenance not only will reduce the emissions to a considerable extent but also will increase the efficiency of fuel consumption. At the present trend of vehicle growth, there can be a greater probability for increased levels of emissions in the future. Therefore, it is timely to take preventive measures to control emissions at the present level without allowing it to deteriorate further.

Accordingly, the Government is launching a Vehicular Emission Monitoring Programme to check the levels of emissions initially on diesel driven vehicles. This programme is carried out under the provisions in Motor Traffic Act No. 21 of 1981. Certain amendments will be incorporated into this law enabling the enforcement of punitive measures for dealing with offenders. Smoke detection meters are used to measure the level of emission and to facilitate legal action. The government has spent on the purchase of Smoke Detection Meters, a sum of Rs. 28 million being a concessionary loan facility from Germany.

The Emission Monitoring Programme is a preventive approach to environmental problem. This programme has several features; Public Education and Awareness Creation being a main feature. The Awareness Creation programme is targeted to vehicle owners and drivers in order to convince them of the benefits of better engine maintenance. Besides social benefits, the private benefits of investing in the regular engine maintenance of a vehicle is much higher because such maintenance brings a considerable saving on fuel as a result of an improvement in the efficiency of fuel consumption.

The effectiveness of the Emission Monitoring Programme will be monitored periodically by a team consisting of the officers and other technical experts under the direction of the Ministry of Environment & Parliamentary Affairs.

Emission standards will be set adapting WHO and UNIDO standards to suit local conditions. These standards will be monitored periodically and necessary adjustments will be made in them.

Vehicle emission control is one of the variety of instruments available for preventing air quality deterioration. More comprehensive approaches which include the implementation of other modes of transportation particularly, efficient rail transport cannot be underestimated. A combined rail-road transport system has particular merits in controlling emissions, compared with private individual transport. Efficient traffic management is also a less costly intervention needs to be persuaded. The possibility of improving the quality of fuel, particularly lead free petrol could be considered as an efffective measure in reducing exposure to lead from petrol.

Building up of preventive mechanisms into ongoing activities and development programmes is one of the most practical and lasting measures in dealing with environmental issues. Public awareness and education are fundamental for the protection and maintenance of a healthy living environment and allowing for the healthy existence of the living planet.

PROJECT FINANCE

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customs administration to minimise unnecessary paper work, delays and leakages.

As a crucial element of the Government's Liberalisation Programme, the gradual, but steady removal of the exchange controls has been evident since 1990. The instructions to the authorised foreign exchange dealers issued by the Central Bank in March 1994 has declared the total removal of exchange control restrictions on current/non capital transactions. Capital transactions which will continue to be under exchange control approval procedures include remittances involving transfer of ownership of fixed assets, acquisition and disposal of tangible and intangible assets, direct and portfolio investment abroad by residents, foreign borrowings, etc. (Nevertheless, the local exporters are now being permitted off-shore borrowing, liberalising certain capital transactions). With the removal of these exchange controls, it is likely that Sri Lanka will qualify to be considered for Article VIII Status of the IMF, which will substantially enhance the investor's confidence.

Although several policy initiatives and preparatory work has been undertaken in the later part of '80s only during the period under review the privatisation of the public enterprises has been launched on a significant scale. While most of the manufacturing and service enterprises have already been privatised or earmarked for placing before the public, the issues relating to several key areas, including financial sector institutions, plantations, international air transportation, etc. need to be addressed early.

Another important change which is likely to have a significant impact on the traditionally supply driven semi-government institutions is the requirement that they should be restructured and organised themselves to meet the needs of the private enterprises. In case of science and technology institutions, such as CISIR, SLSI, NIBM and NERD, the directions have been made that they should be restructured and made more demand driven. It is likely that DFB and BOI will also be encouraged to adopt similar approaches with regard to the promotion and facilitation of investment and exports.

In the immediate future, the policy action of the Government tends to be directed towards creating a level playing ground, competitive environment and implementing trade and industry facilitating measures.

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industrial, business, and residential belts even beyond the larger hinterland.

Financing

This two way monorail and railway twin project apparently involve huge cost. This has to be met with the help of international donor agencies. The international community could make another generous contribution to Sri Lanka undertaking this project devised appropriately in stages as was done with regard to the Mahaweli Accelerated Project not only as a mark of recognition but also to further strengthen the foremost position of Sri Lanka shown in the high quality of life among third world countries. They could also contribute to rapid industrialisation in Sri Lanka now the most liberalised South Asian economy, assisting the development of another spate of foreign investment, giving mutual benefits, exporting to rapidly developing Asian-Pacific Region (including North America), European, Middle Eastern and African regions, benefiting its central location and also its very close proximity to International East-West Sea Route (six miles to Galle harbour). It is the duty of the Government to provide the hardware (the infrastructure, specially transport) for a rapid industrialisation which has to be shouldered by the promising private sector.

The counterpart capital for these projects could come from the substantial savings of capitive sources such as the Employment Provident Fund, resulting in a disciplined macro-economic policy of reducing larger budget deficits. Further it is appropriate to seek funds also from the private sector on the principles of Build Operate and Own (BOO) or Build Operate and Transfer (BOT).

Conclusion

Transport provides for mobility of workers and resources to produce the national output. Although there has been an increase in economic activity, the transport needs necessary for it have not been met, particularly in the Greater Colombo Area.

Before this shortcoming begins to dissipate the dynamism of the economy, the transport facility - the lubricant necessary for running the various wheels of the economy - has to be improved tremendously by taking a revolutionary step in the field of transport. Hence it is very appropriate to give serious thought to the Proposed Twin Project of the Electrified Two Way Circular Monorail and Rail Project serving the Greater Colombo Area and also serving the Greater Colombo Hinterland.

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