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Container Traffic in Madras Port

Some Notes on Employment and Unemployment

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EDITORIAL - SOME HIGHLIGHTS

I. General Economic Scene

State

Planning Commission

There was a meeting of the Commission in mid May. The methodology for the preparation of the state's Perspective Plan 1991-2001 was discussed on the basis of a paper prepared by a member. There was broad agreement that the plan should be developed not on the basis of attaining an overall rate of growth but by defining the various targets to be aimed at and attained in each of the sub sectors of the economy. There was also a discussion of the document, Tamil Nadu—An Economic Appraisal 1989 which set forth a review of the economy during 1988-89. It was noted with regret that the document which should have been available to the legislators in March 1989 when the budget for 1989-90 was being discussed and approved by Parliament (the state was then under President's rule), that it was made available over 2 years later. It was pointed out that this

important document was never available to the legislators at the time of the budget discussion and approval over the past several years. It was therefore recommended to government to make this document part of the Budget paper—that would give the departments and officers responsibility for preparing it and a firm deadline like the budget and give the document the needed priority in printing and processing the document.

Climate and Prices

May was a hot month—in fact is traditionally the hottest month in the year, with the *Agni Natchathiram* appearing during the month. But during this year, May was comparatively mild, never reaching 40 degrees. There were the usual summer rains in some parts of the state, particularly in the southern districts. CSO's monthly abstract of statistics for January 1991 (the month following the last issue) has not yet appeared and hence it is not possible to

give the price data for the state in January. Prices, however, in the state, as in all India, are continually on the rise at all levels, wholesale, consumers, agricultural workers and industrial workers etc.

Power

Power supply in May in the state was normal. The coal stock position of the thermal plants improved so that (i) the power cut on HT users was reduced from 30 per cent to 25 per cent and (ii) there was almost no load shedding until March 21 when as a result of Rajiv Gandhi's assassination on May 21, strikes and bandhs reduced coal supply to the power plants which had to go in for load shedding once more. Further at the end of May there was a mechanical breakdown in Singareni which led to a heavy cut in the coal supply to Ramagundam, resulting in reducing of power supply to Tamil Nadu and other Southern States. The Tamil Nadu Energy Board reports that on behalf of the World Bank, BHEL is being commissioned to undertake a feasibility study for a 500 KW solar power station. The plant is to feed the State Electricity grid. For BHEL which earlier set up a 20KW solar station near Hyderabad and completed it in May, a 20KW photovoltaic power plant in Haryana, solar power along with wind power are the 2 non conventional energy sources the R & D centre is concentrating. For Tamil Nadu with its plentiful sunshine for 10 months in the year, the solar station holds promise of meeting its long term gap between power demand and supply. In this connection, the offer of Industrialists from outside Tamil Nadu—Videocon, Tatas, Macneil and Major, Khaitan and Penta have offered to set up power plants. In the state elections

under very dry May, all major parties have in their manifesto pledged to help the private sector to invest in power. These promises must now be translated into action. And some of leading Tamil Nadu industries, SPIC, TI groups, TVS, Amalgamation should join in this effort. TNEB announces the setting up of a 1.5 MW windmill power plant near Madurai.

At the national level, power supply was normal in May except for the states, AP, Karnataka and West Bengal where there is a shortage of supply and so have power cuts reported in earlier issues. NHPC reports that the funds crunch has forced it to halt construction at Koel Karo (Bihar), Baglikar and Sawalkat (J&K), Chamera II (HP) and the Satida basin (UP). The funds involved are not much against the Rs. 3300 crores needed for these 5 projects, only Rs. 450 crores have been released. This is an urgent priority for which the balance of funds must be found and released as otherwise these plants which will become operational in the IX Plan will be halted. IAEA reports that against 5 countries generating half or more of their total capacity from nuclear energy sources, India's 7 nuclear power reactors have a total capacity of 1374 MW and the seven further reactors under construction will add to the capacity 1640 MW. At present 2.2 per cent of power generated in the country is from nuclear sources, this limited approach is to be commended, given the risk and costs of nuclear sources of energy.

Water

A World Watch Institute study warns of the serious water situation facing Tamil Nadu in both the urban and

farming areas. Against 110 gallons of water available per capita per day in Los Angeles in Tamil Nadu only 8 gallons per capita is made available during summer. There is urgent need for measures to conserve the state's water resources and ensure the efficient use of water. At present there are no regulations governing the amount of water that a farmer can draw from a well, or till recently the water withdrawn for sale by lorries and tanks, so that underground water is available on a first come first served basis. If this continues, the states, underground water resources will be depleted and so there is need for regulation of ground water withdrawal which is being put into effect in some parts of the outskirts of Madras city. Efficient use of water calls for restoration of traditional rain collecting tanks and reservoirs which are in need of maintenance and where the plentiful monsoon rains need to be captured in larger wells and not allowed to runoff. In cities water problems are exacerbated by antiquated or non existent infrastructure (30-40 per cent of water supply in Madras is lost through leaky pumps) that cannot keep up with the population growth. As the states rivers are seasonal and its longest river cauvery has a flow 25 times smaller than the snowfed Ganga and water available and demand vary from region to region (Coimbatore for instance recorded a 16 foot drop in its water table between 1972-1992), there is need for the farming system and the cropping pattern to be adjusted to the availability of water and for water usage to promote methods of consumption.

Housing and Finance

Primer Housing and Industrial Enterprises announces that it is developing

mini townships in the state with the help of HUDCO. Its houses in the township are already in wide demand. This would also be a means of decongesting the mega cities of Madras and Coimbatore. On the financial side, the government report that its increased collection during the last quarter of 1990-91 has narrowed the budgeted deficit from Rs. 510 crores (anticipated) to Rs. 200 crores (achieved). The sales tax and the commercial taxes have raised a record Rs. 2167 crores. RBI, however, in its analysis of finance of the state government for 1990-91, which is the first year of VIII Plan, shows that the proposed additional tax and non tax measures cover only 29 per cent of the continued overall deficit of the states of Rs. 2676.4 crores leaving the overall net deficit of the states at Rs. 1901.1 crores. It also reports that of the 25 states, the majority, that is 20 have left their deficits uncovered.

Mapping Resources at the Panchayat level in Kerala

Kerala is undertaking with the help of its experts and professional services like the Centre for Earth Sciences Studies, Kerala, State Land Use Board, State Planning Board and Kerala Sastra Sahitya Parishads, the mapping of the resources available in its 1000 odd panchayat with active cooperation and involvement of the local people. When the resources are identified in each panchayat, local level planning will ensure optimum use of available resources. The programme has in all 5 stages starting from the collection of basic data on land use, water resources, soil and ending with preparation and execution of development project. The blend of official expert group and voluntary agencies—from each

ward of a panchayat, 10 volunteers are selected for participation in the collection of data and monitoring the projects—will both make people aware of their resources and promote decentralised planning. Tamil Nadu's Planning Commission is working on a similar programme at the level of district Councils.

National

Plan

Work on the VIII Plan during May was at a low key as it was the month of the elections and the commission stated that it had prepared all the data and documents for the new government to take a decision and move on to the VIII Plan. Its latest estimates report a growing gap during the VIII Plan between demand and supply of commercial energy. It states that gap between demand and supply of crude will widen from 24 million tonnes at the end of the VII Plan to 27 to 28 million tonnes at the end of the VIII Plan. For coal the gap between demand and supply is placed at 1.70 million tonnes at the end of the VIII Plan against the surplus of 0.75 million tonnes at the close of the VII Plan. The peaking shortage of electricity is estimated at 17 percent at the end of the VII Plan and will increase in the VIII Plan as insufficient funds are being provided to the power sector during the plan. In terms of saving of energy during the plan, energy efficiency including substituting natural gas for petroleum products can save 5-7 million tonnes of crude and conservation can save about 5000 MW of power. Further, demand management and increasing programmes such as the 2 IDBI schemes on energy audit subsidy and equipment finance of energy conservation along with the lowering of

interest rates on its loans for energy efficient equipment will be needed to meet the problem created by the demand/supply gap. It is also said that the Commission is considering proposing the sale of Rs. 1 lakh worth investments in the public sector to finance the VIII Plan. One further suggestion made by Financial Express gives the fact that the first year of the VIII Plan 1990-91 recorded an estimated overall growth of 4.5 per cent and the second year, 1991-92 is likely to register the same rate, these 2 years can be treated as Annual Plan years and the VIII Plan established for the 5 years 1992-93 to 1997-98. Planning Commission has set up a committee headed by Mr. Rajah Chelliah to suggest a durable solution for the financial position of the 10 special category states.

Prices

In April, the rate of inflation, on the basis of the wholesale price index was 0.6 per cent having risen by 1.2 points during the month standing at 192.4 on April 27. The rate of inflation on a 12 month basis declined from 12.8 per cent recorded in January to 11.1 per cent as at 27 April 1991. But this decline is due to a statistical quirk and does not represent a fall in the inflation pressure. Whereas the January index and that of the last quarter of 1990 recorded a high inflation rate because they were calculated on a low (inflation rate) base for the corresponding period in 1989, and so as was progress during the current year the inflation rate will dip not because there is less inflation but because the base on which it is computed is high. Another factor which will affect the inflation trend

this year is the 1991 monsoon. If it is poor, despite fairly adequate food stocks and the good water levels in the reservoirs, there would be increased inflationary pressure. A further factor which is affecting the inflation rate is the credit squeeze which led to a sharp drop in the growth of money supply (M3) from 9.1 per cent in April-October 1989 to 4.8 per cent in April-October 1990 and an even steeper decline of M1 during that period from 9.2 per cent to 1.7 per cent. The money supply is being further tightened. In early May, RBI has instructed commercial banks to maintain, in addition to the Cash Reserve Ratio of 15 per cent, from May 4 an incremental cash reserve ratio of 10 per cent in net demand and time liabilities. Note circulation as at May 10 exceeds Rs. 58,000 crores—an increase of Rs. 1676.74 crores calling for the further tightening of money supply. A cut in the fiscal deficit is also needed to keep down inflation but the experience in 1990-91 shows that the effects of such decline in deficit is offset by the raising of administered prices—particularly petroleum and foodgrains. Here it is not excess liquidity or money supply or supply/demand forces but the administered price increases that fuelled inflation. Now the decision on procurement prices for the coming kharif season, normally made in April, to help and guide the farmer on his cropping pattern has not been made, because of the elections and with the postponement of the election to mid June and the possible formation of a new government at June end, it is not till July that the kharif procurement prices will be announced. That is late for the farmer, but there will be a rise in the prices announced which will have an effect on the rate of inflation.

Stock Exchange

The stock exchange in May was rather subdued awaiting the results of the elections. It also was hit by the assassination of Mr. Rajiv Gandhi, the former Prime Minister. Badla rates at first shot up and then declined to the minimum level. The money market reacted sharply to RBI's decision to improve an additional 10 per cent of the incremental demand and time liabilities reported earlier by increasing call rate from 30 to 40 per cent with similar increase in bill discounting rates. Banks and Mutual Funds hiked coupon rates on debentures in May in anticipation of the government freeing debenture coupon rates with a floor limit on ceilings.

Economy

In May in addition to the 10 per cent increase in CRR referred to earlier, RBI in fresh curbs to limit credit expansion to conserve foreign exchange reserves, imposed a 25 per cent surcharge on bank credit for import finance and the freezing of drawals under cost credit limits of Rs. 1 crore and above. It has stipulated that the use of bank credit for those with limits over Rs. 2 lakhs to finance imports should be earmarked under a separate set terms of cash credit limits. Outstandings under this import credit sub limit is to be charged the normal 17 per cent interest plus a surcharge of 25 per cent. After 2 decades of generous lending after nationalisation, banks have now to refuse loans particularly in accommodating clients; despite not having money to lend, they resort to the call money market for cash. Now the slack season credit policy announced by RBI on April 12 and the recent hike in CRR will stop this reprehensible practice. The problem

with the depleting foreign exchange resources (which fell to \$905.6 million in January 1986), and the draw down on the subsequent IMF loans of \$1.786 billion as reported in the last issue and the BOP crisis is traced by RBI in its census of India's foreign assets and liabilities during 1986-88 (according to RBI Bulletin April 1991) to the policies pushed during the VII Plan. On the basis of responses from 1816 joint stock companies, 50 branches of foreign companies, 65 bank and 12 other institutions, the RBI census reports that while India's total liabilities increased by 21 per cent between March 1986 and 1987 and a further 13 per cent by March 31 1988, its external assets increased only by 13 per cent in the first period and declined by 2.6 per cent during 1987-88. The increase in the official sector foreign liabilities was due to outstanding loans from foreign governments and international institutions, while the corporate sector's liabilities increased on account of foreign loans and a higher controlling investment in foreign rupee companies. As the study states 'the increase in India's foreign liabilities was the result of an increase in external debt of the Government of India, foreign commercial borrowing by companies and financial institutions and rise in the balance of non resident accounts and other investment liabilities'. This important study and the lesson it conveys for India's foreign financial relations should not have been published with such a long delay. Infact the Economic Advisory Council says that the BOP problem has existed in 30 of the 36 years since 1957-58. The crippling effects of the huge trade deficit of over Rs. 10,500 crores in 1990-91, with a steep rise in the case of imports and a decline in exports, plus the loss of West Asia remittances involved heavy withdrawal from the foreign

exchange reserve. One further issue in May. The Finance Minister was right in demanding an investigation into the unprecedented revenue short-fall of over Rs. 1000 crores vis a vis the budget estimate, but equally he should take responsibility for it because of the utter laxity in tax administration, particularly in the last quarter of the year. Actually the fall in revenue collections is more serious than the Rs. 1000 crore gap referred to. Data at the end of May shows that customs revenue will be Rs. 2056 crores against the budgeted Rs. 24000 crores and excise collections Rs. 24,323 crores against the budgeted Rs. 27000 crores. Again while the import curbs may save Rs. 1500 crores in foreign exchange out-go, they will also cause a loss Rs. 1500 crores in customs revenue in the first quarter of the current year. All these need review. In this connection economic activities in the informal or hidden sector could be tolerated if there is no large scale violation of tax laws. In India, even the conservative Acharya Committee report for the National Institute of Public Finance and Policy shows that not only has black incomes become a pervasive part of India's saving, it is the result of large scale tax evasion apart from being the source of wide spread corruption. There is also the capital flight from India in the 1980s which is computed by Meenakshi Rishi and James Boyce at \$21.1 billion which is equal to 52 per cent of the aggregate external debt for this period brought about by misinvoicing India's trade with industrial countries. Finally the reduction of the fiscal deficit referred to earlier on the basis of cutting subsidies on food and fertilisers along with raising administered prices, will bring about a decline in production through this macro economic adjustment, resulting in inflation continuing, moving into stagflation for the country. The latest (43rd round) of the

NSS shows that 25 per cent of rural families spend more than Rs. 1000 per month each and 35 per cent of the urban families spend more Rs. 1500 a month, another 21 per cent Rs. 500 to Rs. 700 a month and the remaining 29 per cent Rs. 700 to Rs. 100 a month; in urban areas 20 per cent of families spend less than Rs. 700 a month, 30 per cent between Rs. 700 to Rs. 1000 and 29 per cent between Rs. 1000 to Rs. 1500 a month.

Industry

The industrial growth rate for January 1991 released by CSO shows a slackening to 4 per cent compared to the 12.9 increase in January 1990. This means that the rate of industrial growth for the 10 month, April-January was 8.4 per cent which was better than the 6.4 per cent recorded in the comparable 10 months in 1989-90. The expected government decision to prescribe a flexible interest rate policy for the all India financial institutions will mean a sharp rise in the cost of long term funds to industry, making the long term rate equal to the 17-18 per cent short term rate. In one sense this is a needed correction to the tradition of keeping the administered cost of long term funds far below the short term finance. This will help the financial institution to earn more of an income. This seems to be the result of the IMF/World Bank pressure to liberalise and deregulate the country's financial system. The World Bank report on how to reform trade policy in India and make Indian Industry more competitive provides for, what it calls "one of the world's most restrictive, discretionary, complex and difficult to administer system" a drastic overhaul. It starts with the proposition that Indian BOP crisis is not the result of the liberalisation of trade policy over the past decade

but of a high rupee value and large fiscal deficits. So it recommends the devaluation of the Rupee by 22 per cent, cutting government expenditure by 9 per cent, abolishing quantitative restriction on imports, cutting customs tariff from an average of 117 per cent to 20 per cent, jacking up excise duties by over 50 per cent, placing all intermediate and capital goods on OGL first and later also consumer goods. In short, it wants the Indian economy and market to open upto foreign goods completely. It acknowledges that this will involve a transitional cost, including a sharp drop in the production of domestic capital and intermediate goods. Equally serious, it will mean zero growth of the economy for some years—a fact which it does not mention. The trade policy should be reformed but its content and pace should be determined by India in its interest of being a major producer of intermediate and capital goods and that of a growing economy. Finally in May, government lifted the cuts in diesel consumption and provided a 6 per cent growth on that of the previous year. This would help industry and trade to grow during the balance of the year.

Public Sector

In the Interim budget (see last issue), a provision was proposed to disinvest 20 per cent of the public sector's enterprises equity in favour of mutual funds and financial or investment institutions in the public sector. As the government fell shortly after this proposal was made, it was not pursued. The broad consensus of the corporate sector is that the disinvestment of the shares of the PSE, should not be for the sole purpose of minimising the budgetary gap. There is reason in this because raising resources

for the budget though such disinvestment means using capital resources directly or indirectly to reduce the revenue deficit which is not a sound principle.

National Production Front

Steel

The country is once more faced with a huge demand and supply gap of pig iron, estimated at 2.29 million tonnes by the end of the IX Plan. This means a very large import of pig iron to meet the demand for this industrial input. This situation arises from the decision of SAIL and the Ispat Nigam not to increase pig iron products. Their production of pig iron will be 1.7 million tonnes at the end of the VIII Plan and a lower 1.1 million tonnes by the end of the IX Plan. The reason for stagnant and falling pig iron production by SAIL is because none of its 5 integrated plants wants to produce this low value added product against the high price of steel. TISCO does not produce any pig iron, while Ispat Nigam, the holding company of the Vishakapatnam steel plant will not increase its production from the present low level. This means that the production plans of the 4200 iron foundries in the country which have an annual installed capacity of 2.4 million tonnes will either have to slow down their production plans or import this input. One way out is for the private sector to enter this field and produce the needed pig iron. As of now 74 entrepreneurs have applied for licenses to set up pig iron units and these are being processed by the Department of Steel, which must also ensure that the coking coal needed is made available to approved units. On the steel front, SAIL rep-

orts that the production of saleable steel by its 5 integrated plants is doing very well, increasing in April by 15 per cent—Bhilai and Bokaro have taken the lead in this. But the Development Commissioner for iron and steel seems to have doubts about SAIL's optimistic report and states that the target for steel production for the year, 1991-92 may not be attained, with productivity of the primary and secondary units at 14.2 million tonnes against the target of 14.8 million tonnes. Shortage of raw materials is held to be the reason for the stagnation in steel production around 14 million tonnes over the last 3 years. There is therefore need for managerial inputs in the industry to break out of this stagnating production situation and to replace imports by increased domestic production by both the primary and secondary groups.

Crude

ONGC's task now is to clean up the 700 offshore and onshore wells so that their life can be lengthened and their productivity increased. The rate at which the wells are being shut down is serious and will affect crude supply at a time when domestic production has to be maximised. ONGC in mid May announced that it has struck gas in two prospects—BS 120 and BH-35 in the Bombay offshore area. This is a reminder to the government and SAIL to ensure that gas is not wastefully flared but is used for power plants, factory production and also for urban transport. The government reports that the oil pool deficit account which was Rs. 200 crores in 1989-90, Rs. 1600 crores in 1990-91 will be wiped out this year because of the 25 per cent surcharge (see Vol xxi p87).

Coal

The coal output target for 1991-92 is 203 million tonnes against the 1990-91 actual of 189.64 million tonnes. As far as Coal India is concerned, a welcome development is that it plans to achieve 71 per cent of its growth in underground mechanised board puller production. This concentration on underground mining will improve quality of the coal, which all consumers - power plants, cement factories etc are demanding. The Geological Survey of India and the Central Coal Mine Planning Institute announced that as a result of fresh exploration in various parts of the country, they estimate that gross coal reserve has touched 192 billion tonnes. This is the request of using mechanically advanced methods, of survey and remote sensing supplementing conventional methods which have resulted in adding 16 billion tonnes since January 1989. Further of the total explored coal, 73 billion tonnes are in the proved category. Coal should be the major energy source besides the non conventional sources of biomass, solar and wind energy.

Non ferrous

HZL reports that the new lead and zinc smelter at Chandirya in Rajasthan will start production in June. This should improve its consumer services, which the stock point at Indore will promote particularly for small and medium consumers as well as large ones.

Agricultural Production

Earlier reference was made to the possibility of this year's south west

monsoon being sub normal. The Hyderabad Meteorological Centre reports that the SW monsoon moving through the North and South Andamans by May 22-23, South East Bay of Bengal in May 27-28, Sri Lanka May 30-31, arriving along the coast of Kerala by June 1. This means that the monsoon is on time, whether it will be normal remains to be seen. The importance of a normal monsoon can be seen in the results of field demonstrations which show that farm production can be doubled in rainfed areas with the same level of technology. If there is careful attention to soil and water conservation, water harvesting, appropriate cropping sequence and institutional support, the average half tonne of foodgrains produced on these lands per hectare can be doubled to 1 tonne, apart from raising livestock, grasses and fodder crops and horticulture. Farmers in the North and South are preparing the land for the SW monsoon to develop the varied agricultural production referred to above. The 2 day National Conference of Agriculture in early May organised by the union government and the states has fixed the 1991-92 crop year food grains target at 182.5 million tonnes, against the current year's 174.5 million tonnes. Of the 1991-92 target, 103 million tonnes is to be produced during the kharif (monsoon) season. The kharif target is composed of 68.8 million tonnes of rice, 28.5 million tonnes of coarse cereals and 6 million tonnes of pulses. Taking note of the Indian Meteorological Department's prediction that the 1991 monsoon will be below average, it was decided that a number of bumper crop correction exercises according to the actual rainfall are to be undertaken. The government announced in May that it has decided to wind up the Standing Advisory

Committee in Agriculture, chaired by Sharad Joshi as it had completed its task of preparing the Agricultural Policy Document. Mr. Joshi disagrees with the decision because he feels that Agricultural Policy is not yet finalised on which there are differences with the Ministry and in any case the committee was constituted to advise the government on a continuing basis on the formation for implementation of agricultural policy.

Foreign Trade and Balance of Payments

DGCI & S reports that the trade deficit for 1990-91 is a massive Rs. 10,643.84 crores (compared to 1989-90's Rs. 7730.41 crores)—with exports at Rs. 32,527.28 crores (growth of 17.5 per cent in rupee terms and 9 per cent in dollar terms) and imports Rs. 43,170.82 crores (growth of 21.9 per cent in rupee terms and 13.1 per cent in dollar terms). This growing trade deficit is the key to the Balance of Payment problem that we face—Rs. 616 crores per month in 1988-90 against Rs. 900 crores per month in 1990-91, Rs. 4110 crores in April and Rs. 2507 crores in May 1991. The sharp import curbs announced by RBI referred to in the last issue on the further curbs including the moving of the interest rate reported in this issue will cut the trade deficit in the short run. But the major factor in our import bill—the costly import of crude which rose from Rs. 2811 crores (14.6 per cent of the value of total imports) in 1986-87 to Rs. 6,274 crores in 1989-90 (17.7 per cent of aggregate imports) remain untouched. There was some panic buying of oil during the Gulf crisis which should be avoided. There was need for restraining consumption and not pondering to consumers demands and desires at the cost of the

country's meagre foreign exchange reserves. Other imports which have contributed to the trade deficit and BOP problem are fertilisers (5 per cent of total imports), edible oils etc which can be pruned. On the exports side, the record is not good and its contribution to the trade deficit should be corrected. Exports fell short of the target by as much as Rs. 3500 crores. Textiles and leather goods have shown a high increase in exports at Rs. 8397 crores over the previous year, led by readymades. Printed Circuit Boards are being imported to encourage export of consumer, electronics. Also exports of agricultural commodities increased by 29 per cent—mainly cotton plantation crops exports. Engineering goods only just hit the target, gems and jewellery record a decline. There was also a large fall in consultancy exports. But really what is missing is an export direction and policy. The growing import intensity of exports has contributed to the BOP crunch. A recent PFI survey shows that value of import licenses granted to registered exporters has risen from Rs. 2487 crores in 1985-86 to Rs. 10,535 crores in 1989-90. For every Rs. 100 worth export licenses, as much as Rs. 60 is granted to registered exporters as incentives for export promotion. REP license to 9 thrust export sectors has increased from Rs. 1170.2 crores in 1983-84 to Rs. 1414.6 crores in 1988-89. CCI for exports which a study shows as being more effective in pushing exports than the REP or duty drawback scheme, rose from Rs. 893.4 crores in 1986-87 to Rs. 1536.4 crores in 1988-89. This is too high a cost to service our exports. Why was not the creation of large viable capacities in the domestic sector created to promote export surplus. Government policies despite all the liberalisation still do not let global capacities to come up in many

sectors. At the end of May because of the foreign exchange crunch, the government has tightened machinery imports against textile exports. India will lose exports to the European Community, if it is not able to cater to the 30,000 specification written down by it. Instead of the export policy direction, ad hoc decisions are being taken which only worsens the trade deficit and BOP crunch. Because of the foreign exchange crunch and the squeeze on exports, the availability of some non ferrous metals has shrunk and their prices have begun to sky rocket. In just 4 months since January their prices have risen by 20 per cent. Here again MMTC's imports and the grant of REP licenses should be directed to address the shortage of the metals. The BOP and fiscal deficits over the year, particularly the last 4 years have accerated India's indebtedness—both internal and external. An RBI study places India's bilateral liabilities at \$37 billion or Rs. 100,000 crores (it is much more if all liabilities—short term and long term are included). The cure for this is to expand exports and tone down the BOP crisis. There is little time to lose on this.

Aid and loans

In May, the informal meeting of 6 countries making major loans to India the World Bank and IMF agreed to help India tide over its BOP crisis by making available the necessary shory term credit. But the World Bank has warned the government against rolling over continuously the country's external debt. This rolling over of the public debt by the government which has been followed for some years increases the rupee cost of interest payments and the capital loss on the principal outstanding as a result

of the rupees' exchange rate depreciation. The World Bank has made a loan of Rs 150 crores for the Karnataka Electricity Board for streamlining the transmission and distribution of power. Further IDA approved a credit of \$ 130 million for dam safety in the Central Water Commission. ONGC has applied for a World Bank loan of \$ 200 million for financing its gas flaring reduction project in the Western offshore area. ADB states that it is setting up a 12 nation Indian Equity Fund to mobilise investments in equities of Indian companies. Japan and ADB are extending emergency loans of \$300 million in May to help the country in its current financial crisis. In addition ADB has sanctioned a loan of \$150 million to help India buy crude oil and petroleum products. Japan has also cleared an energy loan of \$150 million to India to help it meet its present financial crisis, pending long term accomodation from IMF and the World Bank. CESC has signed an agreement with ADB for a loan of \$17.8 million for its electricity project. In May there were a number of bilateral financial dealings with Germany. To start with, Germany is concerned with the fact that projects worth Rs. 374.82 crores for which it has extended loans and credit are not using the credit, in some cases for over 10 years. Germany has warned if these inefficiencies in project execution continue, Germany loan may be cut. In May it has offered DM220 million (Rs. 253 crores) for quick disposal on projects in response to the decision of the informal meeting of the consortium referred to at the start. It has offered a loan of Rs. 212 crores to help the power sector this year. For 1991-92, it states that it will make available for Rs. 400 crores including repayments of Rs. 186 crores from the previous years unused

credit. It is also making a technical cooperation grant of Rs. 46 crores. Also in May the Netherlands made a loan of \$80 million for rural power development. Thus May was a month when external credit and loans were tapering off or made available on temporary or stand by basis. There is need for the whole policy on external finance to be reviewed and a policy in line with the overall economic policy of the country to be developed anew.

Foreign debt

The World Bank places India's external debt in 1989 at \$562.509 billion. It was \$7.937 billion in 1970. Its world Tables show that the foreign exchange crisis began not with the Gulf war but after 1987 when there was no external crisis. In 1987 India's international reserves, excluding gold was \$6.454 billion and gold \$4.267 billion. In 1988 they decreased to \$4.899 billion and \$4.286 billion. In 1989 they further decreased to \$3.859 billion and \$4.190 billion. IFC notes that in December 1990 Indian foreign exchange reserves was enough for only 3 weeks imports.

International

World Bank/IMF

The interim committee of the IMF and the Development committee of the Bank met in Washington on the last 2 days of April. Its main issue was doubling of the capital of IFC to \$2.6 billion which was not resolved mainly due to the US refusal to support the move. There was also pressure from members of the committee from developing countries, led by India,

for an increase in SDRs in order to increase world liquidity. But this was firmly opposed by the US supported by other industrial countries. So the issue is to be studied further and is postponed for a future meeting. It is reported that there seems to be a consensus at the meeting on a wide acceptance of IMF conditionalities and the World Bank's structural adjustment programmes (to which an earlier issue of the Bulletin has called attention see (Vol XXI p162 and the next issue). The Head of the Bank and Fund ascribe this to the fact that more and more developing countries are accepting this prescription as good policy. This is highly doubtful because the cut in subsidies, welfare expenditures and budget deficit which the countries are forced to accept to get the badly needed IMF/World Bank loans involve the countries in a good deal of popular agitation and resistance. The two agencies will be making a mistake in basing their policies on the assumption that their programmes are acceptable to the countries.

World Debt and World Economy

On the question of world debt, the prescription of the World Bank and IMF have not relieved the problem in the countries facing heavy debts. For sub Saharan Africa, the debt—GDP which has become 100 per cent resulting in negative growth rates. In South America, Brazil's debt of \$71 billion in 1980 became \$123 billion in 1990 despite the Bank/Fund Brady remedies. There is one way out shown by the lending countries who have written off half of Poland's debt, which has enabled Poland to overcome its problems of transition from communism to capitalism. Why cannot this remedy be applied to the

external debts of the countries of Africa and Asia? Without the partial cancellation in debts, these countries will not be able to service their growing volume. On the world economy, a report on world economic prospects, the World Bank states that the growth rate of South Asia which recorded an average of 5.4 per cent in the 80s will slow down in the 90s due largely to India's current economic difficulties and political uncertainties. It states that the economic downturn in India was compounded by macro economic imbalances and difficulties in BOP, adverse crude prices, high interest rates, availability of capital and recession in the industrial countries. For India future progress will depend on correcting its macro economic imbalances and undertaking "structural reforms" which is the Bank's panacea everywhere. Sub Saharan Africa is the other region facing a gloomy future, with per capita income growing at 0.5 per cent annually over the 90s. It points out that a rise in international interest rates by 1 per cent will slow down growth in the developing world by 0.2 per cent and 0.4 per cent is highly indebted countries (in which category India falls in the 90s). On the other hand a 1 per cent rise in the growth rate of industrial countries will raise the developing countries growth rate by 0.5 per cent. From this point of view, the World Bank states that the people of the third world will earn a little more in the 1990s because of a rise in the US economy. The World Bank's study of the world economy states that good economic management can double per capita incomes in developing countries. But this also depends on (a) a successful outcome of the Uruguay round, (b) a return to solid growth with price stability in industrial countries, and (c) the reinforcement of international trade and

foreign investment in developing countries. The IMF in its latest report on the world economy states that the global economy which had grown by 3.2 per cent in 1989 declined to 2 per cent in 1990 and will decline further to 1.2 per cent in 1991, after which it will pick up. Most of growth in 1990 and 1991 is due to Europe and Japan, much of it originating from domestic demand and not from their contribution to world trade. Since industrial countries contribute more than three fourths of the World GDP, any fall in their growth gets translated and magnified with regard to the developing countries. The upward movement of the world economy in 1992 will be due to the US, (which accounts for one fourth of world GDP), whose growth will be 2.7 per cent in 1992 compared to 0.2 per cent 1991. Japan will grow at a higher rate but Germany burdened with the problem of Eastern Germany will not make a contribution to world trade and development. The best performance will come from the Middle East which will register a high 8.5 per cent in 1992 (doubling its 1991 rate). The current balance of payments, in 1991 will improve for the US because of large Gulf War payments made by Germany and Japan, reducing their current account surplus. The rate of inflation will decline from 4.9 per cent in 1990 to 3.9 per cent in 1992 and for the developing countries which was 90.3 per cent in 1990, will be 40.9 per cent in 1991 and 81 per cent in 1992.

New Measure of GDP

UNDP has devised a new method of measuring GDP, based on the UN International Comparisons Projects (ICP) which has developed an internationally comparable scale using purchasing power parities (PPP) instead of exchange rates as conversion factors and expressed in

international dollars. The usual World Bank and UN system uses the official exchange rate to convert national currencies to US dollars which however, does not measure the relative domestic purchasing power of the currencies. Using the new measure PPP, India's per capita income is not \$350 as shown in World Bank tables but \$70. Pakistan's per capita income is not \$370 but \$1790 and Sri Lanka \$2000. (Bangladesh is \$730, Nepal \$770 and Bhutan \$750). Knowing at the first hand the level of living of the people of these countries, to place Sri Lanka and Pakistan in middle income countries is nonsense, and shows up the error in the methodology. The conclusions of PPP are also contrary to UNDP's own finding, using the Human Development Index which places India above Sri Lanka, Bangladesh and Pakistan. According to the index, Sweden is at the top.

World Trade

GATT in its latest report states that in line with the forecasted decline in GDP in 1991, world trade will decline in volume for the third consecutive year falling from the high 9 per cent in 1988, to 7 per cent in 1989 and 5 per cent in 1990. In 1991 there is further fall despite the fall in the post Gulf crude prices from \$75 to \$20 per barrel. The economies of US, Japan, Western Europe and Eastern Europe and USSR have slowed down, despite the reconstruction activity in the middle East and Eastern Europe. Gulf crisis played little role in slowing trade expansion, this slow down in 1990 world trade being due to the US and Europe. Much of West Germany's production was consumed by East Germany and so West Germany's export volume was reduced. While the volume

of trade rose at a lower rate in 1990 compared to 1989, because of the depreciation of the US currency, the value of trade increased by 13 per cent in 1990 against 7.5 percent in 1985. West Europe registered the best performance at 20 per cent expansion, EEC and EFTA each registered 20 per cent increase, with unified Germany surpassing US in total exports. The share of the industrial world in world trade was 79 per cent, that of developing countries was 13 per cent, with the countries of OPEC rather than South Korea and East Asia leading the trade. On the Uruguayan round, the world conference on religion and peace calls attention to the human rights dimension of the negotiation and points out that the liberalising of trade in audio visual material and other products (the so called intellectual rights) could result in countries losing their cultural identity. In the US there seems to be a consensus that multilateral free trade and GATT have become increasingly irrelevant, with the slogans coined by intellectual leaders (MIT etc.) that 'GATT is dead, that "free trade is passe" that "GATT does not matter any more"'. The political leaders including the US trade representative Ms. Carla Hills do not think GATT is relevant to US development—all despite the fact that GATT is based on a convention and not on a charter like the UN and special agencies. Fair trade so called is replacing the need for free trade because fair trade has become a convenient euphemism in the US for managed trade.

World Poverty

The World Bank's poverty reduction strategy seeks to create the policy environment favourable to the private

sector because it states that the vast majority of jobs for the poor are provided by the private sector and so it wants even the social services to be extended to the private sector. It wants public resources to be freed for social service, activities—primary education, basic health care, family planning and nutrition—which could be operated by the private sector. It estimates that some 1.1 billion people in the world live in absolute poverty and at least 700 million will continue into 2001. The Bank proposes to design an analytic framework which will be assessed by it periodically as the base for advising government on poverty reduction with the role of the private sector, which is

the major preoccupation of the Bank. A study by the journal, International Health and Development asks why is that despite spending \$48 to 60 billion each year, poverty in the third world is worsening. Its answer is that this is because a great part of the 'aid' is being spent not in the developing countries but in the West, in large salaries of UN bureaucracies and consultants, the high prices of the western equipment and large wasteful projects thrust on the countries, like fish production project in Mali at \$2000 per annum while per capita income is \$400 a year, a grain silo in Egypt which had no power, massive population transfers in Brazil and Indonesia etc.

* * * * *

II. Agricultural Development in Tamil Nadu

Paddy and Other crops

The farmer have completed in May their samba harvesting which has yielded 10.71 lakh tonnes in procurement operation by the Tamil Nadu Civil Supplies Corporation. Thanjavur farmers lead the 8.86 lakh tonnes of paddy, though as pointed in the last issue the area under cultivation was smaller due to the limited rains and the non opening of Mettur. Farmers in Pudukottai district contributed 47,000 tonnes. The farmers in all districts have had to be contend with drinking water supply and so have had to reduce the land under paddy cultivation, particularly under kuruva cultivation. Whereas normally, their paddy production was 20.7 per cent from Kuruva. (10.75 lakh tonnes), 68.3 per cent under

samba (34.15 lakh tonnes) 11 per cent under summer paddy (5.5 lakh tonnes), this year the farmers had to reduce their kuruva production at 6.02 lakh tonnes (10.55 per cent), expand their samba cultivation to 45.24 lakh tonnes (79.31 per cent) leaving little over 10 per cent (5 lakh tonnes add) to summer cultivation. With this shortage of land available for paddy, the total paddy production has however not fallen, due to the farmer's various combination of water, fertilisers and seeds to raise the production per hectare, making him stand third in the country, after Punjab and Haryana. Some of the paddy land is being diverted by the farmers to sugarcane, in which he stands first in the country in producing the higher cane yield per hectare. This is a negative trend which the paddy price policy should correct. The cotton farmer

is also doing well, with the same cotton area year after year but cotton production rising to 2.61 per cent a year, giving him the fourth place in the country. The oil-seed farmer like the paddy farmer also faces a shrinking area of cultivation by over 8 per cent annually. But his production per hectare in groundnut, gingelly, castor and coconut is good, giving him the second place, is declining.

Research results

Of the 39 research reports recorded in May, are of particular importance as they can be transferred forthwith to the farm. Two reports from TNAU and ICRISAT on soil solarisation—as a cheap, easy and non hazardous technology have been shown to increase crop production through control of plant diseases, dematodes, weeds, improving soil nutrient status and early seedling vigour. Similarly the other demonstration has shown that soil solarisation arrests plant pathogens attacking redgram and bengalgram. All that is needed in this state with its plentiful sunshine for 10 months in the year is for the farmer to use a thin transport plastic sheet. Farmers should be encouraged to use this technique. On rice, two reports from AP Agricultural University and UAS Bangalore show that the small farmer can use the power tiller mounted paddy transplantation and the vertical conveyor reaper developed by the farmer agency. This reduces the cost of reaping paddy from Rs. 300 per hectare to Rs. 167. Similarly the Bangalore Institute is making available to farmers a new rice variety, R 64 which gives 6.8 tonnes during summer and 6.2 tonnes per hectare during kharif. Farmers are ready to use this high yielding variety. Third, a

series of reports from ICRISAT of the farmer controlling various diseases dealing with chick pea diseases, from TNAU on management strategies to control sesamum diseases, from the Agricultural Research station, Bignaer and Agricultural Research Station, Kollikulam on the measures to check leaf spot and the phycolody disease in green gram, from the Agriculture Research Station, East Godavari on the planting practices to avoid phyto-pithera fruit rot in coanu—are all ready for immediate use by farmers. Fourth, the Kottayam station is now making available the 4 control measures to counter various diseases in vegetables which vegetable farmers are waiting for. Fifth, ISR Lucknow has developed a herbicide to check weeds which is a rate of great loss to sugarcane farmers and which they are waiting for. Sixth, the Madras Veterinary college has developed control measures against the blue tongue viral disease threatening sheep, including water management and inactivated vaccines. The states cattle farmer can use this remedy to save the spreading threat to their sheep population. Similarly the work of CIFA Bhubaneswar shows fish farmers how to control two serious fish diseases—EUS and UDS—attacking inland fish in wells, tanks, ponds and paddy fields, starting with stopping the inflow or outflow of water, reducing feeding, and using easily available drugs according to stated direction.

Tea

Tea exports in 1990-91 are reported at Rs. 1045.41 crores against Rs. 862.42 crores in 1989-90. The unit value realisation has increased from Rs. 43.18 per kg to Rs. 52.59 per kg. The fact that

in terms of quantity, the 1990-91 exports were only 199.48 kg. against the previous year's 202.81 million kg. shows that the higher value—total and unit—realised in 1990-91 was due to the rapid depreciation of the rupee. With the increased domestic consumption, at 4.8 per cent per annum and production increase at 2.7 percent per annum, attention for the future should be concentrated on value added tea exports such as packet teas, tea bags and instant tea as well as intensifying the programme to increase the production of tea.

Coffee

Coffee producers are facing considerable difficulties and many problems as a

result of the low MEP and the falling prices being realised. Some estate owners have cut back their production and are selling at whatever price is offered. To save the coffee crops and help the coffee dealers the Coffee Board needs to consult them, and the government and financial institutions must take some short term measures. A major problem facing the coffee growers is the various diseases and pests attacking the coffee plant—the berry borer, the white stem borers as well as the need for HYV strains. All this points to the need for the Coffee Board to concentrate on R&D against coffee pests.

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III. Industrial Development in Tamil Nadu

Industrialisation of Tamil Nadu

In May the industrialisation of the state continued with many positive and some negative developments. Among the positive features, *first BHEL* is to check the feasibility for a 500 KU solar power station as referred to earlier. This will certainly help provide power on a less irregular base. *Second, Tamil Nadu Minerals* is setting up a beneficiation plant for upgrading the carbon content of graphites costing Rs. 15 crores, the project will go on stream by end 1992. In addition, Tamil Nadu Minerals has decided to set up 2 projects at Rs.50 crores each for granite cutting and polishing. The two units are to be export oriented. *Third*, the financial institutions have decided to increase their investment in *Tamil Nadu Petro Products* to 40 per cent which is not

a real increase in the company's resources, as the financial institutions are exercising their option of converting their loans into equity. *Fourth*, it is good news that *Tamil Nadu's Flourine and Allied Chemicals* has after some years of losses recorded in 1990-91 a profit of Rs. 1.67 crores through its record turnover of Rs. 31.86 crores. *Fifth*, *SPIC* together with Tamil Nadu Petro Products just referred to announces that this joint sector company is raising Rs. 90 crore through the issue of coupon bonds on rights basis. This is the fourth company in the country and first in the state to use this new financial instrumentality. *Sixth*, *TIDCO* has advertised in all the journals that it is disinvesting in 5 companies involving a gross capital of Rs. 115 crores, 2 cement units, 1 asbestors sheet company, 1 asbestors pressure pipe

company and 1 stone ware pipe company. This involves its disinvesting its holding in Tamil Nadu Cements (TANCEM) and Tamil Nadu Explosives (TEL), the former with a paid up capital of Rs. 12.36 crore and the latter with Rs. 5.17 crores. This is in line with the policy of the state government pulling out of industrial activities and encouraging the private sector to take on the responsibilities. *Seventh MALCO*, which is the smallest of the 3 private sector aluminium producer in the country and which is on the sick list being dealt with by BIFR is not to be nationalised, but on the contrary has been attracting private bidders who include RPG Enterprises, Essar Snipping, Larsen and Toubro—who are all interested in making the unit an export oriented one. *Eighth, Farm Implements* is expanding its production and is planning 100 per cent indigenisation of its machinery. When it started in 1985, it bought from Denmark the drawings and designs on the concept of rotary cultivating methods as a one time operation. Its import content which was 90 per cent in 1986 is now 15 per cent, which is to be dispensed with as the company expands its operation. *Finally*, the state government is entering a really risky field—the mining of gold from the gold depots located near Krishnagiri. The potential is rated to be 1.3 to 5.5 grammes per tonne to a depth of 45 metres. This is about 1/3—1/4 the potential of Kolar Gold Fields and might well be left alone. It has been placed as the last item in this list, because it is doubtful whether this gold mining venture is sound and really needed.

On the negative side, first the Tamil Nadu Electricity Board's inadequate supply of power to the state's

industries is continuing. The problems faced by industries are low voltage, poor maintenance, the failure of the ring main system and the units suffering particularly in the state's backward areas which were wooed there with many promises of continuous power supply. *Second* and related the project for the private sector electricity unit based on *Jayamkondan* Lignite now appears to be a non starter. In spite of all the promises and rhetoric on private sector participation in electricity generation, the union government has not approved this proposal. There is the further obstacle of the union government not approving private sector entering into lignite mining. It is to be regretted that, these two problems—of the private sector operating an electricity generating plant and using for this purpose the lignite at Jayamkondan was not earlier settled. Now it is advisable for the project to be started with purchase of lignite from NLC or coal from CIL, following the Maharashtra pattern where 4 private sector electricity units are in operation. *Third, MRF Finance* has been condemned by MRTF for falsely allowing advertisements for the purchase of cars—offering loan of Rs. 70,000 to Rs. 1 lakh repayable over 2 or 3 years. The misleading part of the advertisement was its promise to deliver any number of cars within 24 hours—which MRTF pointed out is false for Maruti has a 6 month waiting period and so have NE-118 and Contessa classic. This is only the tip of the iceberg for many units are involved in this kind of false advertisement. *Finally*, the southern states including Tamil Nadu are at a disadvantage as far as their investments are concerned; in Andhra, union investment has increased by 0.1 per cent and in Tamil Nadu by 0.5 per cent, in Kerala the level is maintained at 1.6 per

cent and Karnataka at 2.5 per cent, now down to 1.7 per cent. The share of Maharashtra, UP, Gujarat are already large and rising rapidly. This kind of comparison is discouraging to the industrial development in Tamil Nadu.

As in the previous month, the positive features of the state's industrialisation are larger than the few negative features. On this, the future development can be built, avoiding the errors pointed out.

III. Education, Science and Health

Educational Reforms

The increase in the provision of primary education particularly in the over 2000 habitations which do not have a school within 3 kms is proceeding apace. Simultaneously the mass training of teachers during the summer holidays is being completed to enable teachers to teach according to the new curriculum. The vocational stream at the plus 2 level is being expanded to meet the demand for vocational training after high school completion.

In Tamil Nadu, the government under President's rule has approved the setting up of 2 arts and science colleges, which needs to be reviewed in view of the growing educated unemployment in the state.

Adult literacy

Some 4 states and 1 union territory are following the Kerala model in aiming at 100 per cent literacy for some selected districts in the state and for all of the union territories of Pondicherry within the year. In Tamil Nadu, 2 districts—Kamarajar and Thanjavur,—

have launched a total literacy programme to be attained within one year.

Science

The president of ICSU, Prof M. G. K. Menon, calls attention to the fact that global cooperation in space sciences envisaged in the early 80s has not really occurred. The 1982 UN conference in SPACE in Vienna on the basis of then existing cooperation made plans for the use of space sciences and related technology to push forward the economy of developing countries and called for a budget of \$1 billion for this proposal. Today not even 5 per cent of the budget has been subscribed making the realisation of the plan impossible. In addition there has been all round commercialisation of space technology by the industrial world. In the field of communication, the USINTELSAT has used an estimated \$10 billion. In remote sensing, which is of vital importance to the developing countries, the 80s represent a set back as it has been used not to map resources for economic development but for military spying. India (with China) launched its own space programme together with indigenous satellites, but is now limping along, as the USSR's space services on which it depen-

ded have become equally expensive. A centre for Asian Science and Industrial Policy Research is being set up in Delhi in order to develop cooperation among Asian countries and evolve a collective science and industrial policy. Its plans include encouraging research in areas of big science, high technology and industrial development. The centre is also preparing a data bank of technological and industrial activities and capabilities within the Asian countries and to analyse and assess existing plans and programmes in this area. At a time when 3 Asian countries have been placed under Special 301 as noted earlier, it is important that the Asian countries, instead of wasting their limited scientific resources by competing with each other in defence and industry and buying western technology at a high price, should create an open market for their technologies as the European community is doing. This the New Delhi centre can help to generate.

Health

In the health field, the family welfare programme in the state is being geared

to promote the healthy baby concept which will ensure that the babies will be 2.5 kg at birth, which will a) reduce the health problem of low weight babies, and b) reduce the infant mortality rate (IMR) to 60 per 1000. The programme also includes raising the age of marrying above 20 years and makes known the disadvantages of pregnancy before 22-23. The data shows a clear relation between cervical cancer and birth of 3 or more babies per mother. The data also shows that slum women get married at 17/18 and that their child bearing cycle goes on till 33/34 years. The programme will try to reduce this 15 year "span of fertility to 7 years". In the state, it was noticed that there was a sudden rise in the birth rate in 1989 by 0.4 points, resulting in the birth of 1.8 lakh additional babies. While the reason for this spurt is being analysed, the family welfare programme particularly in the slums is being intensified so that IMR which was 68 in 1989 could be brought down to 60 by 1992. This calls for maximum involvement of non governmental agencies and voluntary organisations.

V. Employment and Labour Relations

Unemployment is on the increase because of the high growth rate of population outstripping the growth rate of employment generation. Population according to the 1991 census has grown by 23.50 per cent in the first 10 years 1981-91, while employment in the organised sector during this period has risen by 5 per cent. An analyses of the last 4 NSS rounds,

28th, 32nd and 43rd (in 1992-93, 1977-78, 1983, 1987-88) shows that 56 per cent of the workers are engaged in self employed activities, and 30 per cent as casual labour. Using the census data, it is estimated that 80 million will enter the labour force in the VIII and IX Plan and if 56 per cent of them are to be helped in their self employment activities and 31 per cent

as casual labour two action are needed : a) credit must be made available to the self employed *promptly* when they need it and at low cost, that is low rates of interest and b) the minimum wages must be set by government and enforced by it at an average of Rs. 15 per day. The Planning Commission wants employment generation during the VIII Plan to be 3 per cent per annum during the plan period. The National Science and Technology Entrepreneurship Development Board (NSTEDB) reports that through its Mass Employment Generation through Science and Technology (Megsat) it has created 10400 jobs in 1990-91 against the target of 10,000 jobs which is believed to be realistic and feasible. On child labour, the Central Advisory Committee on child labour has asked states to take concrete steps to prohibit the employment of children in occupations which have been banned: that as the root cause of the employment of children

is socio-economic compulsions (poverty of parents), there is need to apply the principle of equal pay for equal work for child and adults and that cost effective projects should be drawn up and funds mopped up from various sources to have a common pool for the child labour project. Now the problem is to ensure implementation of even those half way measures. The situation of child labour in the states is really appalling, as the intervention and judgements of the Supreme Court from time to time show. Among child labour, some 1.25 million children are destitutes, needing homes. As it is felt that poverty cannot be abolished quickly, child labour will persist, all that can be done is to regulate the practice of child labour. While this may be a practical policy, which even as is not being followed, We should always keep before us the ILO convention of 1973 abolishing labour by children. When can we implement it?

VI. Other Items

Mass Action for National Regeneration

There was a meeting in early May of the southern coommittee of the Mass Action for National Regeneration. The revised curriculum for the first semester this summer of the Anna University and that for the Madras Christian College which is being reduced to 30 day this year were discussed. The state is now set for their implementation and for the July meeting of Vice Chancellors and Principals of Autonomous colleges.

TNSC S & T Workshop on Health

The Tamil Nadu State Council of Science and Technology and the State Planning Commission organised a workshop on the S&T inputs needed in Health. The workshop attended by the state's top medical practitioners, medical scientists and administrators noted the need for updating the science knowhow of the busy general practitioners, the medical and para medical workers in rural dispensaries and health centres and the need for continuing and continuous inservice training in medical science and the

updated technology for all medical scientists.

Islamic cultural foundation

The Islamic cultural foundation and the Social Aid Society jointly organised a felicitation function for Mr. Habibullah Badshah, the newly appointed Advocate General of the state. There was general agreement that with the excellent legal background, his personal qualities of integrity and fairness and his concern for those in need of legal help from the poor sections of society he brought to this important post rather unique qualities. A hope was expressed that he should continue as Advocate General when the new state government is established.

SRC-TNBCE

A meeting of the building committee of the SRC and TNBCE was held at the end of May at which the union government's executive engineer examined the 3 contracts which had been submitted for the construction of the new Headquarters of the 2 organisations. The engineer advised that the earth and ground soil should be examined by an expert and gave two names of persons who could do it. The architect who had examined the 3 contracts recommended the tender offering the lowest quotation which was accepted.

IIC

The monthly panel discussion on Social Development in the National Plan

and economic development was organised at the end of May. There was agreement that there was need for examining the definition of social development. The importance of education and health which are given a low priority in the Plan was recognised. The key to social development was the education of girls and women which should be given top priority. On the next day, there was a workshop on alternative paradigms of development. Various models—Socialist, Communist, Gandhism were examined. There was agreement that the present system was not working well and in particular it has not addressed itself to poverty of the more than half the people and inequality of society. Here again the use of education and health as the key to correcting these defects were underlined. There is need for both opening up of the market and state interventions on matters affecting people. It was suggested that some of the important issues referred to should be pursued in smaller groups.

June Development Seminar

The paper for the June Development Seminar on 'Container traffic in Madras Port' by Paul P. Appasamy and Anand Kumar Thiyagarajan along with the Summary of Discussion of the paper at the seminar appears as the first article.

Second Article

An article, Some Notes on Employment, and Unemployment appears as the second article.

MIDS News

Dr. Nirmal Sengupta had a Meeting with Secretary, Rural Development on 26th June, 1991 regarding a Wasteland-Watershed project.

Poverty, Planning Commission on July.

He also attended a training conducted at LBSN Academy Probationers on (a) Poverty Alleviation Programmes and (b) Participation and Co-operation.

Dr. S. Neelakantan attended the Section Committee Meeting at TNV University, Madras on 4th July.

He was the External Examiner for Ph. D. Viva Voce Examination G. Leonard held at St. Joseph's Coll Tiruchirapalli on 8th July.

Mr. S. Guhan attended the Assocham Workshop on Economic Agenda for New Government.

Dr. A Vaidyanathan attended a Meeting of the Expert Group on Estimation of

Dr. Chendroyaperumal, Faculty Member of National Institute of Port Management, Madras gave a lecture on 'Arrow Technique for Communication Economics' on 10th July.

June Development Seminar

Container Traffic in Madras Port

by

Anand Kumar Thiagarajan

and

Paul P. Appasamy

Monthly Seminars 1991

<i>Month</i>		<i>Title</i>	<i>Author</i>
August	—	Services and Uruguay Round	B. S. Raghavan
September	—	Power situation in Tamil Nadu	M. G. Devasagayam
October	—	Study of Perceived and actual Crime in Madras City	A. Sivamurthy
November	—	Externally Aided Projects in Tamil Nadu	N. Narayanan
December	—	Labour Law and Trade Union	Babu Mathew

Introduction

Madras Port was developed by the British primarily to promote their trading interests, with the erstwhile Madras Presidency serving as a vast hinterland for the port. Fortyfour years after independence, Madras Port continues to be the largest port on the eastern seaboard with links to the Far East and Pacific countries, apart from the traditional ties with Europe and West Asia. With an enviable location and a well-connected transportation network, the port has tremendous potential for traffic growth.

World-wide advances in shipping technology have had their impact on Indian ports. Containerisation of cargo sometimes referred to as a revolution in freight transportation, is gradually changing the character of port operations. Madras Port has taken the lead in constructing a container terminal, and incorporating containerisation as an

integral part of its modernisation programme.

In this paper, we briefly describe the historical development of Madras Port, and in particular the container terminal. We then discuss the concept on containerisation, and the constraints in the Indian context, before presenting some data from published sources on the growth of container traffic at Madras Port. This study is intended only as a preliminary survey of container operations, in order to identify potential areas for further research in the broader fields of port economics and management. Of particular interest is the role of the port in the economic development of the Madras Metropolitan Area.

I

Background of Madras Port

Unlike many of the ports across the world, Madras Port was not endowed

or designed by nature. In fact, mariners viewed it as a liability because it was heavily infested by sharks, and the continental shelves were sandy and sloping. The coast was also frequently hit by cyclones during the monsoon season. Ships had to anchor two miles away, and the cargo had to be transported from ship to shore by "Masula" boats.

It was in the middle of the nineteenth century that the harbour was designed and built, and after many delays, Madras Port was commissioned in 1935. The port came of age only in the first decade of the twentieth century when a number of additional facilities and remodelling schemes were introduced by Sir Francis Spring. Madras became a major commercial port in which steamer vessels of 10,000 tons could dock. No other major developments were introduced until independence. The volume of cargo handled by Madras Port remained at around 2 million tons per year (Tirumalai, 1986).

After independence, a number of technological improvements were undertaken to improve the capacity and efficiency of the port. Since the entrance to the harbour was blocked by the littoral drift of sand, a reliable dredger was obtained. Additional handling equipment, a transit shed, and a passenger station were built during the fifties. In the next decade, a floating crane, a wet dock, and mechanised ore and coal handling facilities were introduced. In 1972, an outer harbour with the "Bharathi" Dock was commissioned, while an export cargo complex was built a few years later (Tirumalai, op.cit.).

In 1983, a fully equipped container terminal was commissioned. From 1985 onwards, expansion of the harbour and modernisation of the container terminal

have been undertaken. During this time, Madras Port saw a further increase in its performance record. There was a tremendous rise in the volume of containerised goods from the time the container was inaugurated. Modernisation of the inland container terminal is now underway. (The physical aspects of Madras Port are given in Annexure I).

Madras Port Container Terminal

The container terminal which was commissioned on December 17, 1983 by the late Smt. Indira Gandhi, renders coordinated service with infrastructure and facilities, and operating efficiency matching international standards. Located in the Bharathi Dock of Madras Port, it can handle gearless cellular vessels of any size, container oriented vessels and combicarriers. The terminal commands a quay length of 380 metres with a draft of 12.8 metres.

It has a rated capacity of 80,000 containers (TEUs) per annum and is supported by an operational area of 1,21,000 sq. metres and a modern freight station. It is the first port in India to set up an "on-line" computer for ship and yard planning, tracking and billing.

The infrastructure and facilities were provided at a cost of Rs. 390 million. With the rapid increase in throughput of container traffic, Madras Port Trust has planned for acquisition of additional equipment, and for providing other infrastructure improvements at a cost of about Rs. 240 million. Important containerisable commodities at Madras Port include tobacco, coffee and tea exports, and steel imports (Administration Reports, 1981-1990).

II

Containerisation

Till the middle of this century, general cargo was transported by break bulk methods. Cargoes were loaded and unloaded manually at various ports and in the ships, and this resulted in inefficient utilisation of space in ships and an increased turn around time at the ports. Because of the disadvantages inherent in this method, the maritime community felt a need for a better and efficient method of cargo handling. Unitization of cargo was offered as a solution to this problem. Of the various methods tried out in unitization, one method namely containerisation developed quickly and has come to stay and promises to be the principal mode of cargo handling in the next half century. It is widely used for transportation over sea, rail, road or even air.

What is containerisation? The International Standards Organisation (ISO) defines a freight container to be an article of transportation equipment intended to facilitate the carriage of goods by one or more modes of transport without intermediate reloading. Thus, a container must be of permanent character, strong enough for repeated use; fitted with devices permitting ready handling by several modes of transport; and designed to be easy to fill and empty.

The primary advantages of containerisation are the rapid handling of cargo, and the possibility of not only port-to-port but door-to-door movement. Other advantages of containerisation include: Greater physical protection to the cargo

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from damage; less holding of stock and lower working capital requirements, and reduction in cargo claim liability (ESCAP, 1986).

There are also problems associated with containerisation, such as the high investment in cellular ships and container terminals; labour problems arising from displacement; and lack of coordination among agencies. Also, optimum use of the technology can occur only if there are multi-modal transport arrangements, i.e. it is necessary to develop a network of inland container depots and container freight stations. But, unfortunately containers rarely move beyond the port boundaries in most developing countries. (ESCAP, op.cit.).

Containers are usually made of steel, aluminium, plywood or fibreglass. The dimensions of most containers used are 8' width x 8' height x 40' or 20' length. The number of containers are quoted in terms of containers twenty feet in length—TEUs or twenty equivalent units. Ventilated containers are used to carry cargo like spices and coffee, refrigerated ("reefer") containers for frozen food products, open top containers for oversized and high density commodities like iron and steel, and tank containers to carry liquids.

Container services were introduced in 1955 by Sealand Services and Maston Navigators for U. S. Coastal movement. Containerisation has gradually spread worldwide as its operational and economical advantages have come to be recognized. By 1983, the container traffic worldwide exceeded 45 million TEUs, with the United States accounting for more than a fifth, at 9.5 million TEUs. India stood 24th among countries

involved in container movement in 1983. (ESCAP, op. cit.).

Container Traffic at Indian Ports

Although India's share in world container traffic was only 0.51% in 1983, the number of containers handled at Indian ports has been growing as shown in Annexure II. In 1988-89, the container traffic had more than doubled from 0.24 million TEUs to 0.53 million. The decade of the eighties was clearly a period of rapid growth. Among the eleven major ports, only Bombay, Cochin, Madras, Haldia/Calcutta, and Kandla have the facilities to handle containers. However, there are provisions in the Eighth Five Year Plan to have container handling facilities at all 11 ports (Sinha, 1989).

Yet, container traffic at Indian ports has not reached the levels seen in major Asian ports like Singapore or Hongkong, for a number of reasons.

- (1) Indian shipping lines, other than Shipping Corporation of India, are either too reluctant to bring about technical changes, or they do not have the resources and expertise.
- (2) Workers at some of the ports do not have the skill and the willingness to accept the new technology.
- (3) Small exporters cannot offer full container loads, and are not as yet capable of dealing with containerisation.
- (4) There is no encouragement of land bridging between the hinterland

and the ports i.e., lack of multi-modal network.

- (5) Reluctance of shipping agents and forwarding agents to change from breakbulk to containerisation (Binay Kumar, 1986, Dayal, 1986).

The most important constraint to containerisation is the lack of a good network Inland Container Depots (ICDs) of which can feed the container terminals at the major ports. Currently, most containers are stuffed or destuffed at the ports and not in the ICDs.

Inland Container Depots

Penetration of containers from the ports to inland destinations is a logical extension of containerised movement of cargo. The operational versatility of containers has brought into effect the concept of "land bridging", that is, importing and exporting container cargo *directly* from the hinterland. Inland Containers Depots (ICDs) linked to gateway ports serve as "dry ports", where Customs examination of cargo is undertaken and clearance given so that these formalities are eliminated at the gateway ports. Thus, ICDs alleviate overloading of handling facilities within the terminal; fill the need for personal service which a large port cannot accommodate, because of its prime need to serve the requirements of the ship; and have a beneficial effect on the country or region. (Kappel, 1983).

In the Indian context, the major obstacles to setting up ICDs are: the paucity of inland infrastructure and customs clearance facilities; the high cost of

containers handling equipment; and the high cost of through transport from inland centres. Container transport is *not* an important part of the operations of the Indian Railways. In 1988-89, container cargo constituted only 0.5 million tonnes out of a total of 340 million tonnes transported by the Railways (Dayal, 1986). An analysis of cargo traffic flows by RITES indicate that there are approximately 100 locations in the country where container handling facilities could be considered. The study proposes a net-

work of 23 ICDs and 71 container freight stations connected to the 11 major ports (Sinha, 1989).

ICDs linked to Madras Port include Bangalore, Coimbatore, Guntur and Anaparti. Sub-depots are proposed to be set up at Ranipet and Hosur in the near future. In the next section, we examine the container traffic data for Madras Port following the advent of containerisation in the early eighties.

III

Analysis of Container Traffic Data at Madras Port

This section deals with the data concerning import-export tonnage, number of containers handled, import-export commodities and financial aspects of containerised cargo. The data collected and tabulated pertain to the period 1981-1990. These data were collected from the Administration Reports of the Madras Port Trust.

Relevant figures regarding container traffic are shown in Table 1. It includes data regarding the number of containers (empty & stuffed) exported and imported, the cargo tonnage imported and exported in the past one decade. The figures in brackets are the percentage increase of a particular item over the previous year.

As can be observed all parameters show continuous increase over the time period except for 1987-1988 which shows a decrease in almost all the parameters. This trend is particularly

welcome, since this is indicative of the shift from total break-bulk cargo movement to total containerisation movement. No specific reason were given in the Administration Reports for the decline in 1987-1988. A simple index has been formulated by taking the number of containers handled in 1981-82 as the base value (containers handled in 1981-82 correspond to a value of 100). As can be seen from the table there has been a six fold increase in the number of containers handled from 1981-82 to 1989-90. The new container terminal was inaugurated in December 1983 and for the next two years 1984-85 and 1985-86, there has been a tremendous increase in both the number of containers handled and in the cargo tonnage.

The Madras Port Trust had estimated that the total tonnage which would be handled in 1989-90, would be around 7,82,770. This indicates that the containerisation process has been carried

out at an impressive pace, outstripping even the most optimistic projections.

One interesting feature is that the incidence of empty container handling has shown a steady decrease over the period considered. This decrease reflects that there is increasing synchronization of imports with exports and vice-versa.

Table 2 shows the relevant figures regarding import of containerised commodities over the last four years. There were more than 45 products which were imported through the Madras Port. These products were suitably divided into 14 major categories. The figures indicated in brackets are the percentage contribution of the category to the total containerised imports.

Some of the main import categories in 1989-90 were paper & paper products, metal & metal products, chemical & pharmaceutical products, chemicals, machinery and food products.

The major products in the paper & paper products category were waste paper, imported from U. S. A., newsprint imported mainly from U. S. S. R. and miscellaneous paper products. Iron and steel products contribute about two-thirds of the total metal products imports while the remaining was accounted for by the non-ferrous metals. The main countries which export these products to Madras are U.S.A., U.S.S.R., Japan and West Germany. As regards the chemical and pharmaceutical products, which are traditionally imported from U. S. A. and Japan, the main products are moulding powder, dyeing & tanning substances

and miscellaneous plastic products. Chemicals are imported from U.S.A and U.S.S.R. and machinery is imported from Japan, West European countries and West Germany. The category food products consists of wheat, other cereals, edible oils which are mostly imported from U.S.A.

In 1989-90 the total cargo imports were 12,45,787 tonnes of which containerised cargo was 4,74,452 which is about 38%. However, it may not be economical to move certain commodities through containers whatever be the merit of containerisation.

Table 3 shows the figure regarding the export of commodities through Madras Port. As in the previous case there were more than 51 products and these were grouped under 16 major heads. The table shows the exports of these commodities for the past four years. The figures indicated in the brackets are the percentage contribution of that product to the total containerised exports.

Considering the year 1989-90, certain major categories deserve special mention. Fruits & vegetables is one of them. In this category, fruits & vegetables are exported mainly to U.S.S.R., South Eastern countries and West Germany. Food products are also an important export commodity destined to the West European countries. Important products are cashewnuts, appalam, appads and plantation commodities & spices. Fibres also form another significant export category. The main product which contributes a lion's share to this head is cotton goods which is exported mainly to U. S. A. and West European

countries and to a smaller extent to many other countries. Granite is a major export revenue earner and contributes about 18% of containerised exports: U.S.A. and Japan import almost the entire bulk of granites exported from India.

In 1989-90, 4,78,813 tonnes of cargo were exported through containers out of the total 9,39,475 tonnes of cargo exported i.e. about 51% of the total cargo exported was done through containers.

Table 4 provides the income, expenditure and profit data arising out of containerisation at Madras Port. Income and expenditure through containers, total income and expenditure of the port, profits through containers, overall profits and relevant percentages are shown for the period 1982-83 to 1989-90.

The income and profit through containers have shown a phenomenal increase from 1982-83 to 1989-90. Another feature is that the contribution of profit through containers to total profit has increased from a mere 3% in 1982-83 to about 23% in 1989-90.

IV

Conclusions

The container terminal at Madras Port has been in operation for nearly a decade. The available data indicates that there has been a sixfold increase in the number of containers handled, and a twenty-six fold increase in the profit earned through containers during this period. Moreover, the percentage contribution of the profit through containers, to the overall profit has shown a substantial increase every year. Also, the tonnage of individual import and export commodities have also shown an increase in the past four years. There has been

a decreasing trend in the incidence of empty containers handling resulting from synchronisation of imports and exports through containers.

However, it may be premature to conclude that the efficiency of the port has improved through containerisation. A careful study on the costs and benefits of containerisation has to be undertaken before any general conclusions can be drawn. It has also been suggested that there are a number of conflicting interests with regard to container terminal productivity—that of the terminal operator, the port authority, labour, and the carrier. Due to problems of data comparability, the only appropriate comparisons of productivity are at a single terminal over two or more time periods (Dowd and Lischine, 1990).

The issues specifically with regard to containerisation that need to be studied include:

- 1) The importance of the multimodal network—Can containerisation be successful or justifiable even in the absence of such a network?
- 2) Does containerisation result in the displacement of labour?
- 3) Should other unitization alternatives to containerisation be considered?
- 4) Are the institutional factors (union work rules, customs regulations, safety rules etc.) major barriers to containerisation?
- 5) Will Containerisation improve the competitive position of Indian Ports vis-a-vis other ports in the region?

A detailed case study of containerisation at Madras Port can shed some light on these and other relevant issues.

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Table 1
Container Traffic (MPT)

	81-82	82-83	83-84	84-85	85-86	86-87	87-88	88-89	89-90
Import Containers									
Empty (TEU)	2523	2299	4287	5635	5152	6494	8773	5880	9302
Stuffed (TEU)	5883	6785	8207	15323	33628	41076	34617	39401	38767
Total (TEU)	8406	9084	12494	20958	38780	47570	43390	45281	48078
Cargo Tonnage (tonnes)	79776	99818	105705	174508	375282	470265	458274	500619	489761
Export Containers									
Empty (TEU)	1897	2827	2282	3979	10909	10053	8424	10761	7579
Stuffed (TEU)	4777	6646	10381	15673	27568	36674	34414	34610	40126
Total (TEU)	6674	9473	13663	19652	38477	46727	42838	45371	47705
Cargo Tonnage (Tonnes)	61334	96969	103058	166994	304824	420021	444307	459390	492917

Total Containers	(15.9)	(28.1)	(46.3)	(67.0)	(3.0)	(3.9)	(-3.2)	(1.4)
Total Empty Containers (TEU)	4420	5126	6569	9614	16061	16547	17197	16641
								16881
Total	(25.9)	(38.4)	(66.7)	(47.4)	(27.0)	(-11.2)	(7.2)	(6.5)
Stuffed Containers (TEU)	10660	13431	18588	30996	61196	77750	69031	74011
								78892
Grand	(23.0)	(35.5)	(61.4)	(90.2)	(22.0)	(-8.5)	(5.1)	(5.6)
Total (TEU)	15080	18557	25157	40610	77257	94297	86228	90652
								95773
Total	(39.4)	(6.0)	(63.5)	(99.1)	(30.7)	(1.3)	16.3)	(2.3)
Cargo Tonnage (tonnes)	141100	196787	208763	341502	680111	890286	902581	960009
								982678
Incidence of Empty Container handling	29.31	27.62	26.11	23.673	20.78	17.547	19.94	18.35
								17.62
Index	100	123.05	166.82	269.3	512.3	625.31	571.8	601.14
								635.09

Note : The number of total Containers included transhipment containers.

Table 2
Imports Through Containers (MPT)

	1986-87	1987-88	1988-89	1989-90
1. Fibres	(1.4) 3896	(2.5) 7711	(6.6) 26354	(2.6) 13302
2. Wood & Wood products	(0.3) 712	(0.1) 176	(1.6) 6522	(1.4) 6642
3. Paper & Paper products	(4.1) 11516	(4.5) 14612	(14.3) 56861	(16.1) 76426
4. Leather & Leather products	(0.4) 1188	(1.4) 4221	(2.4) 9695	(1.4) 8935
5. Rubber & Coal	(4.5) 12614	(6.7) 20382	(7.2) 28671	(4.7) 22471
6. Chemicals	N.A	N.A	(9.8) 38958	(9.4) 44407
7. Chemicals & Pharmaceutical products	(4.3) 12004	(7.8) 23773	(15.3) 60773	(17.4) 82547
8. Food products	(7.3) 20390	(4.7) 14415	(12.4) 49372	(5.3) 24965
9. Machinery	(10.2) 28283	(7.6) 23283	(5.0) 20017	(8.0) 38134
10. E. Machinery & Transport Equip.	(7.2) 20152	(7.2) 21934	(4.3) 17142	(4.1) 19644
11. Beverages & Tobacco	N.A	N.A	(0.6) 2239	(0.7) 3337
12. Minerals & Non Metals	(4.9) 13609	(4.9) 15037	(4.6) 15928	(2.7) 12835
13. Metals & Metal products	(10.8) 29983	(13.5) 41261	(13.6) 54758	(15.8) 75087
14. Others	(44.5) 124069	(39.2) 119634	(2.5) 9983	(9.6) 45720
Total	278505	3054391	397262	474452

Note: All figures are in tonnes. Data for 86-87 & 87-88 are not comparable with those of 88-89 & 89-90, since a detailed breakdown of commodities was not available for the earlier years.

Table 3
Exports Through Containers (MPT)

	1986-87	1987-88	1988-89	1989-90
1. Fish & Fish products	N.A	N.A	(3.3) 11292	(2.4) 11541
2. Vegetables	(10.2) 23411	(7.2) 21173	(9.7) 33371	(13.6) 65084
3. Food products	(2.0) 4539	(1.0) 3080	(3.5) 12160	(3.1) 14912
4. Beverages & Tobacco	(7.5) 17807	(4.1) 12236	(2.7) 9354	(3.3) 15636
5. Fibres	(7.5) 17296	(16.2) 47920	(13.2) 45489	(13.4) 63935
6. Rubber	(3.6) 8245	(2.4) 7056	(2.1) 7389	(2.7) 12830
7. Animal products	(2.5) 5670	(2.1) 6078	(2.5) 8586	(1.7) 8211
8. Leather products	(4.7) 10845	(3.6) 10505	(3.3) 11564	(3.0) 14567
9. Chemicals	(1.5) 8524	(2.8) 8230	(3.2) 11102	(3.4) 16479
10. Chemical Pharmaceutical prod.	(0.7) 1718	(0.9) 2630	(0.6) 2075	(0.6) 2921
11. Machinery & Tools	(2.4) 5418	(0.7) 2135	(2.0) 6803	(1.9) 9073
12. E. Machinery & Transport Equip.	(2.5) 5810	(1.4) 4063	(2.3) 8083	(2.7) 12771
13. Minerals & Non Metals	(0.7) 1598	(1.1) 3169	(4.3) 14735	(3.9) 18870
14. Metals	(0.9) 1961	(1.8) 5306	(7.9) 27163	(5.3) 25378
15. Granites	(17.3) 39047	(22.6) 66909	(22.7) 78352	(18.6) 89075
16. Others	(36.0) 82461	(32.2) 95139	(16.7) 57838	(20.4) 97530
Total	2292324	295626	345356	478813

Note: All figures are in tonnes. Data for 86-87 & 87-88 are not comparable with 88-89 & 89-90, since a detailed breakdown of commodities was not available for the earlier years.

Table 4

Income, Expenditure and Profits Through Container Traffic (MPT)

	1982-83	1983-84	1984-85	1985-86	1986-87	1987-88	1988-89	1989-90
Income								
Containers (Rs)	11142687	36458909	97409318	126751637	168441259	154452332	189200173	24165430
Total (Rs)	474350136	530694287	814327270	911813856	970549778	1016253739	1216860671	1310066282
% Income thru. Containers	2.35	6.86	11.96	13.89	17.35	15.19	15.54	18.44
Expenditure								
Containers (Rs)	3586799	14790998	27366408	31907307	34259882	43395489	43988639	46362661
Total (Rs)	271032753	295306619	353373333	371635083	398710492	428346617	46821484	502092130
% Expenditure thru. Containers (Rs)	1.32	4.97	7.72	8.58	8.57	10.11	9.37	9.22
Profit thru.								
Containers (Rs)	7555888	21667911	70042908	94844330	134181377	111056843	145211534	195289769
Overall Profit (Rs)	203317383	235387668	460953937	540178773	571839286	587907122	748645830	807924152
% Profit thru. Containers	3.71	9.21	15.20	17.56	23.46	18.89	19.40	24.17

Annexure-I

Madras Port—At a Glance

Madras port is an artificial port located in 13° 6'N, 80° 18'E. It is a major East Coast port on low sandy coast with shelving beach depth 2 miles out. The area covered under this port :

Inner Harbour	—	Water spread area	: 220 acres
		Land area	: 441 acres
Outer Harbour	—	Water Area	: 200 acres
		Land area	: 145.96 acres

The storage capacity of the port :

	Type	Area
Covered	1. Warehouse	65,685 sq.mtrs.
	2. Transit sheds	47,841 sq.mtrs.
	3. Covered area for containers	43,450 sq.mtrs.
	4. Container freight station	6,300 sq.mtrs.
Open	5. Open space	3,25,000 sq.mtrs.
	6. Container Parking Yard	61,000 sq.mtrs.

Annexure-II

A. Total Container Traffic Handled at Indian Ports

Year	Traffic in TEU's
1975-76	9745
1976-77	9305
1977-78	16987
1978-79	44429
1979-80	94806
1980-81	116610
1981-82	165490
1982-83	175670
1983-84	239000
1984-85	296000
1985-86	396000
1986-87	399416
1987-88	480000
1988-89	531351

Source : V. K. Sinha (1989) "Inland Container Depots—Bringing Inland".

B. Container Traffic by Port (1985-86)

Port	Traffic in TEUs
Haldia	8000
Bombay	214000
Cochin	39000
Madras	69000
Calcutta	46000
Total	396000

Source : R. Dayal (1986), "Containerisation in Perspective".

Annexure III

Glossary

Break Bulk cargo: This is also known as general cargo and is the traditional method of transporting cargo without the use of containers.

Cellular Vessels: A ship specially designed to carry containers. The hold or cells are so arranged to accommodate containers in a vertical line.

Combi-carriers: Ships carrying both containers and Break bulk cargo.

Container Terminal: A facility which provides a package of activities and services to handle and control container flows from vessel to rail or road and vice versa.

Empty Containers: Containers without any cargo which is moved from one place to another for loading. This cannot be avoided because a limited

number of containers are available in the pool for use by members of ISO and exports cannot always be synchronized with imports and vice-versa for a given port within a reasonable period of time.

Hinterland: The inland areas near a port which it serves for the sea-borne trade.

Incidence of Empty Container Handling: It is expressed as a percentage of number of empty containers to the total number of loaded containers plus empty containers.

TEUs: Twenty Equivalent Units in which all containers are generally quoted in terms of 20' container is equal to two TEUs and a 30' container to 1.5 TEUs.

Throughput: The throughput of containers is expressed in terms of numbers of cargo handled (TEUs) and the containerised cargo in tonnes.

Summary of Discussion

The paper presented by Dr. Paul Appasamy deals with the development of Madras Port and containerisation of cargo transport. In order to increase the efficiency of cargo handling several methods of unitization have been tried and containerisation has come to stay since the middle of this century.

Containerisation has resulted in the standardisation though not a single standard has come to stay, and increase in the speed of cargo handling. However, it is difficult to conclude that the efficiency of port has improved through containerisation. At this stage it is premature to conclude on the efficiency of containerisation as the various dimensions of the problem are yet to be analysed.

Several constraints on containerisation have been noted by the author. Containerisation warrants the development of multimodal network. The hinterland

container depots have to be developed to feed the terminals at the port. Further, standardisation of containers decides the mode and type of both inland and ship transport, which requires investment in various related sectors of the economy. Another constraint on containerisation noted by the author, is the indivisibility of container space which hinders the utilisation of containers by small exporters. However, the chairperson has pointed out that it is no longer a problem as several shipping agents arrange for sharing of the containers.

The issue of displaced workers and training of personnel to cope with increasing specialisation as a result of containerisation merits attention. Dr. C. Chendroyaperumal chaired the Seminar.

V. Jacob John

Some Notes on Employment and Unemployment*

Rate of Economic growth and rate of Employment growth

One of the peculiar features of the economy that has come to light, particularly in the VI and VII Plans is the coexistence of high rates of growth and declining rate of employment. At the macro level, it is noted that, while the trend rate of growth of the economy during the two plans was 5.3 per cent¹, and that of industry even higher at 8 per cent, the growth rate of employment has declined from 2.8 per cent to 1.51 per cent during that period. The rate of growth of unemployment usual (status) increased from 2.77 per cent to 3.77 per cent during the period.²

Agriculture

At the disaggregated level, the above trends in the decline in employment is even more disturbing. Even as we have been expressing satisfaction at higher level of agricultural production and attaining a level of foodgrain production which avoids their imports, the growth rate in agricultural employment is declining drastically from 2.32 per cent in 1972-73 to 1977-78, to 1.20 per cent in 1977-78 to 1983 and to a very low of 0.65 per cent in the prime 1983 to 1978-88³. The major reason for this is that the regions with a high rate of growth of output such as Punjab, Haryana, Uttar Pradesh show shrinking labour use per unit of output. In Punjab a one percent growth in agricultural output is accompanied by nil (0.00 per cent) growth of employment and so too are the employment records in

other high output regions. This means that to generate employment and to enable agricultural and allied activities to absorb about 50 per cent of the 65 million who constitute the backlog from the VII Plan and the labour force entrants forecast during the coming 5 years the following is suggested.

— Foodgrains production should be developed in the non green revolution areas and dry farming lands comprising West Bengal, East Uttar Pradesh, Orissa, Assam, Rajasthan, Maharashtra, Tamil Nadu, Telingana and Rayalseema regions of Andhra Pradesh, Karnataka and Kerala, with rather heavy investment in irrigation—Medium and Minor—which is itself employment intensive;

Concentrated development of animal husbandry and fisheries which can provide additional employment for 5 million to 8 million persons;

—Development of high value production of vegetable, fruits and other horticultural crops, sericulture and intensification of cash crops—jute and mesta, cotton and oilseeds, which are all employment generating.

Together, these diversified above two agricultural developments can absorb about 30 per cent of the work force awaiting employment.

Small Industry

Turning next to the employment record of the small industry sector, the data

shows a somewhat mixed trend, of employment growth declining by about 40 percent over the VII Plan period. This is mainly because under the generic breed of small industries is included the capital intensive modern units (using increasingly NC/CNC machine tools), most of which are benami units of large enterprises, as well as the traditional small industries, the tiny industries and the khadi and village industries. It is the latter group which is employment generating at around 8 per cent during VII Plan. This group of small industries, the traditional, the village, the tiny, can, if they are required to, produce the major part of mass consumption goods, can increase employment by a net 10 per cent per annum —(losing about 2 per cent of their employment generation through increased and improved productivity which is also needed in this sector). This part of the small industry sector which includes the unorganised urban employment sector can absorb 15 per cent of the workforce awaiting employment.

Organised Industry

Finally taking up organised industry at the disaggregated level, it is found that some capital (as well as import intensive) industries have low employment generation in relation to their output. These are the industries which have recorded the highest rates of growth in the 80s., such as automobiles industry and the electronics industry. On the other hand there are industries which have better employment potential —of 0.50 to 0.70 for every 1 unit of output. These include handloom and powerloom textiles and toilet products generally, food processing industries, including fish preservation and canning, and dairy production as counter—part to

development of animal husbandry, fisheries and horticulture proposed under agriculture earlier, khandasari and gur products, edible oil processing, leather products, all kind of handicrafts. The intensive development of this group in the organised sector can absorb 3 per cent of those awaiting employment.

Educated unemployment

The problem of educated unemployment, as it affects the 3.2 million out of the 32 million job seekers registered at the Employment Exchanges at December 1989, is multifaceted.

First, there is not only the problem of open unemployment in this group which characterises the majority of the educated unemployment, there is also the misemployment and underemployment which characterises this group. A recent survey shows that around 25 per cent of those registered in employment exchanges are not unemployed much as misemployed. They are already employed but not in occupations for which they have been trained/educated. This group, being employed represent a wastage of the investment in their education — and can be employed in occupations for which they are trained as and when the economy in their occupation expands. But this is not a priority.

Second, there is the group of those who have a general arts and science education and who are looking for a job. This group needs to be trained in special skills and given a start as TRYSEM does, for self employment.

Third, and probably most serious is the unemployment of highly trained scientists and technologists because their annual

* A note by Dr. Malcolm S. Adiseshiah for the Planning Commission, New Delhi, Feb. 12, 1991.

output is not in accord with the demand for them. A recent study by the Department of Science and Technology⁶, for instance, reports that agricultural scientists are in surplus by 22 per cent in 1990-91 but will decline to 12 per cent by 2000-2001: in engineering and technology there is a surplus of 3 per cent in 1990-91 which will increase to 8 per cent in 2000-2001. Similar data is provided for medical manpower, food technologists, electronic or tele-computer science specialists. This is a difficult area to deal with. For the future demand can be estimated by making clear assumptions of the rate of growth of the economy and of each occupation, which depends on a whole set of variables, the rate of capital investment, the new technologies being developed, management practices etc. But this kind of estimate needs to be made and the education and training intake of the scientists and technologists in universities and institutes adjusted to them, as this is a source of personal frustration, the most expensive investment in societal terms and is one of the major causes for the brain drain.

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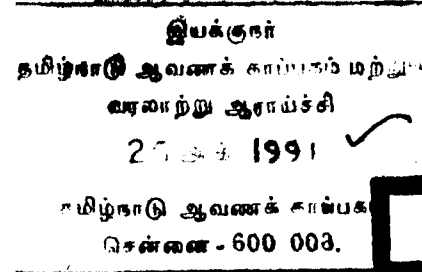
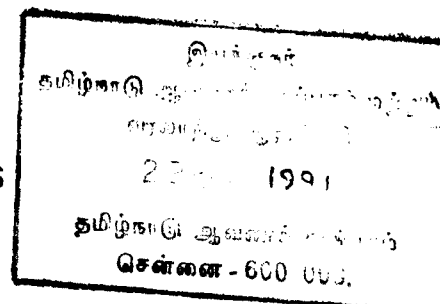
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The Institute was founded by Dr. Malcolm S. Adiseshiah in 1971 and was reconstituted in 1977 as a National Research Institute within the framework of the Indian Council of Social Science Research, New Delhi.

The aim of the Institute is to contribute to the economic and social development in Tamilnadu and India.

The activities of the Institute are:

- Research leading to Ph.D. Degree
- Studies and action-oriented research in micro-development problems
- Documentation and library service in development problems
- Exchange and dialogue at the State, National and International levels on development issues
- Publication of papers and results of the Institute.

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Some Comments on Tamil Nadu: An Economic
Appraisal 1989

Statement of the Workshop

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EDITORIAL - SOME HIGHLIGHTS

I General Economic Scene

State

Planning Commission

The Planning Commission is undergoing some recasting. Since the elected government resigned in February, the Chairmanship has changed twice—with the Ex-chief Secretary and the Adviser (Economic Affairs) holding the office in succession, and now with the election of a new government, the chief secretary, Mr. T.V. Antony, has been transferred to the commission and made its chairman. Whether there will be any revision of the Annual Plan and Draft Eighth Plan remains to be seen.

Climate and Prices

June saw the south west monsoon advancing to cover the southern districts of the state, relieving a hot summer which May represented. Madras received very sharp rainfall on one day and also showers during the second half of the

month, so that the climate has been mild and cool at nights. CSO's abstract of statistics for January 1991 and subsequent months has not approved as yet and so there is no report on the price facet of the state economy. The Commissioner, Civil Supplies reports in early June that prices of vegetables have doubled. This is mainly attributed to the assassination of Mr. Rajiv Gandhi in late May which brought all life and markets to a standstill. The government reports that this was also used as an occasion for profiteering. The government states that it is planning a crash programme for bulk procurement from the major producing centres in and outside the state and to market the vegetables through some 100 retail centres in Madras and district headquarters. The Cooperatives are to be entrusted with retail sales. Now that the elections are over and a new government is in position the suffering of housewives and consumers in paying enormous prices for vegetables should end and prices should attain normal levels—at the start of the new month

(July 1991) (after 4 weeks) this is yet to be made effective.

Power

The power front in the state in June had two important plus points. First, because of the rains, the hydel reservoirs received large inflows during the month. The continuing rains in the catchment areas will help to make up this year's lag in the reservoir which was by the middle of the month 606 MU compared to last year's 689 MU and the total capacity of 2200 MU. The grid demand was declining because of the reduced intake by farmers receiving good rains. The other plus point is that the coal stock position of the thermal plants has improved at 1 lakh tonnes by mid June, (the AP Chief Minister has promised further 1 lakh tonnes from Singhereni) and with the restriction of thermal generation to the minimum making it possible to further build up the coal stocks. On this basis, TNEB decided to remove state wide load shedding, while still maintaining the 25 per cent cut on power consumption and 30 per cent cut on demand of HT industries. The other piece of good news is the announcement by TNEB and ONGC that the state's first gas based turbine using the cauvery natural gas will go on stream in September. This is a 6 month slippage (see Vol XXI p209) of 10 MW station coming up at Kovilkalappol. In view of the large revenue deficit of Rs. 673 crores for this year which TNEB faces, it has announced a heavy increase on new consumers. This is a development change for new connections (Rs 500 for single phase connection, Rs. 1000 for three phase similar charge for LT, HT, commercial, research, educational institutes and street lights. This is needed

but will add to the inflationary pressure. Kalpakkam's first unit which has been shut down from early February is expected to start by the end of July which will make active its capacity of 235MW. TNEB also announces that Tuticorin's fourth unit (210 MW) will be commissioned by December and that the first unit will be ready by June 1992. The North Madras station is being built according to schedule and its first unit will be commissioned by June 1993 and the second unit by December 1993. Power will be in a tight fit for the state in the VIII Plan and will have to be used economically avoiding power intensive industrial units. The Union Public Investment Board has in June approved a Rs. 1163.27 crores new mine (providing 4 million tonnes) and a linked thermal station of 420 MW.

At the national level, the Ministry of Power reports that electricity generation is increasing at 9.5 per cent in May 1991 against May 1990, with thermal generation forming 75 per cent of it. This imbalance in thermal as against hydel generation should be corrected over the VIII Plan. The supply of power in most states was normal, with the heavy rains in Kerala and Maharashtra, moving North. With regard to atomic energy, the government reports a number of problems. For one the Soviet agency had blocked the detailed projects for Kayamkulam and Mangalore, so that NTPC executing the projects states that instead of completing them by the VIII Plan end, they may slip into the IX Plan. The Soviets states that the delay is due to NTPC not opening the letters of credit as per schedule. Second, Mangalore (420 MW), Kayamkulam (420 MW), North Kamarajpuram thermal (1000 MW) and Godavari (400 MW) are being held up by the Department of Environment on environment and rehabi-

tation grounds. Third, there are delay also in 4 nuclear power projects—Rajasthan, Narora, Kakrapur, Mangalore which will cost the government more than Rs. 1200 crores. Finally the government states that because gas based turbines are not available internationally (partly because of the Gulf war) the gas, based, power projects are held up and gas will continue to be flared wastefully. This is an occasion when we should use our engineering skills and R&D in BHEL and other centres to develop gas based turbines indigenously. The power ministry is pressing for the ban on bilateral aid in power to be lifted because it enables faster development of the project, at lower cost. Experience shows that neither is the project speeded up as a result of bilateral tie up nor is it cheaper than that of indigenous power equipment that producers charge.

Water

A major development in the water area was the decision announced on May 25 of the Cauvery Water Disputes Tribunal directing Karnataka to release water from its reservoirs so as to ensure that 205 tmc of water was available in Tamil Nadu's Mettur dam in a year from June to May to be effective from July 1. This follows the Supreme Court directive to the Tribunal to consider Tamil Nadu's prayer for interim relief (see Vol XXI p271). The Tribunal also ordained that Karnataka is not to increase its area under irrigation by Cauvery waters beyond the existing 11.2 lakh acres, besides ensuring that the water released to Tamil Nadu is regulated on a week basis. The tribunal has asked Tamil Nadu to release 6 tmcft of water to the union territory of Pondicherry. The monsoon, as noted earlier, was moving inland,

and by June had reached Telingana and the Rayalaseema, Karnataka and Tamil Nadu. The unusually heavy rain on June 4 & 5 gave Madras 6 tmcft in 24 hours and 1 month water supply, sending the storage to the Red Hill reservoirs to 1879 mcft. Also an inflow of 52,360 cusecs into Mettur at the same time and the rains in Tiruchi, Kamarajar, Thanjavur etc. meant that the water position in the state for both drinking and irrigation is satisfactory for this part of the year. Work on the Telugu Ganga is being speeded with the AP government taking some positive initiatives.

Housing

HUDCO announced that Rs. 8000 crores have been set apart for housing in the southern states, of which Rs. 800 crores is being spent in Tamil Nadu. Of 170 building centres in the country for training masons and other construction workers, centres had come up at Maduravayal, Auroville, Gandhigram and Tiruchi and is being completed in Madurai. About half the state allotment is for housing and the other for acquiring land and the infrastructure needed. The VIII Plan target for the South is 35 lakh houses, of which the Tamil Nadu's will be 11 lakhs. This is a sound approach of encouraging private capital and funds to flow into the house building activity.

Cheap liquor scheme

The first programme action of the new government was the announcement of the discontinuance of sale of country liquor with effect from July 16. This was one of the major pledges of the party now forming the government. The abolition of the cheap liquor scheme will entail a revenue loss of Rs. 322 crores for the rest of this financial year, which it is

stated will be made up by "other administrative avenue's. This is aimed at countering the cheap liquor which has lowered the living levels of the poor sectors. To back up this action, the state level prohibition propaganda committee is being reconstituted and reactivated, and a campaign to educate the public on the evils of liquor is to be one of its major tasks.

Union

VIII Plan

In June, the Deputy Chairman and members of the Planning Commission submitted their resignation to the new Prime Minister. The Deputy Chairman presented to the Prime Minister the preparatory work done by the Commission on the VIII Plan on the basis of a 6 per cent rate of growth calling for an outlay of Rs. 325,000 crores in the public sector. The government appointed as the new Deputy Chairman of the Planning Commission, Mr. Pranab Mukherji and the other members of the commission are being appointed. The Deputy Chairman states that the first priority for the commission is to complete the VIII Plan.

Prices

The inflation rate for May recorded a rise of 1 per cent, the whole sale price index standing at 194.3 per cent on June 1. The annual rate of inflation, on a point to point basis, was 10.8 per cent compared to 11.1 per cent reported in the last issue for the 12 month period ending 27 April 1991. This decline is due to a statistical quirk involving a higher base for the period, as explained in the last issue. The index of primary articles registered a rise of 0.2 per cent, food prices 0.4 per cent

including cereals by 0.5 per cent, pulses 0.2 per cent, fruits by 1.5 per cent and fish and meat by 1.76 per cent—for the week ending June 1, 1991. Among manufactures, food products rose by 1.6 per cent, including sugar, gur and khandasari by 2.6 per cent and oil cakes by 2.5 per cent during that period. RBI reports that notes in circulation continued to fall (by Rs. 195.40 crores) during the week ended May 31, notes in the banking department rising by a small Rs. 4.29 crores. This slowing money supply has made contribution to the damping down of inflation in May.

Stock Exchange

The Stock Exchange seems to be unaffected by the immediate problems facing the economy—the BOP crunch, the large debt both internal and external, high fiscal deficits. Share prices are currently 50 per cent higher than last year, the Bombay Stock Exchange sensitive index for 30 scrips averaged 1248.13 on June 7, 1991 against 802.45 in June 1990. The BSE national index was also up by 50 per cent. The Madras Stock Exchange recorded a better trend during mid June, with share prices recovering their lost ground. The Calcutta exchange recorded a decidedly bullish trend. The Delhi share market moved up briskly and Ahmedabad exhibited cheerful conditions. These stock exchange trends are criticised as not reflecting the grave economic crisis facing the country—that its activities are based on the good start of the monsoon and good farm output expected: which might help industrial production and the new government and giving the economy the needed sense of direction and stability. It may well be that the Stock Exchange dealers, workers etc

have a better appreciation of the future than the chambers of commerce, economists etc. The building up of discipline in the exchanges is being emphasised in the Stock and Exchange Board of India (SEBI) recommending that the company Law Board penalise companies/delaying share transfers and for this purpose, the Registrar of Companies carry out surprise checks on companies delaying the share transfers. This will put a check on this group of malpractices. SEBI has also set forth criteria for grading prospects of public issues on a scale of one to ten to guide merchant bankers. This will also facilitate the tasks of genuine investors. The Ministry of Finance has increased pressure on Stock Exchanges to tighten their regulations, trade and reporting practices and has authorised SEBI and the ministry officials to conduct annual inspections for this purpose. One problem facing the government both for its economic viability and for its negotiations with the IMF and World Bank is the huge revenue deficit during 1991-92, which is estimated at Rs. 17,000 crores.

Economy

May recorded several developments in the economy. First, there was and continues to be a deal of excitement over the government selling 20 tonnes of confiscated gold (out of an estimated 80 tonnes) through the State Bank of India in the Zurich market on a spot basis and buying it 6 months forward, which was using the gold as collateral for raising a short term loan of \$240 million. The interest on this is the Libor rate. The government has no option on the matter as its low foreign exchange reserve (covering 3 weeks of imports) would have been completely exhausted, if the gold had not been sold/mortgaged, to

meet our debt servicing obligations. It is normal practice for any government—USSR, Iran, China to sell its gold holdings to meet its foreign exchange needs. The problem is that there is still a foreign exchange debt service of \$ 700 million to be met which will involve the sale of a further 30 tonnes of gold, which will have to come out of the official reserve. Here the IMF loan can be of help. The government has sent a letter of intent to IMF for a loan and is negotiating the details—the amount and conditionalities. It is also negotiating a bridge loan to meet immediately foreign exchange needs. Second, the government projects a 5 per cent growth for 1990-91 on the basis of a normal monsoon, stable oil prices, moderate inflation, sustained agricultural and industrial production and supporting infrastructure facilities. This appraisal of the past year should be placed along the NCAER 4th survey of consumption trends for 1989-90 which reveals the sale of consumer durables, such as refrigerators, quartz wrist watches, VCRs, motorcycles, have increased sharply showing "the heavy marketing investments during the year in these products, their easy availability, the rising prosperity of the consumer households". Black and white TV sales rose by 60 per cent over the previous year, while colour TV sets increased by 10 per cent, the spurt in black and white TV sets being mainly in rural areas (increasing from 31 per cent to 44 per cent) along with increasing rural market shares in sales of table radios, sewing machinery and pedestal fans, pressure cookers, wrist watches. The data shows that the East has moved slowest towards a consumerist society, the West showing the fastest increase, with North and South also increasing the rural shares but at a lower pace and for a different cluster of goods. The South's

main share was in mixies, grinders, B&W TVs, table radios, ceiling fans moped and motor cycles, electric stoves and irons, the North's major share was room heaters, RCV, gas stoves, pressure cookers, colour TVs, scooters, moulded brief cases. The survey draws the conclusion "the data questions the basic presumption of what are necessities and luxuries when we see the figures of consumption among low income group as well as in rural areas." This interesting survey and conclusion needs a detailed analysis of the methodology used and the sample chosen. Third, the World Bank has demanded changes in the accounting procedures of the development finance institutions as a condition for sanctioning the financial sector loan of \$1 billion. The substance of what is demanded is in the national interest—that is, disclosure of the sick industries portfolio and bad debts and change in accounting from accrual basis to cash basis, but it is to be regretted that the World Bank has been allowed to dictate these terms. This is a bad precedent which the Bank will follow up. Fourth, the RBI relaxed cash margin for manufactures—exporters of finished leather products, chemicals and pharmaceuticals, engineering goods, games and name boards (see previous volume). It is also considering relaxing the margin being required for opening letters of credit on rupee paid imports as there is no foreign exchange outgo on this. Fifth, the 3 days down-pour in Maharashtra resulted in Rs. 100 crore worth of damage, filed by industries with insurance companies; the fertiliser subsidy for this year is likely to exceed Rs. 6000 crores against Rs. 4800 crores provided in 1991-92 budget which is a major inflationary factor. Finally, the government has rightly decided to initiate steps to set up a technology mission on cotton, as unlike recent years when the

cotton crop was abundant, (above forecasts), this year there is a smaller crop, large exports, the cotton shortage faced by mills will accentuate, the cotton crisis for which the technology mission may show the lines of meeting the crisis for now and the future, as it has done for oil seeds. The other product facing a problem is sugar, where despite a 9.8 per cent increase in production in 1990-91, sugar prices have jumped by 2.2 per cent between October 1990 and January 1991. On this the remedy is to ensure that levy sugar is available to the poor and allow free sugar prices to rise as the only means of not only balancing demand and availability but also restraining luxury consumption of sugar by 5 star hotels and the black marketeers—of this water guzzling crop.

Industry

CSO reports (quick estimates) that the industrial growth index for February 1991 at 222.7 was 7.3 per cent higher than that for February 1990 so that for the first 11 months of 1990-91 industrial growth rose by 8.5 per cent compared to the 7 per cent recorded by the first 11 months of 1989-90. During this period, April-February, 1990-91 the index for manufacturing (which accounts for 77.10 per cent of the total index) rose by 9.6 per cent compared to the 11 months 1989-90 rise by 6.3 per cent. As noted earlier this satisfactory record of the industrial sector leads to the official view that together with a similar performance in agriculture, 1990-91 recorded an overall growth of the economy of 5 per cent which seems reasonable. The Chief Commissioner of Income Tax says because of well considered tax planning, the contribution of the private sector to the corporate tax revenue "is very negligible"

and that the level of the revenue of Rs. 5000 crores under this head comes from the public sector firms like BHEL, Mahandgar Telephone Nigam, NTPC, IOC and ONGC, with the share of the private companies being near non-existent. The top 25 corporate giants in the private sector do not pay any corporate tax. He also drew attention to the estimate of black money of Rs. 300,000 crores and regretted that "even nationalised banks have been made full use to generate black money", 51 per cent of demand drafts purchased in India against tax payment of Rs. 1 lakh related to unaccounted transactions and involve a revenue loss to government of Rs. 400 crores per annum. On individual industries, the plastic industry is reported to be adopting a new strategy involving (a) dovetailing its priorities with those of the government, and (b) pushing exports so that it would be able to obtain foreign exchange for its essential imports. This would also counter the popular impression that the petro chemical industry causes a net drain on foreign exchange resources which it does as if it is carefully managed, it may generate a small supply. The priority for plastics and polymers in the coming years is in the area of packaging of edible oils (with NDDB), plastics furniture reduce deforestation, plastic crates for foods and vegetable, flexible laminated processed foods and engineering plastics for key industries like electronics and automobiles. It is expected that from this year the industry will once more expand and earn profits, following from IPL's plans for the Nagotham complex and the new capacity being created in the private sector. Will the supply situation of PVC, polystyrene and HOPE improve and become positive this year and the following years? On this depends also the further prospects of the industry.

Public Sector enterprises

In May, SCOPE (the Standing Conference of Public Enterprises) at the meeting of its board identified 25 profit making public sector units which are suitable to attract ready buyers of their equity, if the government decides to disinvest. The names of the units have been conveyed to the appropriate ministries. With the disinvestment a fund is to be created for (a) undertaking modernizations, (b) expansion of public sector programmes, and c) nursing back sick public sector units to health. This would also distance government dealing with the day to day management of such undertakings in which it has no competence. While this last is desirable, the start should be with disinvestment and selling off of loss making units which will bring in funds because of their valuable real estate. The disinvestment of profit making units raises general issues of the place of public sector in a system of planned development which needs further consideration.

National Production Front

Steel

In June, the Joint Plant Committee issued the long delayed guidelines for the distribution of the iron and steel materials based on the sound principle of a direct relationship between the consumer and producer, eliminating the middlemen and conformity with the government over policy on iron and steel. The new guidelines are important for expanding the compact industry group which has a better representation of actual consumers. They also make special provision for sick units, their approved rehabilitation programmes are to be treated as programmes of new

units and for potentially sick units are to be assisted by a sub committee. The guidelines are clear and sound and how they are carried out will decide on their effectiveness and relevance. A CEI study shows that in 1988-89 SAIL held the top position among engineering plants and TISCO in the matter of exports. It is presumed that their leads continues in the subsequent two years, though the absolute amounts involved, Rs. 6777 crores in SAIL turnover and Rs. 83 in TISCO export, are not impressive. SAIL is also reported to have imported coking coal for its captive power plants, which is a criminal waste at a time when the country faces a foreign exchange. This wastage is now becoming serious as it is continuing even after the instruction to stop it. Further, it is reported to have built up a large coking coal reserve (4.8 lakh tonnes in April 1991) which is far in excess of its requirement. The time has come now to stop its import of coking coal to induce some responsibility and caution in its use both by SAIL and TISCO. Finally, from the end of May steel prices have been falling which may be due to consumer resistance to prevailing steel prices which may also be related to political uncertainty which should end with the new government. On the other hand mini steel plants are facing a crisis due to inputs shortage. The extent to which the curb on imported scrap their, main raw material has lead to decreased supply was referred to in earlier issues and for the short run atleast calls for some relaxation along with our steel plants providing this important input to mini steel plants.

Crude

In June ONGC has submitted an action plan to the ministry for adjusting oil production in Bombay offshore and

repair of wells. This takes account of the World Bank warning that unless this kind of adjustment is made, Bombay offshore will lose 130 to 150 million tonnes of oil over a period of time. Hence the plan based on the recommendations of the Dasgupta committee involves closing down defaulting wells and repairing them, which will involve loss of 14 million tonnes in the VIII Plan (and 2.5 million tonnes in 1991-92). The repair of the 58 wells will start increasing our production in the IX Plan. ONGC also reports that it struck gas in the south Bassein gas field off the Gujarat coast in a new structure, BS12. The use of gas will be looking up in the future with the decision by the government to transfer all assets associated with the marketing of gas to GAIL, leaving only production and processing of gas with ONGC and OIL. This not only ends a long drawn out controversy over the asset transfers but also should see its effective use and reduction of the flaring of gas. This should also reduce the alarming import bill of crude and petrol product by the end of the IX Plan to the tune of Rs. 18,000 crores.

Coal

The June news on coal is both encouraging and sombre—Coal production in 1990-91 has attained the target and gone beyond it at 210 million tonnes. The sombre aspect is the provision that at the end of the VIII Plan in 1994-95 coal production will have to increase to 310 million tonnes. Not only is the attainment of this order of increase (100 million tonnes) in the next 3 years a difficult task, but the 35 million tonnes expected from Singhereni is highly doubtful of attainment, given its uncertain labour relations.

Non Ferrous

Development in the non ferrous metals field were of a mixed nature. On the one hand the primary producers of aluminium are worried over mounting stocks at 16,000 tonnes in April 1991 rising to 50,000 tonnes in March 1992 while the government is pressing them to produce more mainly for exports. There are some issues here: one is that in the absence of buyers the producers will be incurring losses on their stock: the other is aluminium is a power intensive industry and in a power short economy the building up of stocks seems inadvisable. Hence the producers must be allowed to produce with the electricity supplied to them with the various cuts, as captive power is expensive and will push up export prices. On the other hand NALCO reports a record turnover in 1990-91 at Rs. 884.54 crores and its foreign exchange earnings have crossed Rs. 1000 crores—which are creditable, despite the fire and cyclone setbacks it suffered. This may enable MMTC to push the sale of aluminium through a series of counter trade deals following its first shipments to Germany and UK. HZL also reports a record production of 8000 tonnes of Zinc and 25,000 tonnes of Lead in May, on the basis of which there are prospects of its new Chanderiya plant with a capacity of 70,000 tonnes of Zinc and 35,000 tonnes of Lead, enabling HZL to produce 100,000 tonnes of Zinc and save foreign exchange to the tune of Rs. 100 crores this year. The negative element in June is that overseas suppliers of non ferrous metals are insisting that the irreversible letters of credit opened by Indian units be further guaranteed by foreign banks. In view of this, it is time that overseas

orders for the metal be reduced as much as possible.

Agricultural Production

News in June on farming operations are positive and encouraging. On the one hand, the IMD forecast of a normal monsoon, with a negative side, has enabled state governments and large farmers to work out contingency plans to make up for any shortfall in water availability. On the other hand, the kharif operations which starts with pre monsoon rains which have been adequate has enabled kharif sowings and transplantation to be undertaken normally in Kerala, AP, West Bengal, J&K. The sowing of coarse cereals has picked up with the onset of the monsoon. On this basis the kharif target of 103 million tonnes seems attainable, despite the elections having delayed nursery paddy seedlings raising in Bihar and east UP. In Punjab and Haryana sowing operations are expected to pick up at June end when the monsoon arrives there. The sowing of jute was complete in West Bengal and Assam, but due to the inadequate pre monsoon rains in the region, there is a small shortfall in the area covered. The sugarcane crop is reported to be doing well. The water reservoirs have levels 40 per cent higher than last year. The 1990-91 foodgrain is placed at between 176.5 and 177.5 million tonnes, a record production for the third successive year—with 101 million tonnes from kharif and 76 million tonnes from rabi. Rice at 75 million tonnes owes its record because of the fertiliser consumption and the special rice production programme in Assam, Bihar, MP, Orissa, Rajasthan and Tamil Nadu leading. Oilseeds are also a record at 19.23 million tonnes. Sugarcane

records 233.5 million tonnes, cotton 102.3 lakh bales, and jute 77 lakh bales. Procurement of cereals has been slow due to elections and the disturbances. The targets for 1991—92 for foodgrains has been fixed at 182 million tonnes and to attain this fertiliser supply is being ensured. A study by S. P. Gupta forecasts India's population at 100 crores and derived from it foodgrains at 240 million tonnes by the end of IX Plan 2000—which looks realistic.

Foreign Trade

The Ministry of Commerce announces that in 1990—91 exports rose by 17.5 percent at Rs. 35,527.28 crores and for 1991—92 has fixed export target of Rs. 40,200 crores, an increase of 20 per cent. Engineering exports are proposed to be raised to Rs. 5940 crores (from 1990—92 Rs. 4500 crores) an increase of 32 per cent, computer software from Rs. 300 crores to Rs. 700 crores an increase of 133 per cent, electronic hardware from Rs. 800 crores to Rs. 900 crores, an increase of 12.5 per cent, textiles from Rs. 8665 crores to Rs. 10,350 crores, an increase of 19.4 per cent, gems and jewellery because of recession from Rs. 510 crores to Rs. 520 crores an increase of 17.3 per cent, agricultural products from Rs. 2700 crores to Rs. 3050 crores, an increase of 13 per cent, marine products from Rs. 850 crores to Rs. 1050 crores an increase of 23.5 per cent, minerals and ores Rs. 1980 crores to Rs. 2160 crores, an increase of 9.1 per cent, leather exports from Rs. 3000 crores to Rs. 3700 crores an increase of 27.7 per cent, chemicals at Rs. 4000 crores, handicraft at Rs. 1200 crores, petroleum products at Rs. 900 crores and sports goods at Rs. 100 crores. What has given some cheer in the

current year, that the first month, April, shows a surplus of exports over imports by Rs. 135 crores compared to a deficit of Rs. 764 crores in 1990. This surplus is due mainly to the sharp drop in imports by 12.7 per cent to Rs. 2815 crores and a rise in exports by 19.9 per cent to Rs. 2950 crores. As the import compression policy (the high cash margin imposed by RBI when opening letter of credit) explained in the last issue will have a real impact in reducing imports later in the year—after June/July which will be reinforced by the delay in purchase of crude and deferred payment arrangements for bulk imports, the surplus stands on rather slender foundations. Further, the invisibles scenario is not encouraging with tourism declining because of the situation in Kashmir, Punjab and Assam civil aviation being in the doldrums, remittances delining due to the Gulf war and the higher interest rates offered by other countries and increased outflow of foreign exchange because of debt servicing. In this situation the invisibles policy needs review, particularly the NRI deposits (FCNR) which with NREP amounts to Rs. 7,675 crores, is high cost money instead of which commercial borrowing or foreign investment will be cheaper. Also the policy of large short term borrowing (\$3—4 billion) is uneconomic as it adds to our repayment burden. But it must be admitted that there are not many options in the area of invisibles. With a view to boost exports, the government announced in June that FERA companies will be allowed third part, exports of a wide range of commodities including those in engineering, chemicals, electronics, and jute sector. The exports are to be made only to general currency areas. Exporters were also informed in June that their CCS payments will be made in August as

the government has now out of the funds in the vote on account. On individual items while dyestuff exports in 1990—91 was Rs. 506 crores against the target of Rs. 876 crores, engineering export recorded a rise of 46 per cent in the first month, April of 1991—92, giving rise to hope that the year's target noted above will be met.

Aid and loans

Towards end of June, World Bank made a loan of \$458 million towards the \$3.18 billion project to stop the flaring of Bombay High gas which flares 12 million cubic metres of associated gas a day. The World Bank extended a loan of SDR 100 million for the Narmada project. In June, Japan made a loan of \$150 to cover refinance extended by Small Industries Development Bank for development of small industries included in India and Japan, agreement on three loan agreements for \$410 million for Anpara power transmission and small industries. UK made two grants of Rs. 40 crores to finance slum improvement in Calcutta and Rs. 50 crores for slum improvement in Vijayawada. It made a loan of 30 million as short term balance of payment assistance. Switzerland is to provide a loan of Rs. 140 crores for import of capital goods and services from Switzerland. A UNDP report on human development states that it is political will that is lacking in industrial countries and not financial resources to promote aid and loans to the Third World countries. A RBI study shows that dollar deposits under foreign currency non residents (FCNR) and non resident external rupee (NREP) accounts referred to in the previous section, were pledged as Security for bank advances abroad, rose during 1985—88. 81 per cent of

dollar deposits and 84 per cent of pound sterling deposits were with interest rate of 9 per cent: in the case of NREP 62 per cent of deposits were with 12 per cent interest rate and 25 per cent with 10—11 per cent interest rates. This is high cost money as noted earlier. The World Bank condition of written assures for making loans for power projects has been referred to earlier. The IMF loan to which reference was made earlier, official circles feel will have to be under its structural adjustment facility for upto \$7 billion. The exact amount will soon be known when parliaments meet in early July. According to the World Bank, India's external debt rose by \$8.45 billion in 1990 to \$70.953, making it the third most indebted country after Brazil and Mexico.

International

World Economy

IMF in its 'World Economic Outlook 1995' expects continued structural reform in India and other South Asian countries, where it states slippages in policy implementation led to intensified price pressure. Its statistics show that GDP in India rose by 9.7 per cent in 1988, 5 per cent in 1989 and 4 per cent in 1990. Inflation in India rose by 8.6 per cent in 1988, 7.9 per cent in 1989 and 9.1 per cent in 1990, and in Pakistan by 8.4 per cent in 1988, 2 per cent in 1989, 10.6 per cent in 1991. In industrial countries inflation will increase in 1991 due to rise in oil prices. The medium term growth for global economic growth have deteriorated since the October 1990, World Economic Outlook, slowing from 3.25 per cent in 1989 to 2 per cent in 1990 and down to 1.25 per cent in

1991, due to recession in industrial countries, decline in output in West Asia, East Europe and USSR. With recovery in some major industrial countries in 1991, and successful implementation of stabilisation policies and structural reform in developing countries, world growth should rebound in 1992. This is also reflected in world trade falling from 7 per cent in 1985 to 2.5 per cent in 1991, rising to 5.5 per cent in 1992. This global analysis has little relevance to India except in regard to the sectors pertaining to India. Another IMF staff study points out that domestic and external debts are closely linked in the Third World countries and should be studied together. Another report, the 61st annual report of the Bank for International Settlements raises doubts about the IMF forecast that there will be an upswing in 1992 in countries now in recession before the recession spreads to the countries where demand is still strong. The answer is probably yes. In the developing countries, there is no interest in business cycles because their economies are managed by governments. But the recession and business cycle in industrial countries will affect the developing countries because the demand for their products will fall. So the report concludes that business cycles are relevant to their governments and central banks which should learn to manage the effects on them of the business cycle. The report emphasises the importance of supply and demand policies to counter business cycles, particular demand management which has implications for the world economy. It calls upon the industrial countries to join in efforts to alleviate poverty in poor countries and help create viable economies in these countries. For 9 years most efforts have been directed towards moving out of the impasse of the debt

crisis. There is need to go beyond the rescheduling of debt and debt service reduction to help the countries deal with alleviating poverty and raising their GDP and living levels. This is a hopeful note coming as it does from the Bank of International Settlements. The Japan centre of informational finance in a report states that there will be a \$30 billion capital shortfall in the world economy this year and will continue into 1992-93 at \$25 billion in capital being needed. Of course as usual the major burden of the shortfall will be on the developing countries, where flow of capital into their economies will taper off. This is contrary to the BIS plan and is a good advance warning for action by the industrial countries towards the developing ones.

IFC

World Bank President was at long last able to announce at June end that the capital of the International Finance Corporation will be increased from \$1.3 billion to 2.3 billion. The US which had blocked this 1 billion increase of the IFC capital because it wanted the World Bank to increase its loans to the private enterprises, was finally forced to withdraw its objection by the unanimous decision of the IFC Board.

SAARC Chamber of Commerce

In June the Chamber of Commerce of the SAARC countries at a meeting in March joined together to form the SAARC Chamber of Commerce and Industry to promote and foster regional economic cooperation. This is an important development which may give some life and direction to the slow developing intergovernmental body—

SAARC. It is to be regretted that India and Sri Lanka did not send a representative from their Chambers to the meeting and were represented by their diplomats. Why was this? Was not enough time given to the Chambers of Commerce to prepare for this important meeting? The headquarters of the SAARC chambers has been established in Pakistan. Both India

and Nepal chambers offered to host the meeting. That shows their keenness in the project which should have been used to get a really representative meeting organised at which actual programmes for information exchange and joint action could have been decided.

II Agricultural Development in Tamil Nadu

Paddy and other crops

In June, the farmers profited from the pre monsoon and monsoon rains to begin dry ploughing to prepare the land for the paddy crop. Those with filter points are raising nurseries. By mid June farmers in Thanjavur have transplanted kuruva paddy in 10,000 acres and kuruva nurseries have been raised in 3000 acres, which they will use for planting in 30,000 acres. The farmers in Periyar district are using the Rs. 14 lakh allotted to them by the union government under integrated rice production development scheme; which helps farmers in 10 districts and is now extended to Ramanathapuram, Pasumpon Thevar Thirumaganar district in addition to Periyar. The farmers are using all the favourable weather factors including the satisfactory water storage both in the Periyar and Vaigai dams believe the usual paddy production can be achieved as in 1990-91 when paddy coverage in the district was 22,840 hectares producing 1,50,697 tonnes of paddy. The major development in June for the farmers in the interim award of the cauvery tribunal which is to take effect from July 1

with the release to Mettur from Karnataka to be regulated on a weekly basis as follows in tmcft: June 10.16, July 42.76, August 54.72, September 29.36, October 30.17, November 16.05, December 10.37, January 2.51, February 2.17, March 2.4, April 2.32 and May 2.01, with for each month the releases to be made in 4 months in 4 equal instalments. If in a particular week it is not possible to release the required quantum, the deficit is to be made in the subsequent week. If this award goes into effect in July of the year, the delta farmers, after a decade, will be able to take up kuruva cultivation over the usual large area of 12 lakh hectares. But Karnataka is talking about appealing for a revision of the decision by the Tribunal, and if necessary by the Supreme Court on the grounds that the data on which the award was made is wrong and Karnataka does not have 205 tmcft water to spare. Its Chief Minister has asked the union government not to act on the Tribunal verdict until he hears from him. If this happens it is doubtful, when the award will benefit the farmers. Meanwhile the farmers are awaiting the decision on the release of the water

from Mettur, for which the traditional date of June 12 is now well past. The government reports that it has procured from paddy farmers 11 lakh tonnes in 1990-91 against the 12 lakh tonnes last year. The state's rice buffer is 6.75 lakh tonnes and with the union grant of 75,000 tonnes a month, the PDS is in a comfortable position.

Research results

Of the 25 research reports recorded in June the largest, 6 in number is in regard to rice and can all be used by the paddy farmer straightaway: using subabul as leaf manure increases rice yield by 25 per cent and reduces the cost and dosage of the nitrogen fertilisers used as the agricultural college research station in Madurai demonstrates: the Madras station also shows that growing a legume green manure also before paddy improves its productivity: IARI New Delhi supports this conclusion showing that it increases the supply of both nitrogen and phosphorous on tropical legume supply to the paddy field and plant: the rice research station Tirunelveli warns paddy farmers that the ragged stunt disease, a recent three pronged disease must be identified at the early stages of the paddy plant and checked with dimethvate: TNAU research shows that given the high cost and shortage of chemical nitrogen fertilisers, the paddy farmer should use bio fertilisers, like free living and symbiotic form of nitrogen fixers associated with azospinilum which results in 6 to 9 per cent higher growth yield: finally APAU has developed a new high yielding rice variety, MTU 2067 which is also resistant to brown hopper and can be used by farmers in double cropped areas of

Thanjavur and Tiruchi. Second, a series of research results to counter plant diseases are reported: from APAU, Ponnu, which shows that farmers can control root knot nematodes by use of decomposable organic matter, crop rotation and the burning of dried crop residues or paddy turnover the soil surface: the national pulses research centre Vembar shows that yellow mosaic, the ravaging diseases of green gram, horsegram, red gram, black gram and soyabeans can be controlled by gram growing farmers by timely removal and distribution of diseased plants, using a short duration variety of black gram vemba I, and growing various crops like sorghum, maize or pearl millets: the horticultural research station Ballampalli states that the foot rot of castor should be detected and controlled at the start by preventing water logging and soil drenching with chemicals: the Vridachalam research station states that the rhinoceres beetle of coconut can be controlled by growing and using a fungus which checks and paralyses the pest: IARI reports that the rice bran plant hopper can be controlled and wiped out by use of broad spectrum of insecticides and for this it proposes training farmers to recognise such friendly insects. A third group of results which can be transferred to sugarcane farmers comes from the Agricultural college, Kumulin which advises him to use nitrogen, moisture and reduced sugar content to produce more generation: similarly the TNAU station Cuddalore shows that packing the ridges of the cane crop after planting with sugarcane trash (dried leaves) upto 10 cm check weeds, conserves soil moisture, keeps the early shoot borer away and improves cane quality. Finally for the animal husbandry farmer, the Madras Veterinary College lays down 3 guidelines—feeding on Vitamin D, low

intake of calcium and phosphorous and inadequate milking as a means of checking milk fever in cows: similarly the Krishi Vigyan Kendra in Kattupakkam advises him that bovine sumafotroopin (PST), a cattle grown hormone which is produced in its pituitary gland improves the efficiency of the milch animal, reduces its cost and increases its milk yield: the animal health centres, Nizamabad shows that blue tongue which is an infectious, non contagious, viral disease of sheep can be controlled by preventing starvation, dehydration and secondary infection and above all through vector control plus vaccination.

Tea

The basic dilemma in tea is that the rate of increase of the consumption in the country far outstrips the annual production increase. For 1990, it is estimated that tea production will be between 710 and 730 million kg and domestic consumption 515 million kg, leaving an export surplus of 195 to 215 million kgs. Not only is domestic consumption rising fast: in 1947 domestic consumption was 79 million kg out of total production of 255 million kg (31 per cent) in 1988 domestic consumption rose to 479 million kg out of 710 million kg production (68 per cent): the surplus is being exported increasingly to non free foreign exchange area: in 1989, 40 per cent was exported to free foreign exchange area, in 1990 it has declined to 34 per cent, at a time when the country wants increasing foreign exchange resources. Further branded tea which was 34 per cent of exports to the free foreign exchange area has fallen to 26 per cent in 1990. Under these conditions, it is urgent that tea production which is stagnant

at 1650 kg per hectare should be rapidly raised by a) an accelerated programme of replanting tea bushes, b) all tea planters adopting the high yielding clone of tea TV29 with a yield of 9500 kg. Second, there should be an intensive publicity drive, which does not exist today, to replace tea consumption by coffee, particularly in the North. In this, the lower capitalisation of tea gardens vis a vis other industries has been of help in a substantial reduction of repatriation of foreign exchange from the sterling companies. The tea industry request for lowering interest rates on export credit, repayment of loans and waiver of current restriction, freezing cash credit to avoid loss of exports might be given consideration by the government as short term palliatives to promote exports.

Rubber

Rubber production in 1990-91 rose to a record 330,000 tonnes against the previous year's 297,000 tonnes and the VII Plan average of 250,000 tonnes. What is encouraging in this record production for 1990-91 is that the per hectare yield has risen to 1075 kg from the previous year's 1029 kg and the VII Plan average of 900 kg. Among reasons for this expanded production is the fact that the Rubber Board's programme to encourage and promote new planting and replanting in traditional and non traditional regions of the country, under its plantation development programme is now catching up as seen in the increased numbers (1.5 lakh beneficiaries) and disbursement of cash subsidy (Rs. 12.36 crores) among the planters.

III Industrial Development in Tamil Nadu

Industrialisation

June recorded the usual pluses and minuses with regard to the industrialisation of the state.

The first positive indication was the reiteration in the new state government Chief Minister's declaration that it has under consideration *Proposals for deinvestment* of some public sector units. The two limitations to this declaration is that it is restricted to profit earning joint sector units, while the loss making joint sector units are to be improved and rehabilitated. Here there is no either or. The disinvestment should include loss making public and joint sector units. A second limitation is that the reference is to serving such disinvestment as a means 'to overcome the financial difficulties' of the government. This is necessary but the main motivation should be the fact that the government and its staff has no competence in the industrial and business field. *Second*, TIDCO announces that 6 new projects in the joint or associate sector with a capital of Rs. 184 crores are being planned—the biggest being the Rs. 75 crores aluminium rolled product plant with a capacity of 25,000 tonnes located in Thanjavur, followed by the co-promoted Chemicals and Plastics India (Rs. 50 crores) for the production of its corosulanes and silicone components at Dharmapuri, besides heavy mineral separation with Indian Rare Earth (Rs. 40 crores) at Chidambaram district, a technocrat project to produce intravenous fluids (Rs. 9 crores) and also a technocrat project to produce VP latex in South Arcot (Rs. 10 crores). These are in addition to the four units being commissioned this year—Sargam Aluminium in Hosur (Rs. 11 crores), Tamil Nadu Telecom (Rs. 28.5 crores) at Arkonam, Ushstate Biotech (Rs. 44 crores) at Cuddalore and the Ajna Lamps

and Glass Works. *Third*, and importantly a much need pig iron plant (Rs. 100 crores) is being set up in the joint sector by TIDCO and Lakshmi Machine Works, Coimbatore. The first such plant in the state, it will have a capacity of 180,000 tonnes and the private sector collaboration is a guarantee of its success from the start. *Fourth*, the Ambattur Industrial Estate has exceeded Rs. 1000 crores in its turnover this year. This should be followed up by establishing machinery for assembling data from the small scale industries whose annual turnover has been reported at Rs. 300 to Rs. 400 crores as a guess work. Related and more important is the move by the small scale sector industries to take an important step in self help by forming a corporative undertaking called the Small Industries Product Promotion Corporation Ltd (SIPPOL) to deal with their perennial problem of marketing and promote their products within and outside the country. *Fifth*, an exclusive garment industrial estate is taking shape in the setting apart of 52 plots for garment manufacturers in the Kakkallur industrial estate. It has all the infrastructural facilities of power, water supply and sewage and now needs a railway station. This estate is also important nationally as garments is one of our thrust areas in export. *Sixth*, relatedly Madura Coats reports exceeding working results for 1990-91 and will be investing more on production facilities for yarn, thread work, wear and shirting this year. Last year its exports increased by 19 per cent to Rs. 64.01 crores. *Seventh*, Spencers whose turnover crossed Rs. 100 crores in 1990-91 is now expanding its pharmaceuticals division and its liquor market network. *Eighth*, Real Madras Handkerchief is also booming in exports expanding from Rs. 13 crores in 1989-90

to Rs. 26. crores in 1990-91. Its sole consumers are in Nigeria. *Ninth*, Penta-four Products engaged in the manufacture of a range of sophisticated products such as air conditioners not only for homes and offices but also for cars, buses and trains plans a turnover of Rs. 15 crores for the current year. Its expertise has been invited by a West Asia industrial group to set up a manufacturing base in that country. *Tenth*, Tube Investments International is delinking its stakes in TI India from 27.13 per cent to 11 per cent. This means a disinvestment of 10,90,410 shares by the parent company in favour of the existing resident share holders in the ratio of two shares for every one. *Eleventh*, EID Parry is expanding its Rs. 210 crores operation by taking over Rajasthan based Falcon Gulf Ceramics. This will make EID Parry which has become a South Indian firm now an all India company with its manufacture of sanitaryware in the North and West India. *Twelfth*, SPIC which has recently taken over the sick Tuticorin Alkali Chemicals (TAC)-see last issue has applied for exemption from 40B of the listing agreement in order to make an open offer to shareholders. On this, SEBI and the Madras Stock Exchange should support it to back up its take over of the sick TAC. *Thirteenth*, Rane Madras is extending to foreign market by entering into a contract with Massey Ferguson (UK) an original equipment manufacturer. This will also help it to raise its share of exports to 5 per cent of sale and guard against the future loss of its domestic monopoly for manufacture of certain types of equipment. *Fourteenth*, the Kothari (HC) groups scheme to develop India's second PNCB/ONCB project in Karaikal will go on stream by 1991 end. It has technical collaboration with Switzerland and West Germany. *Fifteenth*, Tamil Nadu Newsprint and

Papers Ltd (TNPL) has recorded an impressive growth in both items of production and profits. It is doubling its capacity from 90,000 tonnes to 1.8 lakh tonnes within the next 36 months at a cost of Rs. 360 crores. Its bagasse route for paper manufacture is of both national and international interest. *Sixteenth*, India Cements has finalised plans to take one of the oldest units in the state, the Tirunelveli based sick unit, Industrial Chemicals and Monomers Ltd (ICML). ICML is a BIFR case manufacturing calcium carbides. It has been closed for 2 years. Now India Cements is planning to modernise the plant and streamline its working at a cost of Rs. 3.5 crores to Rs. 4 crores. *Seventeenth*, Tamil Nadu Minerals (TAMIN) which is one of the very few state public sector enterprises doing well, is setting up a Rs. 5 crore 100 per cent export operated granite tile plant in Madras, expanding also its facilities at Ennore where it is installing circular saws for monument making and also adding gang saws. Finally, the Tiruppur Export Association in cooperation with wool and Woollen Export Promotion Council is launching a knit wear development industry on a massive scale in the state. 25 export units are being started now to be followed next year by a further 35 units which together will be exporting Rs. 200 crores of knitwear.

On the negative side of the industrial development of the state, first after a long drawn out battle BIFR has ordered the closure of MALCO. The plant itself is in excellent working condition, but with its small installed capacity of 25,000 tonnes compared to NALCO's 2.18 lakh tonnes, it really has no future. So its closing is a negative external factor but is positive in contrast to its state take over. *Second*, MRTPL has launched an enquiry into the

alleged restrictive trade practices indulged by the Reliance Industries in concert with *Tamil Nadu Petro Products* (TPPL) in fixing the price of linear alkyl benzene which was Rs. 23,000 and after one month Reliance followed suit, next Reliance raised the price to Rs. 27,000 on August 9, 1989 and after 3 days TPPL followed suit. Then on November 4, 1990 TPPL raised the price to Rs. 30,000 and after 2 days Reliance followed fixing the price at Rs. 30,250. The Tamil Nadu Small Scale Soap and Detergents Manufacturers Association which made the complaint points out that the cost of production of LAB for TPPL is Rs. 2000 more than for Reliance but both have raised the price to the same level and the large profits being made by TPPL shows that the price is excessive. IPC which also makes LAB has a lower cost and charges less. On the positive side TPPL is setting up a Rs. 94 crore captive caustic soda unit at Uthamacholapuram in Thanjavur district. *Third, Sugar mills* in the state might be forced to stop crushing operations if the union government does not allow the export of molasses, which is accumulating in big quantities (4.5 lakh tonnes during the current 1991-92 season). The storage of molasses by the mills has become a problem, their storage tanks are overflowing and excess molasses are being let into kutcha pits, which pose serious environmental hazard. Now with the decision of the government to close cheap liquor shops, the offtake of molasses will be decreasing further. The state government recommended the export of 10,000 tonnes of molasses 3 months ago but the union government wants its export of value added product and not the raw material. This absurd situation must be solved by allowing the industry to

export surplus molasses. *Fourth, the Tanners* in the state are facing a serious financial crunch, following stockpiling of EI tanned goat skin. There are 3 options facing the union commerce ministry: ask leather product manufacturers to clear the stock, arriving by June to 40 to 50 lakh pieces worth Rs. 40 to Rs 50 crores: or instruct STC to buy the accumulated goat skins for sale to product manufacturers or allow export of EI tanned leathers for which there is a ready demand in Japan, Italy and other countries. The situation is similar in buff calf leather and special leathers like terra cotta. *Fifth, Binny* which is embroiled in a long drawn out labour dispute is really a loss making unit, if the balance sheet is read along with the accompanying notes, which should be done. Though the audited statements show cash profits, the company's net worth is in the negative, its accumulated losses amounted to Rs. 56 crores as at March 31, 1990 as against its paid up capital of Rs. 7 06 crores. It is selling its real estate to cover its losses and is constantly revising the real estate value. All this is being done to prevent the company from being declared sick. *Finally, the gold refinery* in Madras which was set up in October 1989 has now been closed without any explanation, causing a deal of difficulties to local jewellers who cannot now find means of refining or assaying the metal without undertaking the heavy cost, risk and travel to the Bombay mint. Possibly this may be an occasion for reviewing the system of placing gold refineries under the control of mint.

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IV Education, Science & Health

Educational Reforms

In June the High School and Higher Secondary School results were published. It was found that the top ranks are secured in all the examination by girls and that students from the mofussil do better than those from the major cities. At the university level, the state government announced that it has approved 13 more self financing arts and science colleges. UGC has circulated all states about some 21 fake universities and warning students and parents not to be taken in by their advertisements. It has also proposed to government to amend the UGC Act so as to make the starting of these fake universities a cognizable offence and punishable by imprisonment. UGC has sought an increase of Rs. 605 crores in the Plan outlay at Rs. 200 crores, to revise the assistance pattern for the allotment to universities as also to discourage the starting of new colleges. It has also decided to discourage the setting up of new departments in these universities during the VII Plan and instead will finance projects for the growth of infrastructural facilities in the existing post graduate departments. This has been drawn up to meet the financial constraints of the VIII plan. There are now 100 autonomous colleges under UGC which will discourage the growth of colleges without adequate infrastructural facilities. In a major effort to promote university-industry interaction, Anna University is floating a novel scheme called "own your university". Under the scheme, the university will induct industrial units as associate member on payment of a nominal amount, and offer in return a host of services, including laboratory testing facilities at its campus in the city. This will help to forge strong bonds between the

university and industry for mutual benefit.

Literacy

In the literacy field, there are two somewhat contradictory developments. On the one hand, following the 100 per cent literacy achievements of Kerala (see Vol XXI p240), the Burdwan district in West Bengal and the Durg district in Madhya Pradesh have now launched on a programme of attaining 100 per cent literacy by the end of the current year. On the other hand, Unesco in a report recently released says that the twin goals of basic education for all and eradication of illiteracy will not be attained by 2000 because of the number of children in developing countries not attending school, numbering 4 million (19 per cent) in Eastern Asia and Oceania, to 52 million (39 per cent) in South Asia 38 million (49 per cent) in sub Sahara Africa, 9 million (30 per cent) in Arab states and 8 million (18 per cent) in Latin America and the Caribbean. The two reports are no really contradictory because they show the need for the kind of intensive effort being undertaken by Burdwan and Bhopal.

Science

The National Informatics Centre is expanding its computer network to cover every village within "bicycling distance". The network will cover 58,000 development blocks, each of which has about 100 villages clustered around it with a radius of 12 kms. Currently 45 districts are linked to store, exchange and access information needed for official scientific decision making. The network played a crucial role during the recent

elections by helping move messages and election results between different constituencies and Delhi. NICNET made poll news live. The world's first hybrid pigeon pea plant developed by the scientists at ICRISAT, Hyderabad has been released. This is a technological breakthrough as this is the first time, that the hybrid of a pulse crop has been developed.

Health

A working group of the Planning Commission has called attention to the distortions to the family planning programmes caused by the "tyranny of targets". It has suggested instead a holistic approach to the whole issue of servicing the health care of identified

mothers and children. According to the working group, the 4 states of Bihar, MP, Rajasthan and UP which constitute about 40 per cent of India's population have crude birth rate, crude death rate, IMR at levels for higher than the national average. There is need for a well coordinated strategy to harmonise and accelerate different programmes beyond family planning including the empowerment of women. This would remove the obsession with numbers which has led to virtual obliteration of the person whom those numbers represent. This also calls for a complete transformation of the attention of both workers and their superiors towards the targets and to turn their attention to the reality of health care activities of mother and children.

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V Employment and Labour Relations

The latest data on job seekers which is an alarming 34 million plus by the employment exchanges is set forth below :

	August 1989	July 1990	August 1990	Percentage increase (+)/decrease(-) over Previous month (Col.4/ col. 3.)	Corresponding month of the last year (Col.4/Col.2)
1	2	3	4	5	6
1. Registrations	814,871	801,368	607,334	(-)24.2	(-)25.5
2. Applicants on the live register at the end of month (000s)	32,127	34,098	34,286	(+) 0.6	(+)6. 7
3. Vacancies notified for submission	59,935	45,130	45,226	(+) 0.2	(-)24.5
4. Placements effected	22,452	18,677	18,466	(-)1.1	(-) 17.8

Employment Service Statistics During August 1990

State/Union Territory	No of Exchanges at the end of the month	No.of registrations during the month	No.of applicants placed in employment during the month	No.of applicants on the live register at the end of the month(000's)	No.of vacancies notified during the month
1	2	3	4	5	6
Andhra Pradesh	30	39,210	1,339	2,937	5,047
Arunachal Pradesh	1	134	—	5	61
Assam	49	16,273	243	1,000	612
Bihar	58	77,826	378	3,305	591
Goa	1	—	—	88	—
Gujarat	36	15,137	1,152	959	2,541
Haryana	85	19,716	851	579	1,629
Himachal Pradesh	13	3,266	256	452	181
Jammu & Kashmir	14	1,542	68	108	262
Karnataka	31	26,165	543	1,206	1,295
Kerala	39	17,811	969	3,352	1,873
Madhya Pradesh	55	38,194	946	2,055	1,716
Maharashtra	38	72,606	3,454	3,075	7,144
Manipur	9	712	3	203	13
Meghalaya	7	603	41	24	68
Mizoram	3	862	139	41	268
Nagaland	7	456	1	21	94
Orissa	20	17,246	600	877	1,908
Punjab	40	16,751	592	622	2,779
Rajasthan	28	19,006	587	946	915
Tamil Nadu	30	62,661	2,561	3,208	7,345
Tripura	4	1,415	223	156	30
Uttar Pradesh	79	76,365	1,407	3,140	4,044
West Bengal	68	63,216	637	4,737	1,528
Andaman & Nicobar Islands	1	377	35	16	48
Chandigarh	1	2,631	43	156	212
Dadra & Nagar Haveli	1	—	—	2	—
Delhi	17	13,573	1,341	832	2,517
Daman & Diu	2	—	—	—	—
Lakshadweep	1	—	—	5	—

Pondicherry	1	3,580	57	120	330
Central Employment Exchanges	—	—	—	—	175
Total	769	607,334	18,406	34,286	45,226

Source: Directorate General of Employment and Training, New Delhi

The labour ministry sets forth quite an impressive programme of work on the conditions of workers ahead of Parliament. These include the labour participation in management bill and the Construction Workers Act both before Parliament. The ministry states that it has completed the exercise for

the introduction of an agricultural workers bill intended to safeguard the interests of farm labour. A meeting of the Indian labour conference is planned to consider a new industrial relations bill which will replace the earlier draft which met with stiff opposition.

VI. Other Items

NIRD

The annual interdisciplinary workshop organised by MIDS and the regional office of ICSSR was held at the National Institute of Rural Development, Hyderabad. It was attended by 25 specialists from all over India and included social, engineering and physical scientists on the issues of safeguarding the environment. The declaration emanating from the workshop is reported in this issue. The National Institute is located in a very attractive campus some 10 kms away from Hyderabad city. Its infrastructure is most impressive as is its staff specialisation in all the areas of rural development. It is an outstanding research and training institute.

SRC and TNBCE

The two monthly meeting of the State Resource Centre was held in early June when besides reviewing of the work of the Institute, the report on the evaluation of the Mass programme of Functional literacy being

run by 8 universities out of the 14 universities in the state was reviewed in detail. It was noted that the programme has many lacunae and that there was an agreed recommendation that adult literacy should be made part of the curriculum. This was accepted. There was a meeting of the executive committee of TNBCE (both meetings which were scheduled at the end of May had to be postponed to the following week because of the assassination of Rajiv Gandhi). The executive committee spend most of its time planning for the Annual Conference of SRC and TNBCE to be held in October in Vridachalam on the theme Total Literacy and the Mass Programme of Functional Literacy. The detailed programme is being drawn up by the office.

RDI

There was the quarterly meeting of the Board of Directors of Reader's Digest, India in June. After reviewing the good and successful work of RDI,

the meeting of all the language editors in the US at which RD policy was discussed, with the US taking the leadership in determining its contents. This was followed by a report on a meeting in Finland on the marketing of publications and the means of extending and strengthening them. The financial position of RDI was reviewed and its satisfactory nature was noted.

ICC

There was a meeting of the monthly panel of the Economic Affairs Group of the India International Centre which dealt with India's contribution to international economic relations. There was a review of India's foreign trade and the need to move towards a position of equilibrium in exports and imports and the balance of trade. There was also a review of aid and it was suggested that the country's reliance on foreign aid which is really a series of bilateral loans should be gradually reduced. There was also a discussion of India's participation in international economic bodies like GATT, UNCTAD and the World Bank and ADB and there was the feeling that India's role in these bodies should be taken much more seriously.

MANAR

There was a meeting of the Madras Committee of the Mass Programme for National Regeneration (MANAR). It devoted itself mainly to preparing for the meeting of the Vice Chancellors and Principals of autonomous colleges of the states in early July. The basic purpose of this meeting was noted, the agenda of the meeting was also discussed and agreed to. It would be a business like meeting, mainly devoted to a statement of the Vice Chancellors

and principals who are able to commit themselves to this programme, which makes Adult literacy and other nation building activities part of the curriculum.

Human Development

There was a very interesting symposium organised by AIR on human development in the Indian perspectives. There was agreement that a distinction should be made between human development in India which is essentially based on the Indian value of Satya and Ahimsa which are being deprived today and so contributing to inhuman development, and human resource development which is an instrument of human development based on the stated values. There are 3 thrust areas to promote human resource development-education particularly primary and literacy education, health care seen as a state of well being of the person and not simply absence of disease, with particular emphasis of the health of women and infants. The long distances which India has to travel in both these areas, human development and human resource development was noted.

July Development Seminar

The paper for the July Development Seminar - Notes on Tamil Nadu: An Economic Appraisal 1989, presented by Malcolm S. Adiseshiah, together with a summary of the discussion on the paper at the seminar presided by Mr. Inbasagan, Member Secretary, State Planning Commission, appears as the first article.

Second Article

The concluding Declaration on Management of Renewable Energy Resources at the Inter disciplinary Research Methodology Workshop held at NIRD, Hyderabad appears as the second article.

MIDS News

Dr. Paul Appasamy prepared a background paper and participated in the Workshop on Monitoring and Evaluation of the National Watershed Development Programme for Rainfed Areas, organised by National Centre for Management of Agricultural Extension, Hyderabad from 8-12th July, 1991.

* * * * *

Mr. S. Guhan participated in a seminar on the Budget organised by the Indian Economic Association Trust at the University of Madras held on 22nd July.

He also delivered a talk on the Union Budget for 1991-92 at the Bharathidasan Institute of Management, Tiruchirappalli on 7th August.

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Dr. A. Vaidyanathan participated in a seminar on the Budget organised by the Indian Economic Association Trust at the University of Madras held on 22nd July.

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Dr. Nasir Tyabji attended a discussion organised by the School of Social Sciences, Indira Gandhi National Open University, on the Public Administration Component of the Bachelor's Degree Programme, held in New Delhi on 25th July.

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Dr. S. Neelakantan acted as an External Examiner for a Ph.D. Viva Examination

on 19th July at Centre for New International Economic Order, Madras.

He also served as a member of the panel of USIS Worldnet Dialogue on "Markets and Planning in Developing Economies" on 7th August.

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Dr. Padmini Swaminathan was a panel member for a discussion centred round the Budget and the Industrial Policy organised by the Loyola Institute of Business Management on 3rd August at Loyola College.

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A special seminar on 'Union Budget and the Economy' jointly sponsored by Madras Institute of Development Studies and Madras University School of Economics was held on Saturday, 10th August, 1991 in the Seminar room. Dr. Malcolm S. Adiseshiah chaired the session and Mr. S. Guhan presented an Overview. In the first session Mr. K. R. Ramamani, Tax Expert initiated discussions about new tax proposals and their impact. In the second session Dr. S. V. Bokil of Institute for Financial Management and Research initiated discussion about external economic transactions and budget.

In the post lunch third session Dr. U. Sankar of University of Madras initiated discussions about fiscal deficit and macro economic implications. In the valedictory session, Dr. C. T. Kurien initiated discussion on the general impact of the budget.

July Development Seminar

Some Comments on Tamil Nadu : An Economic Appraisal 1989

by

Malcolm S. Adiseshiah
Hony. Fellow, M.I.D.S.

Prolegomena

In this prefatory section, some broad as well as specific issues are raised :

The first is the traditional issue, traditional in the sense that I have raised the question since 1979-80, of the timing of this publication—Tamil Nadu Economic Appraisal 1989, which really deals with the financial year 1988-89. The document in its preface refers to 11 July 1990, as its date of publication, and has actually been sent to the Institute on 13 May 1991. Of what use is the document, which ends its appraisal of the state's economy as at 31 March 1989, which is received 15 months later on 11 July 1990 (officially) but in the reality 25 months later. Who is this document addressed to? It has been suggested that like the union government's annual economic survey which is made available to Members of Parliament just before the presentation of the Annual Budget, the state's economic appraisal should be in the hands of the members of the legislature

at the time of the presentation by the government of the Annual budget. The Annual budget for 1988-89 was presented and discussed in Parliament on March 1988 while this valuable aid for its analysis and discussion, the Tamil Nadu Economic Appraisal for the year was made available more than 2 years later. This issue was discussed by the State Planning Commission at its meeting in May 1991 and its recommendation is that to prevent this document becoming an archival material which it is now, it should be made part of the budget document, which will then give its drafter's a deadline for the document and will receive all the needed priority for printing and processing by the government press, as the other budget documents do. This may involve the drafters of this document becoming part of the Department of Finance.

A second issue, which is somewhat specific is that the source of statistical tables set forth in Part II should be more fully spelt out. Too many of the

Unemployment and Population movement

Using data from NSS's fourth quinquennial survey, it may be noted that there is some reduction in Unemployment except for the usual status workers reported in 1987-88 (which is the 43rd round) as compared to 1982-83 (which is the 38th round). The total labour force employment (principal status) in Tamil Nadu was 24.2 million in 1987-88. The table below gives the

percentage of unemployed of the labour force between the 3 rounds, using the census classification of usual status (usually employed) unemployed, current weekly status (employed) unemployed on an average weekly basis, and current daily status (employed/unemployed on an average daily basis) and further distinguishes between the rural and urban unemployed.

TABLE—I

Rural	1982-83				1987-88			
	Tamil Nadu		All India		Tamil Nadu		All India	
	M	F	M	F	M	F	M	F
Usual Status	3.3	2.9	2.1	1.4	4.0	4.5	2.8	3.5
Current Weekly Status	8.1	8.5	3.7	4.3	7.7	6.7	4.2	4.4
Current daily Status	17.6	20.5	7.5	9.0	8.4	10.7	4.6	6.7
Urban								
Usual Status	7.9	8.3	5.9	6.9	7.3	9.1	6.1	8.5
Current Weekly Status	9.8	10.1	8.8	7.5	8.1	9.4	6.6	9.2
Current daily Status	15.1	16.1	9.2	11.0	12.3	13.2	8.8	12.0

Source : NSS

The table shows a high rate of unemployment on the current daily status compared to the usual and weekly status for both rural and urban and a rather sharp fall in unemployment at the current daily status for both males and females. The slow rate of decline in unemployment rates in Tamil Nadu cannot be reconciled with the low average annual growth rate of the population which the 1991 census reports and is set forth in the table II

TABLE—II

Average Annual growth rate	1981	1991
Tamil Nadu (second lowest)	1.63	1.39
Kerala (lowest)	1.77	1.31
Nagaland (highest)	4.09	4.50
All India	2.22	2.11

Source : Census 1991

This means that employment opportunities were not growing fast enough in agriculture, industry both during the decade 1981-1991 and as between 1986-87 and 1987-88. There is some indication of this in the table below which sets forth the sub sector contribution to income and employment.

TABLE—III

	Tamil Nadu		All India	
	% share in NSDP	% share in Employment	% share in NSDP	% share in Employment
1. Agriculture & allied Activities	25.87	51.51	32.74	61.73
2. Mining & Quarrying	0.39	0.47	1.28	0.70
Primary Sector	26.26	51.98	34.02	62.50
3. Manufacturing	24.62	19.63	20.64	11.77
4. Electricity, Gas, water supply.	0.59	0.35	1.05	0.40
5. Infrastructure	3.87	3.66	4.59	3.99
Secondary sector	29.08	23.64	26.28	16.16
6. Trade, Hotels, Restaurant	18.01	9.68	13.74	7.70
7. Transport, Storage, communication	5.73	3.14	4.00	3.02
8. Banking & Insurance	20.95	11.56	21.96	10.53
real estates, ownership of dwellings and business services, Public Administration, other services				
Tertiary sector	44.66	24.38	39.70	21.34

Source : Tamil Nadu An Economic Appraisal 1989.

The Appraisal document points out that a) in the primary sector, the ratio of the sectoral share in total income to employment is 0.51:1 in the state which is lower than the all India rate, b) in the secondary sector the ratio for Tamil Nadu is much lower than for all India at 1.23:1 and e) in the tertiary sector, the rate for the state at 1.83:1 is again lower than that for all India. The employment rates are increasing and per capita unemployment rates are decreasing in the tertiary sector compared to that of the primary and secondary sector

Unemployment is not declining as fast as the population and such reduction as is taking place is mainly in the tertiary sector. By all three criteria, the rate of unemployment in the state is high, being the second highest after Kerala.

Health Care and IMR

NSS in its 42nd round reports on the status of child and maternity care in Tamil Nadu and other states. It shows that Tamil Nadu's rural health services at 28 PHCs, sub centres and community health centres per lakh of its population is the third highest in the country (after Punjab and Gujarat); that in hospital and dispensary beds, it is the sixth at 98 per lakh of persons, and that in number of doctors registered, it is second at 83 doctors per lakh persons. The nutrition status shows that in 1971 children below 3 have a calorie intake of 700 against the recommended 1200 per day and for pregnant and lactating mothers it is a third short of the recommended 2500 to 2700 calories. As a result of malnutrition, the average weight at birth of a child is 2.73 kg. There has

been some improvement which the 1981 survey records and further that the 1991 survey being processed will show. As a result, the infant mortality rate which was 106 per 1000 live births in 1981 is reported to have decreased to 77 in 1986 and 68 in 1989. In this area of child and health care the state has made progress. This should improve its sex ratio (the number of females per 100 males) which has been falling steadily from 1611 in 1941, 1007 in 1951, 992 in 1961, 978 in 1971, 977 in 1981 and 972 in 1991, according to the 1991 census referred to earlier. As the infant mortality rate, particularly the rural female infant mortality rate declines, the survival of the girl child and of women will improve as well the sex ratio.

Water supply and housing

The provision of drinking water particularly for the rural areas is one of the important plan goals. In 1988-89 the majority of villages did not have potable water supply - and what is worse as the Appraisal document reports, is that the number of villages being provided the facility of drinking water was decreasing annually. In 1987-88 632 villages were so provided (against 770 in the previous year) and in 1988-89 it was down to 573. In the villages in Dharmapuri district, today 640 out of 1065 in 1980-81 are facing water problems. On the rural drinking water front, therefore, the situation is not satisfactory. In 1988-89 11,311 villages out of 15,631 are classed as problem villages by the Tamil Nadu Water Supply Board which means that only 6.8 per cent villages have potable water which places the state in the 3rd lowest rank in India against near double that number at 83.8 per cent having such

water supply in urban areas. As for sanitation facilities, while 47.3 per cent of urban areas are provided with them, putting Tamil Nadu in the first place among the major states in India, in the rural areas, sanitation is near non-existent at 0.2 per cent.

On *housing* the performance in the state is mixed. According to the Tamil Nadu Housing Board data, 1988-89 and particularly 1989-90 were years of rather high housing construction, with the housing construction for the low income group being 1727 houses in 1989-89 (spurring to 672 in 1989-90) and that for the economically weaker section being 9300, declining to 599 in 1989-90. The problem however, is that the Tamil Nadu Housing Board should not be a building agency, because the government will never be able to build the 6 lakh houses which are regarded as the backlog in the state in 1971. The study on this subject by the Institute in 1984 concluded that a 'long term solution to the problem of housing has to have as its basis, a policy for enhancing and stabilising the real income of the vast mass of the poor and middle income groups in rural and urban areas and of linking the various social housing schemes to a sustained and reasonable level of household saving'. In other words housing is a responsibility of the individual whose income has to be adequate to meet the needs. The other part of the housing problem in the state is set forth in table 15.3 in the statistical tables of the document which under the head of slum clearance and improvement shows 1000 tenements construction in 1988-89 and the same number in 1987-88. Against the 2680 slums in Madras city in 1988 in which about 3 lakh families live in 3 lakh habitations, the

annual construction of 1000 tenements where 10,000 families could live is the wrong approach to the problem. The Slum Clearance Board should move out of the tenements construction function to the function of improving slums through improved piped water supply, sanitation, roads footpath, and lighting. Even this is inadequate as it covers only another 15 per cent of the families living in the slums. Here the state intervention should aim at a) providing some incentives including margin money for the families to construct their own habitations in which they have shown extraordinary inventiveness and b) improving the economic status and incomes of the slum families which will in part address itself to the problem of housing.

Education and literacy

In *literacy*, the 1991 census shows a good record, with the state being in the second place after Kerala. The literacy percentage of the state has risen from 54.38 per cent in 1981 (68.05 per cent males and 40.45 per cent females) to 63.72 in 1991 with 74.88 per cent males and 52.59 per cent females. The reasons for this improvement during the 10 years need to be studied so that the positive forces can be strengthened in order to attain 90 per cent literacy by the end of the VIII Plan - with 98 per cent for males and 65 per cent of females. The forces in this area operating during the decade were a) the Union government's encouragement and funding of adult literacy programmes through the National Literacy Mission etc, b) the effective efforts of the voluntary agencies particularly the Bharat Gyan Vigyan Samithi and its 100 per cent literacy program-

mes, and c) the increased elementary education provision which had a fall out effect on the adult literacy programme.

On the *school education* programmes, table 12.1 of the Tamil Nadu Appraisal document reports that 4.5 million boys and 3.8 million girls were enrolled in class 1-8 which is 101 per cent of the total estimated school age population, compared to 92.9 per cent in 1981-82. Even allowing for a dropout rate which the government reports at 26 per cent in 1988-89 and 42 per cent in 1981-82, this is a good record because it means that near upon 75 per cent of primary school age children are receiving primary education and the similar enrolment percentage over the 80s has a direct effect on the literacy rate because it reduces the illiterate cohorts joining the ranks of the illiterates, as well as having an indirect effect of educating their parents and providing them with an example of the advantage of possessing knowledge of the 3 Rs.

At this point attention needs to be called to two recent studies commissioned by the Tamil Nadu State Council for Science and Technology which throws light on the question of dropouts, retention and achievement in primary education in 1989-90. One study covering 5 taluks in the districts of Kanyakumari, Tirunelveli, Periyar, Pudukottai and Dharmapuri reports that only about 40 per cent of the children complete primary education without any wastage; that two out of five children drop out of school without primary education; that more than half of the children in the late stages of the fourth and fifth classes fail to meet the basic requirements of literacy—(being unable to comprehend

a short passage and answer question based on them), so that there is also a hidden component of wastage in primary education; and that two thirds of the drop outs are not because their parent pulled them out for jobs but for other reasons, including their problems with the schooling process. The other study dealing with the effect of the nutritious noon meal scheme in the Madurai district over the years 1987-1990 states that since the implementation of the nutritious noon meal scheme in 1982, "there has been a dramatic increase in enrolment, attendance and retention of children in the age group 5+ to 14+ in the district of Madurai. By 1990, 95 per cent of the village student population of the age group 5+ to 14+ years has been enrolled". But this finding is qualified by the comment "that the registers by the schools regarding enrolment and attendance (on which the study relied) in almost all the schools are boosted to some extent". On academic achievement of the students which is based on tests administered by the team of investigators and about which the report is confident, the guarded comment is made that "the academic achievement of children also shows improvement in the three years under report", with the "achievement means" of boys being higher than girls, that of OC children being higher than BC and BC higher than that of SC/ST children. Each of these groups has been scored. In this connection, one of statistical tables which shows a close correlation between income and achievement is disturbing. The table is given IV

TABLE—IV

Achievement Means of Standard VIII Boys and Girls

Year	Income Groups	Boys	Girls
87—88	A	40.72	37.22
	B	58.30	52.80
	C	64.56	60.36
	D	75.80	63.02
88—89	A	44.10	43.26
	B	60.42	53.08
	C	65.78	61.10
	D	78.24	64.24
89—90	A	46.64	43.82
	B	62.50	53.64
	C	68.36	62.25
	D	78.62	73.82

A—Upto Rs. 300

B—Between Rs. 300/— and Rs. 600/—

C—Between Rs. 600/— and Rs. 900/—

D—Above Rs. 900/—

Source: J. K. Pillai: Effect of Nutritious Noon Meal Scheme

These two reports show that the primary education record in the state is not as good as reported by the government and has many points in retention and achievement which need attention.

It is also poor enrolment rates at the middle and high school level at 39 to 40 per cent that is worrisome because the dropping out of about half of those who qualify for that stage represents a rather serious educational and human

wastage and deprives the majority of the educated drop outs of vocational skills.

At the university level, the number of universities at 11 and the arts and science colleges at 187 including 27 autonomous colleges in 1988-89 represent the limit for higher education in the state, if the number of graduate and post graduate unemployed recorded in Employment Exchanges set forth in the table below is a guide.

TABLE—V

Graduate and Post graduate job seekers registered in the state Employment Exchanges

	Graduates		Post graduates	
	1988*	1989**	1988*	1989**
Arts	76,393	74,801	27,169	28,769
Science	63,462	66,233	14,612	14,826
Commerce	32,233	35,660	6,526	6,845
Engineering	6,377	6,372	344	351
Medical	1,849	2,944	15	26
Others	28,633	29,243	1,498	1,700
Total	2,08,947	2,15,251	50,162	52,517

* as at 31 December

** as at 30 June

Source : Director of Employment & Training

The above picture of over 2 lakhs graduates including some engineering and medical graduates and over half a lakh post graduates looking for jobs that is disturbing. Surveys have shown some 20 to 25 per cent of those looking for jobs in the Employment Exchanges are not unemployed but those who are employed who are looking for better jobs. Even taking 75 per cent of the numbers above as the real unemployed, it is clear that higher education in the state faces a crisis both from the supply side of producing more graduates and post graduates than the economy demands or can absorb, and from the demand side in that the employment generation of the economy, particularly for the highly skilled personnel, is limited and is not increasing at the rate at which the higher education system produces them. One immediate action available to correct this situation is to stop any

further expansion of colleges and enrolments in them for the Eighth Plan period, to give the economy time to catch up with the educated, skilled backlog available. The freezing of institutions and enrolments in higher education proposed is only in relation to the formal system, because higher education facilities are increasingly available in the correspondence courses of the 3 older universities of Madras, Madurai and Annamalai in foundation courses, arts, sciences, commerce, education etc. This is a welcome development and should be used to cut back on the state subsidising of higher education courses in the universities and colleges.

To sum up, the development in the state in 1988-89 and reviewed rather briefly in this note so far refers in the main to the quality of life of its people on which the record is a mixed one. It is good in regard to the demogra-

phic factors, improving in regard to maternal and child care and IMR, it is also on the right lines in literacy and possibly in primary education. It is poor in regard to reducing unemployment including educated unemployment, in water supply and sanitation, housing and higher education. With this mixed record, the policy for the VIII and IX Plans indicated are to intensify state intervention and encouragement in this area (quality life) so that the state can maintain and/or attain for its people the second position in the country in this quality of life area after Kerala. The commodity producing and infrastructural sectors to which we now turn must serve this quality of life area.

Agricultural and allied activities

The agricultural and allied sectors of the economy reported in the Appraisal document present several positive as well as negative features.

On the positive side,

i) the increasing production of foodgrains and non foodgrains in 1988-89 - at 73.29 lakhs for foodgrains and pulses, 2.4 lakh tonnes of sugar, 4.01 lakh bales of cotton :

ii) despite a gradual reduction in area under cultivation for paddy from 24 lakh hectares in 1984-85, 25 lakh hectares in 1985-86, 22.64 lakh hectares in 1986-87, 19.55 lakh hectares in 1987-88 and 18.81 lakh hectares in 1988-89, the yield has increased from 53.65 lakh tonnes in 1984-85, 53.70 lakh tonnes in 1985-86, 56.14 lakh tonnes in 1987-88, 57.04 in 1988-89, with similar decline in area for other crops-millet 12.76 lakh hectares against the target 18 lakh hectares and yield 13.77 lakh tonnes, pulses 12 lakh hectares with an yield of 2.48 lakh tonnes,

groundnut 9.62 lakh hectares and yield of 10.84 tonnes.

iii) the yield of paddy has been maintained despite the reduction in area because the yield per hectare has been steadily rising from 2138 kg per hectare in 1984-85 to 2372 kg, 2728 kg, 2872 kg in the following 3 years and 3032 kg per hectare in 1988-89, placing the Tamil Nadu farmers in the third place after the Punjab and Haryana farmers in the country. But there is still a gap of over 13 per cent in yield to be made up, to 3500 kg per hectare, in relation to what is possible.

iv) milk production as reported by the document shows a small increase from 2.8 million tonnes in 1984 to 3.2 million tonnes in 1988-89, giving an annual increase of 20,000 tonnes per annum. It is also reported that 15 per cent of this is consumed by village households and the major part - 72 per cent marketed through the unorganised sector. Against the ICMR requirement of 284 grams per capita per day, the availability has been around 165 grams between 1984-85 to 1988-89, the gap between the ICMR criteria and availability falling from 65 per cent in the early 80s to 42 per cent in 1988-89. There is need not only for some further state investment in cattle development in the VIII Plan, there is also need for allowing the rural milk producers to organise themselves in cooperatives, as has been done so successfully by Anand.

v) there is a similar wide gap between ICMR criteria for per capita requirement of egg at 183 and its availability at 42 in 1988-89. This 77 per cent gap between the requirement and availability seems unbridgable, though since 1984-85 it has fallen by 10

points at 87 per cent. The other allied areas fisheries, forestry and irrigation—present a series negative feature and are therefore treated under the negative features section.

On the negative side, there is a long and dismal set of issues facing the state.

i) The contribution of agriculture and allied activities to the Net State Domestic Product (NSDP)—state income as set forth in the last 3 NSS Rounds shows it declining year after year from 28.47 per cent in 1984-85 to 24.35 per cent in 1988-89. Development theory holds that with higher economic development, the percentage share of agriculture and allied activities in the economy declines, that the percentage of the country's workforce engaged in it declines to a single digit figure as in the US at 4 to 5 per cent, while the tertiary sector and the workforce engaged in it rises dramatically which is held up as a model of economic development. But for India where the majority of people are poor with an unsatisfied demand for food, clothing and other wage goods, any reduction in the share of the commodity producing sector is disastrous. This falling share of the primary sector in the state's NSDP is a negative factor. The decline in the rate of contribution to NSDP of the primary sector has made possible by the 8.12 per cent increase of tertiary sector between the 2 years—the tertiary sector covering—trade, hotels, restaurants, transport, storage and communication, banking and insurance, real estate, house ownership, business services, public administration and other services. The growth of the tertiary sector, except for transport and communication, at the expense of agriculture and allied activities is due to the pull of the market, and as that sector produces no commodities to

meet the unmet demands of the people, is a negative factor.

ii) Agriculture and allied activities are still dependent on the monsoons. The most important forecast during the year determining the direction of agriculture and allied activities in all their various aspects is the monsoon. That determines the area of both irrigated farming and rainfed cultivation, it determines the storage levels in the hydraulic reservoirs which make available power for the farmers, it determines the fodder available for cattle and hence the meat and milk supply, it also influences the volume of the plantation crops and the social forestry prospects. In other words, the monsoon is the determinant of the level of living in the state. In 1988-89 the south west monsoon was satisfactory at 22 per cent above normal but the north east monsoon was deficient at—51.3 per cent and together with summer rains, give a—25 per cent below normal for the year. 1988-89 was consequently not too unsatisfactory a year for the rains but it was the determining element. Despite all the state and private investment and the various biotechnologies and other science applications, Tamil Nadu agriculture is still a gamble in the monsoons.

iii) The continuing decline in the area under foodgrains, particularly paddy referred to earlier, compensated by an increase in the per hectare yield, cannot continue indefinitely. The reduction in the area cultivated under paddy has already changed the cropping season. In the seventies, 20.7 per cent of the paddy production was under kuruwai, 68.3 per cent under samba and 11 per cent under the summer crop. By 1988-89, however 10.55 per cent is under kuruwai, 79.3 per cent under rabi and 10 per cent under the

summer crop. Further it is only partly true that the reduction in the paddy acreage was due to erratic monsoons which led to the late opening of the Mettur reservoir. An important reason for the area decline in paddy cultivation area from 24 lakh hectares in the first half of the 80s to 18.81 lakh hectares in 1988-89 which is a decline of -3.74 per cent over the previous year should be placed along side of the area under sugarcane increase by 11.28 per cent in 1988-89. Sugarcane is a water guzzling crop and the expansion of its cultivation area at the expense of paddy is a negative factor and points to the need to adjust the procurement prices policy to deal with this serious anomaly. Another food crop which declined even more sharply in 1988-89 is—essential for the protein needs of the large vegetarian and poor majority of the state. Pulses declined by—50.50 per cent against the anticipated level of 5 lakh tonnes. Pulses need to be grown in irrigated areas to increase its yield and this also may involve some cut in sugarcane production. Again cotton though recording a 7 per cent increase in area of cultivation records a —8.24 per cent decline in yield and groundnut which shows a decline of 2.83 in area over the target records an ever sharper decline in yield at—16.42 percent. The broad conclusion is that both food grains crops and non foodgrain crops have performed poorly in area/yield in 1983-89, continuing this negative record over the last 5 years. In this connection the apologetic and

defensive comments on the foodgrain position in the Appraisal document is to be regretted: this refers to such statements as "the pace of growth in the latter five year period was as good as on all India" (it was as bad as all India), or "the state's share in food grain production at the all India level had been maintained at 4.9 per cent" over looking the fact that the 1981 census shows Tamil Nadu's population increasing at 17.50 per cent and the 1991 census 14.94 per cent¹⁰. This kind of defensive comments runs throughout the document.

iv) There is a serious decline in the HYV area for both paddy (from 23.68 lakh hectares in 1984-85 to 17.97 lakh hectares in 1988-89 and millets (from 11.13 lakh hectares in 1987-88 to 8.44 lakh hectares in 1988-89). There is no explanation for this except some rationalisation about the decline in gross cropped area in paddy and wide fluctuations in the area under millets.

iv) Another more seriously negative feature reported in the Appraisal document is in regard to the consumption of fertilisers, and here again the seriousness of the issue is judged by the language used. The seriousness of the issue is that in a country where fertiliser is in short supply and has to be imported with the diminishing foreign exchange resources, in the five year 1984-85 to 1988-89 consumption is in excess of the estimated requirement as the table below shows:

TABLE—VI
(lakh tonnes)

Year	Requirement	Consumption	Percentage of excess consumption
1984-85	6.05	6.90	+14.05
1985-86	6.35	6.68	+5.20
1986-87	70.00	6.72	-4.00
1987-88	7.35	7.41	+0.82
1988-89	7.70	7.68	-0.26

Source : Department of Agriculture

Does the excess consumption over the estimated requirement indicate the waste in fertiliser use, such as the use of fertilisers in dry farming areas or in dry years reported by the District Agricultural Officers. If this is so, there is no reason for the satisfaction expressed in the document on the wastage in the statement: "the consumption level as it stood in 1988-89 (7.68 lakh tonnes) was an all time high reach" (sic!). The saving fact is that over the years that about 70 per cent of the fertilisers are made available by the private sector, (so that the major wastage must be from the cooperatives and government supply sources). Another worrisome element is that

Tamil Nadu's per hectare consumption of pesticides is highest among the 15 major states as table 62 shows. This is not a matter for self congratulation as is found in the report because there is no sign that there is any understanding of the environmental and health dangers involved in the large scale use of the pesticide nor any action taken to counter them.

vi) The crop loans made available to the weaker sections—covering small and marginal holdings do not seem to tally with their numbers but follow the area and size of holdings as the table below shows.

TABLE—VII

Classification	1976-77		1979-80		1985-86		Disbursement of crop loan to 1 & 2
	Number of holdings	Area	Number of holdings	Area	Number of holdings	Area	
1. Marginal (Below 1 hectare)	64.6	21.1	69.7	26.7	71.4	26.0	1985-86, 1986-87 54 57 1987-88, 1988-89 60 60
2. Small (1 to 2 hectares)	18.4	20.8	16.8	22.2	16.3	22.7	

Source : Director of Statistics

The disturbing features of the above table are: i) the number of marginal holding increasing from 64.1 per cent in 1976-77 to 71.4 per cent in 1985-86 along with a smaller increase in the area of their operation from 21.1 per cent to 24 per cent in 1985-86 which means that the operational area of the marginal farmer is getting smaller over the years: ii) while their number is increasing the credit disbursed to them is not increasing in equal proportion. The inequity in land distribution and credit availability is a feature of the state's agriculture and allied occupations.

vii) Fish production records a continuing fall every year from 4085 lakh tonnes in 1984-85 to 3610 lakh tonnes in 1988-89. This is due mainly to the sharp decline in inland fish production (by 50 per cent in 5 years) and which is in the hands of the farmers and the rural people and within the limits of the water availability should be turned around. Even more disturbing is the continuing decline in per capita fish consumption in the state by around an annual average of over 5 per cent, resting at 6.72 kg in 1988-89. This source of food nutrient could be available to the poor - the marginal farmer and the landless labour. That anyway is the hope of the intense inland fish cultivation practised in 16000 hectares and aquaculture, using the Chinese pattern of fish hatcheries to attain the goal.

viii) the forestry area is one of the weakest in the state. In 1987-88 the official report is that there is some increase (32,000 hectares) in forest cover from 22.23 lakh hectares in 1983-84 to 22.55 lakh hectares in 1987-88 increasing the percentage of forests to the total geographical area 17.10 to 17.34 per cent. The detailed break down of this figure

given by the Conservator of Forests is: Reserve forests 78.69 lakh hectares, reserved lands 3.25 lakh hectares and unclassified forest 0.61 hectares. In reality, what is needed is data from the Remote Sensing Agency. At the national level, the National Remote Sensing Agency of the Department of Space reports that the real forests in the country with more than 10 per cent tree cover decreased by 50 per cent in the 70s. What is the effect of our development programmes of clearing forests lands for plantations, for refugee settlement, for industrial and irrigation projects - on our forests has not been investigated. But that it is serious seems certain. Similarly the encouraging data given on Social Forestry in table 31 of the report must take account of the fact that farm forestry because of its economic implication benefits mainly the large farmer and faces the problem of heavy leakages which this Institute's investigation brought to light in 1985.

ix) In regard to irrigation, it is probably true that the state has "exploited to the brim - about 80 per cent of the ultimate potential", in the sense that the scope for new major or medium irrigation being nil, as the Appraisal document states. Even minor irrigation works face a limit in view of the rapid rate at which the groundwater level is declining. It is held that 70-80 per cent of groundwater is already in use. Both the recurring droughts and the prolonged dry season is resulting in heavy drawals of underground water both for agriculture and for drinking purposes. The drawals are so heavy that in the coastal areas, salt water from the sea is seeping into the fresh water underground channels. Under these conditions what is now needed is concentration on the efficient and

effective use of the fast declining water sources on which the Appraisal document says nothing. There is the usual data on the irrigation potential created and used (Tables 4 & 7 of chapter 5—irrigation). Of course the concept of irrigation potential is useful in a negative sense, as it points to the wastage of the investment in irrigation—major and minor, Table 4 in chapter 5 and table 5.4 in the statistical tables show that over 25 per cent of major and medium irrigation projects potential and 35 per cent of ground water potential have not been harnessed. Hence what is needed is: a) substitutional irrigation under which minor irrigation works are developed in the villages of major and medium commands: b) an irrigation advancement plan under which i) the uncompleted 30 per cent of the major and medium irrigation projects are completed at least 1 or 2 years early, as well as, ii) a water distribution system net work to deliver water to the farmer's field in one of the crop seasons. This means that the efficiency of the irrigation investment in the state will not be measured by the potential created but by the number of watering per season. Can we have data on the number of waterings received by each farmer? Further the economical use of water would also be ensured by further extension of drip irrigation. Can the use of drip irrigation be made obligatory for large and medium farmers who according to table 3.5 in the statistical tables form 12 per cent of all cultivators, having 50 per cent of the land.

Industry and infrastructure

The 1988-89 industrial scene in Tamil Nadu must begin by referring to the series of efforts made by the government (at first under President's rule and later under the elected govern-

ment) to revive industrialisation of the state. As pointed out in last year's review, in 1988 a review of the state's industrial record showed that in the preceding 10 years, some Rs. 150 crores of capital had migrated to other southern and other states. It is not the migration of capital from Tamil Nadu that was worrisome, but in contrast the stagnation of the industrial scene in the state that was a matter of concern. Unfortunately the government gave prominence in their publicity to their welfare measures costing Rs. 500-800 crores per annum, listing the midday meal scheme, the grant to the newly weds from the poor sectors, the cancellation of the debt of the farmers to the cooperatives, the free education right upto the university and in case of the backward, SC and ST class including engineering and medical education etc. In fact, the manifestos of every party (DMK, AIADMK, Congress, CPM, CPI etc) lay emphasis and give wide publicity to the large number and new welfare measures planned if elected to power with almost nothing on industries. Hence starting in May 1988 and going on to January 1989 and again in June 1989, a series of incentives and other measures were announced. As pointed out last year, it is still too early to assess the results of these efforts, but already in February 1991 some outside investments by large houses—Birla Tata, JK, ITC, Thapar and Khaitan—were attracted, resulting in finalising some 24 major and medium plants, with an investment of Rs. 300 crores. The major problem faced by the new industrialists is that the government was not in a position to deliver the promised power supply, at a lower price. The entrepreneurs were more anxious to have power supply on a continuing basis

without any power cut or load shedding. The Appraisal document attributes this failure to ensure continuous (and concessional) electricity to the new industries because of the power cut. 1989 was a very bad year from this point of view. The 30 per cent cut at the beginning of the year was increased to 40 per cent in March and 60 per cent in April, due to interruption in the supply of coal to the thermal plants and the low level of the depleted hydel reserves. This is in part true and will be further analysed later under the infrastructure sector, but the major reason for the various concessions and subsidies announced from time to time not leading to the rapid industrialisation of the state, like Maharashtra and Gujarat, is because our industrial policy and priorities lacked direction and perspective. This can be seen in the industrialisation not being related to the agricultural resources of the state: while the state is the second largest in the

country in the number of spinning mills, it has to import about 60 per cent of the cotton requirement of the mills from other states: on the other hand despite having flourishing bananas, mango and other horticultural raw materials which can still further be developed, it has no fruit processing or fruit preservation plant. ASI shows an actual decline in the number of factories in the areas of food product manufacture from 22 per cent in 1985-86 to 21.84 in 1986-87. The undesirable expanding of sugar factories in the state which is taking place from 821 in 1988 to 950 in 1989 has been earlier referred to.

This may also be the major reason for the somewhat erratic growth rates recorded by Tamil Nadu industries and its 3 sub sectors as the table below shows: (this assumes that these aggregate growth rate are real indicators of the performance of industry and its sub sectors).

Table VIII

Percentage : base 1970 = 100

Year	Mining	Manufactures	Electricity	Total
1980	26.4	4.9	7.4	5.7
1981	19.4	11.1	6.4	10.5
1982	10.2	4.7	10.5	5.8
1983	0.2	-7.3	-13.8	-8.2
1984	11.1	15.8	38.1	19.0
Annual Average	13.5	5.8	9.7	6.6
1985	1.3	12.5	-0.6	9.1
1986	-0.7	4.9	7.4	5.2
1987	1.6	2.6	10.6	3.9
1988	3.3	10.7	25.4	13.1
1989	18.5	2.6	6.3	1.2
Annual Average	4.8	6.5	7.3	6.5

Source : Basic Industrial Statistics, Tamil Nadu 1989.

The table throws up some important issues. First, it will be noted that the years of high growth rates - aggregate or for manufactures - are based on low rates of the preceding year. 1984 records the highest rate 15.8 per cent for manufactures on the basis of -7.3 growth in 1983. 38 per cent in electricity on the basis of -13.8 growth in 1983, 19.0 per cent aggregate against -8.2 per cent in 1983, and similarly the second highest rates are recorded in 1988, 13.1 per cent in aggregate against 3.9 in 1987, 10.7 in manufactures against the previous year's 2.6 per cent, and so on with regard to 1981 and 1985. In other words the table shows little growth in reality in industry: all the high rates are only recovery rates. This also means that there is no reason for the Appraisal document to be disheartened as when it states "that the growth rate in industrial production had come down from an impressive 13.1 per cent in 1988 to a low 1.2 per cent in 1989". As the former was a recovery rate, the latter was simply a correction rate. Second, the growth rates are an aggregated quantity and in manufactures table 6 of chapter 6 of the Appraisal document shows is based on a single digit. From this point, table 6.7 of the statistical tables headed the results of the Annual Survey of Industry groups-1986-87, is preferable because it gives the actual net value added for each of 97 groups of manufactures. If placed alongside of the similar value added results of 1985-86 and earlier years, it will be possible to arrive at the growth rate for each manufacturing group at the 3 or 4 digit level, which will give a more accurate picture of the status of manufactures.

Earlier reference was made to the need for Industrial policy in the state

having some focus priorities. In view of the fact that most state public sector undertakings are making losses year after year, which the Comptroller and Auditor General calls attention to and which has been referred to in previous annual reviews of the economy by the Institute¹¹, and to which the Appraisal document calls attention in table 34 in chapter VI, which the further information that the net losses are increasing every year, from -Rs. 4881 lakhs in 1986-87 to -Rs. 6717 lakhs in 1987-88, it has now dawned on the government that it should not itself undertake industrial / manufacturing activities for which neither the government nor its civil service staff is competent. And so a good development has been for the state to disinvest from a number of industries. The decision is being put into effect slowly and gradually to take the political parties and trade unions along. The state's VIII Plan provides for a modest Rs. 500 crores for industrial development, as a means of guiding and stimulating industry and not operating industries itself. From 1990 the policy of disinvestment by the state is gathering force and will be reviewed in the next issue.

Finally the state of sickness in the state's industry is alarming. The Appraisal document reports that as at end of December, 1987 - 107 non SSI units were sick with outstanding bank credit of Rs. 228.90 crores. Over 70 per cent of the sick units are in the engineering, textile, chemicals and paper industries sectors. On top, there are what the RBI calls weak units in the non SSI groups, comprising units which record cash losses and whose accumulated losses are 50 per cent of their net worth. They are potentially sick units but remedial action now can save them. In this category are 45 companies in the state with

outstanding banking credit of Rs. 70 crores. It is in the small scale sector that sickness places Tamil Nadu first among the states and the second highest in the bank credit outstanding. There have been enough studies by RBI and by the state authorities on the causes of sickness and the means of rehabilitating them. The first action now is to close the real sick units-non SSI and SSI-by sale, merger or being shut down. There is resistance both in the legislature and more strongly from Trade Unions, but there is no other remedy for the unviable units. Their lying closed and being taken over by the state is no solution. That compounds the temptation of large units who cause the sickness and use the easier entry into the SSI sector to misappropriate bank and company resources.

Infrastructure

Industry and agriculture are closely and increasingly dependent on power. The data published by the Tamil Nadu Electricity Board shows that in 1988-89 in regard to i) capacity creation, ii) electricity generation and gross power availability and iii) per capita availability there are increases and improvements in the year as in previous years. 1988-89 represented the highest power availability in 80s at 17,618 MW. Over the eighties, there has been a somewhat steep reduction and decline in the share of hydel power capacity from 50.4 per cent in 1979-80 to 37.7 per cent in 1988-89, with the resulting rise in the share of thermal power capacity from 49.6 to 55.5 per cent. Both forms of power face problems and limitation. The hydel generation in every year depends on the monsoons. Because of the good south west monsoon in 1988-89, hydel generation increased by 53.5 per cent in 1988-89 at 33.53

MW over the previous years, when the generation was a low 2884 MW. As far as the thermal generation is concerned, there is the problem of the sources of coal supply for the thermal plants being far away in the state, with steep variation in the quality supplied, depending not only on the condition in the mines but also the state of rail transport. The Singhereni source which is close to the state is in a permanent state of labour unrest, so that the plants have gradually got delinked from this uncertain source. The state is also dependent on three major union sources of supply-Neyveli with installed capacity of 776 MW in 1988-89, Kalpakkam atomic plant with capacity of 350 MW and the National Thermal Power Corporation, Ramagundam with 353 MW. In 1988-89 as in previous year not only is the power available inadequate to meet the demand, resulting in power cuts, there is also serious fluctuation in its availability, resulting in load shedding. The atomic source which the government is expanding with a second plant at Koodankulam carries many human, ecological and economic costs which the people in the state and the state government cannot afford. Further even the experience of power availability from Kalpakkam was that it was closed on a larger number of days for repair than the days of operation. The way forward for the state's power scenario is i) to concentrate on supplying power to industry and agriculture as a first priority followed by the urban household demand; ii) to develop quickly bio mass as the main power supply source for the vast rural areas; iii) to restrict industrial power supply to industries which are not power intensive; iv) to develop on an increasing scale solar and wind energy, which are now becoming available in the state for communications and farming, and v) above all to

adopt a life style so that what power is available is shared equitably between urban and rural areas, between the well to do and the poor sector of society.

Finally on communications, the Appraisal document provides some information on the roads in the state. As far as the districts are concerned, the government and panchayat union and panchayats have not provided the minimum of roads surface in 6 districts—Dindigul Quaide—Millet (1804 km), Chidambaram (1204 km), Kanyakumari (950 km), Pasumpon Muthuramalingam (1669 km), Pudukottai (1669 km) and Ramanathapuram (1285 km). These are the data for 1989 and these are districts where funds should be made available as a priority to panchayat unions. Table 18.12 in the statistical tables shows that about 40 per cent of villages (9000) have no all weather roads and are thus not able to participate in the states' main activities.¹² One problem that is faced in

this matter is that PWD engineers are asking for black topped roads for the habitations which have no connecting roads at all. They should be provided funds for good mud topped roads as a priority in this matter of road building.

Conclusion

This brief over view of the Tamil Nadu Economy in 1988--89 leaves one in general agreement with the broad conclusion set forth in the Institute's publication in 1988, Tamil Nadu Economy, Performance and Issues expressed thus : "The account of the development of Tamil Nadu seen in the preceding chapters is a mixed one with some bright spots, many dark patches and different shades of gray all over.....'Economic growth in the state will have to be stepped up by stimulating economic activity in different sectors of the economy'¹³, starting with agriculture which has been holding back the development of the economy.

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Annex to: Some Comments on Tamil Nadu: An Economic Appraisal 1989

Relative Importance of the Main States in India Agriculture and the Relative Importance of Agriculture within each State

	Shares in All-India Domestic Product Originating in Agriculture (average 1984/5—86/7)	Share of Agriculture in State Domestic Product (average 1984/5—86/7)	Growth of State Domestic Product Originating in Agriculture (1960/61—1986/87)
North	8.4	43.8	4.0
Haryana	3.3	43.8	3.7
Punjab	5.1	43.8	4.2
Uttar Pradesh	12.8	38.0	2.3
East	23.0	41.9	2.2
Assam	2.8	41.9	1.3
Bihar	8.0	45.3	1.4
Orissa	4.2	55.2	4.2
West Bengal	7.9	34.8	2.5
Center	11.3	42.9	2.5
Madhya Pradesh	6.2	40.1	1.7
Rajasthan	5.2	46.7	3.6
West	11.5	22.8	2.0
Gujarat	4.2	25.0	2.2
Maharashtra	7.3	21.7	2.0
South	17.6	30.6	1.5
Andhra Pradesh	6.6	36.6	1.8
Karnataka	5.0	36.9	2.7
Kerala	3.1	35.9	0.9
Tamil Nadu	3.0	16.9	-0.03
Total	84.6	35.0	
All India	100.0	34.5	2.3

Source: World Bank 1991 Country Economic Memorandum Volume II, using data from GOI, CSO, Estimates of State Domestic Products, various issues.

Summary of Discussion

The July development seminar was conducted on 25th of July at the Institute. The Chairman of the Institute Prof. Malcolm S. Adiseshiah was the author of the paper on "Some comments on Tamil Nadu: An Economic Appraisal" and the seminar was chaired by the Member Secretary, State Planning Commission, Mr. Inbasagaran.

At the outset, the author recorded his concern over the delay in publishing the 1988-89 document after the lapse of 25 months which nullifies the very purpose of the preparation and presentation of the document and the discussions thereon. The author invited the attention of the planners to avail the assistance of the non-Governmental institutions like CMIE and MIDS in bringing out the document on time and suggested that the document should form part of the budgetary exercise to help members of legislature to discuss the features of the document in the House.

On highlighting the very purpose of the document, the author pointed out that the plan exercise in itself is an ongoing process and the absence of any reference to the plan goals of the Seventh plan in the document for 1988-89 (which is the penultimate year for the State's Seventh plan) is a serious lacuna to be taken care of.

As to the substantive part of the document, the author appreciated the efforts of the officials in bringing out a useful record of assessment of performances, although late by two years. The author raised his doubts

over the effectiveness of the analysis of growth rate statistics towards assessing the performance of the economy as they are gross in nature and in that sense, an abstraction and often misleading.

In addressing the problem of unemployment, the author recorded his empuzzlement over the prevalence of the slow rate of decline in unemployment along with the low average annual growth rate of population during the decade 1981-91.

In improving the 'quality of life' and assessing the social betterment, the author called for more accurate and substantial social parameters in the plan document to reflect the current situation. On the housing sector it was identified that the data on private housing activities (which is a major investment) are not provided and pointed out to not fixing-up the responsibilities with the officials concerned as the prime reason for this gap.

As regard to performance of the department of education, the author was surprised to find the results of State's intervention in primary vis-a-vis higher education in opposite directions. Citing the two recent studies carried out by Tamil Nadu State Council for Science & Technology, the performance of schemes in reducing the dropouts from the schools are far from satisfactory. At the same time, it was observed that the State intervention in the higher level education is quiet encouraging.

While summing up, the author argued for state intervention in improving the 'quality of life' in a greater way in the future. Coming to specifics, in terms of performances of major sectors, he drew attention towards the fall in the area under cultivation in agriculture and the non-performance of the State Public Sector Undertakings in industry. The author voiced his doubts over the competence of the proposal for privatising the power sector which is on the cards.

The Chairperson in responding to the views of the author, gave the assurance that the next plan document which is under preparation will be placed along with the 1992 budget and highlighted the scheme of the plan document briefly. It was pointed out that instead of doing an assessment of all sectors, a thorough analysis of one sector at a time on a continuum basis was suggested in this context. With this the discussion on the paper was initiated.

It was observed that the rationale for posing slow rate of decline in unemployment with that of low average annual rate of growth of population by the author is questionable. The response was that it was done with the corresponding European experience in this area in mind. The issue of discouraging the non-utility courses at the collegiate level is not substantiated by the unemployment figures presented by the department of employment and training, was also brought out.

One of the participants suggested that the data on the performances of different sectors should be provided on a continuum basis to facilitate comparability and the suggestion was well received.

Concern over the fall in agricultural production especially, with respect to the increased gross value of production with a low net value of production was expressed. It was pointed out that there is neither academic nor departmental interest shown in this direction. The absence of a clear-cut agricultural policy (in the context of depleting ground water position and the Cauvery water-dispute on the surface irrigation front) was recorded. As a wayout, the agro-climatic parameters can be the leading light was suggested as the criterion. The response was that the policy is to encourage horticulture activities which are not water-demanding is being pursued.

The reliability to whole system of agricultural statistics of the State is questioned in terms of its presentation, its break-ups, the gaps and hence a thorough review was called for.

In responding to the questions raised, the chairperson admitted the gaps in the departmental statistics and briefly mentioned the various steps taken to plug the gaps. He welcomed the idea of availing the help of the institutions like MIDS in bringing out the annual plan documents more effectively and timely in the future.

The author in his response to the questions raised recorded his concern over the sluggishness in agriculture and long-list of non-performers of State PSUs in industry.

As a concluding note, the author expressed his empuzzlement whether to advocate democratisation or privatisation in the context of State intervention.

S. THIRUMALAIVELAYUTHAM

At a condolence meeting held in the Institute on 27/7/91 at 12 noon, members recalled Dr. V. K. R. V. Rao's immense contribution to the field of economics and his services as a teacher, researcher, vice-chancellor, minister, and Institution builder.

The members of the Institute sent their heartfelt condolence to the members of the bereaved family.

July 31, 1991

S. Neelakantan
Director

Statement of the Workshop*

Preamble

The Twentyfirst Interdisciplinary Research Methodology Workshop on Management of Renewable Energy Sources organised by the Madras Institute of Development Studies in collaboration with the Indian Council for Social Science Research was held at the National Institute for Rural Development, Hyderabad, during June 5 - 8, 1991. There were 24 participants representing the disciplines of economics, ecology, agriculture, engineering, geography, home science, management and urban planning. This workshop, the third and the final in the series on "Management of Renewable Resources" focussed on issues concerning energy, particularly for the rural sector, while the earlier two workshops had dealt with management of land and water resources.

Energy in different forms is a pre-requisite not only for meeting the basic minimum needs, but also for economic development of our rural and remote population. Currently, a large fraction of the rural population is too poor to buy what are sometimes called "conventional", and at other times as "commercial" energy, viz. energy such as petro-

leum products or electricity. The rapid rate at which fossil fuels are being depleted, and the escalating costs of procuring or generating such conventional energy sources are factors which force us to examine more carefully the potential prospects of renewable energy sources such as bio-mass, animal and agricultural waste, as well as tapping the practically infinite sources such as solar energy (used directly or after conversion into other forms such as heat and electricity), wind energy, ocean currents, etc.

The possibilities of decentralised energy generation when renewable sources are used without the excessive costs associated with transmission and distribution inevitable in the case of centralised thermal and hydel plants, is a particularly attractive feature, in the context of the need to meet the diverse forms and levels of intensity at which energy requirements are to be met in the widely dispersed and remote rural locations.

The energy requirements in the rural sector are largely for domestic use (cooking and lighting) and for agricultural operations. The energy requirements for agricultural operations are of two kinds: a) energy inputs in the form of seeds;

chemical or organic fertilizers/manures; and b) energy required for the mechanical operations such as ploughing, pumping water, harvesting, drying etc.

Most of the energy requirements for domestic needs as well as that required for the mechanical operations described above are met from renewable sources such as bio-mass, agricultural and animal wastes, and human and animal labour. Most of the requirements such as fertilizers are met through energy sources which are non-renewable.

Net gains in energy productivity, by which we mean the increased food, fodder, and fuel production to meet the basic minimum needs must be the goal of renewable energy programmes.

This is possible through:

(a) judicious management of the energy inputs including wastes, and (b) improvements in the efficiency of the end-use devices which convert energy inputs into useful forms of energy such as traction, heat or light.

It was this premise which was the undercurrent of the thirteen papers discussed at the workshop.

Energy Requirements and Availability in Rural Areas

Fuel for cooking is by far the most important end-use in rural areas. Concern has therefore centred on the availability of fuelwood at the national and state levels.

A study of fuel usage by households in rural areas of Tamilnadu found that half of the requirement is met by wood, a third by agricultural residues, and the rest by dung cake in villages abutting

reserved forests of Tamilnadu, illegal extraction of fuelwood is an estimated 7 lakh MT per year.

Clearly, this level far exceeds personal consumption needs, and the sale of the surplus is a means of livelihood. Presumably, a substantial portion finds its way to urban areas. While it is theoretically possible to produce the needed fuelwood from social forestry plantations, such a strategy should concurrently address itself to the problem of providing alternative source of employment/income for those engaged in this activity.

Although, the extraction of fuelwood by headloaders is by no means the only significant cause of deforestation, there is the danger that firewood may become a non-renewable resource if the trends in deforestation continue. On the positive side, the high consumption of *Prosopis* in Tamilnadu indicates the potential of that species to meet the fuelwood needs at very low cost, since it proliferates rapidly even on poor quality land. Wood needs for brick kilns and other industrial uses can be met from social forestry plantations. However, such a policy may be undesirable if common lands which provide free fuelwood to the rural poor are diverted for commercial purposes.

The extraction of fuelwood from forests is particularly important in ecologically vulnerable areas such as the Nilgiris. Another study of energy usage among households in Nilgiris indicates that firewood is the largest contributor of energy, and is mostly used for cooking. A close relationship was also observed between the consumption of cereals and firewood; the cold climate due to the elevation of the Nilgiris leading to higher cereal and firewood consumption comp-

*Statement of the Twentyfirst Interdisciplinary Research Methodology Workshop held at NIRD, Hyderabad, June 5-8, 1991.

ared to the plains. Urban areas in the district which have alternative energy sources had less reliance on firewood.

Suggestions made on the basis of the study include: (a) development of fuelwood plantations to meet the firewood need; (b) nutritional supplement to make up for the deficiencies in the diet; and, (c) treatment of dung in biogas plants to generate gas, and produce a slurry with the required nutrients for use as manure.

Among renewable energy sources, there is much greater data on the availability of biomass, particularly firewood. Similar studies of availability through surveys and simulations are needed in other areas. Also, firewood being a "conventional" energy source, the issues revolve around *reduction* of usage from an environmental perspective, rather than promotion of usage which would be the case for other renewable energy sources.

The macro level as well as micro level planning for meeting energy requirements can be aided by a variety of techniques and methodologies. One such exercise illustrated how an optimisation model (linear programming) could be used to decide on the extent of afforestation needed in different categories of land and at different seasons in order to achieve objectives such as meeting the fuelwood demand at minimum cost.

While optimization, simulation and combinations of such techniques can be meaningful in the search for action programmes, great care must be exercised in making assumptions about the various components of the model used, as well as in estimating the parameters of the model. The sensitivity of the solutions in the form of action plans for different assumptions and values of the parameters must be examined carefully.

In any case, such exercises can at least focus the attention of the planners and policy makers to different options for action, and enhance the understanding of the dynamics of the relationships among aspects such as changes in cropping pattern, differing qualities of available land, etc.

Emerging Renewable Energy Technologies

The technological options available for harnessing renewable energy sources include:

- a) Solar photovoltaic technologies which have high reliability and are easy to maintain;
- b) biogas generation through use of animal and plant wastes;
- c) technologies based on biomass conversion to heat energy either by direct combustion or through gasification;
- d) harnessing wind power and small scale hydropower in locations with the required conditions.

Integration of different technologies in a complementary manner is needed.

Many emerging technologies are technically viable, but may not be cost-effective without a subsidy because of the lack of scale economies. At the same time, we cannot ignore arguments that large and continuous subsidies may devalue the credibility of the option and prevent gradual adoption. However, rationalisation of existing conventional fuel prices may provide an incentive for the development and acceptance of these technologies. The successful transfer of

technologies requires greater awareness among the rural poor, local management systems such as village committees, and trained manpower for operation and maintenance which may be in short supply in remote rural areas.

Besides the possibility of emerging technologies becoming economically viable through measures such as the above, they have the potential of improving the status of deprived groups of the society such as women. For instance, they improve the quality of life of women by freeing them from the drudgery of collecting fuelwood or by providing smoke-free kitchens.

Two case studies of implementation of these new technologies provide some insight into the potentials and problems of the development and adaptation of such options. The experience of decentralised electricity generation through community-based biogas plants indicates that the cost per Kw of installed capacity is lower vis-a-vis nuclear power generation. The economic analysis of generation of electricity through wind farms and feeding into the central grid, shows that the project has a positive net present value. While unequivocal conclusions about economic viability cannot be made based on such pilot projects whose replicability is yet to be proven, the point remains that careful evaluation of such options deserves to be undertaken, in order to give a chance for renewable energy options to play a significant role.

Management and Institutional Aspects

It is important to alter the current attitudes of policy makers and planners, who consider renewables to be an insignificant supplement to conventional

energy sources such as coal, oil and electricity. A major step in gearing up effective renewable energy programmes is to convince the top echelons of the energy policy makers through energy accounting based cost-benefit analysis, that renewables have a major role to play. At the same time, efforts must begin, to develop expertise and skills at various levels such as the state, district, block and panchayat, to absorb increased allocation of resources for harnessing renewable energy.

Unless *institutional arrangements* are developed, the most careful planning be it at the micro level or at the macro level, will not guarantee the success of any large scale programme for the harnessing of renewable energy sources. The experiences of a national level effort such as the National Project for Biogas Development, as well as studies of micro level projects in Andhra Pradesh and Gujarat clearly illustrate this seemingly obvious, albeit often neglected aspect.

An analysis of the manner in which the National Project on Biogas Development was implemented suggests that the project did not realise the desired objectives because:

- a) the implementation was left to the bureaucratic agencies already involved with many other programmes;
- b) there was no proper post-intervention services to help maintain the biogas plants and solve technical problems; neither had any local expertise been created through appropriate training;
- c) the R & D was laboratory oriented and the conditions on

the ground had not been taken care of in the design of the plants; and,

- d) the target beneficiaries either could not realise the expected benefits because of the lack of the raw material itself (dung) or had not been convinced to accept the new technology.

The implementation of a renewable energy programme (Urjagram) in a tribal village near Hyderabad was evaluated over a 6 — 7 year period. The introduction of renewable energy hardware did not by itself bring about improvement in the standard of living of the people. The implementing agencies tended to be obsessed with targets and neglected the proper functioning of the programme during implementation.

The programme in the study area was imposed on the people and their demands/needs were not taken into account. Further, the people were not actively involved. There was no coordination by the several agencies involved in the programme, and they did not take advantage of voluntary organisations such as the YMCA, which were familiar with the needs of the people.

Studies of micro-level efforts in Gujarat reveal that major current weaknesses must be removed if renewable energy programmes for rural areas have to succeed.

- a) The haphazard, and unreliable information about the energy consumption and resource availability of the target areas must be replaced with carefully gathered information. The participation of the community in gathering information may have the advantage of getting realistic

estimates as well generating motivation for the programme.

- b) Provision of effective and readily accessible maintenance services for the equipment, directly by the implementing agency in the initial phase, and through properly trained local residents in the long run, is a must.
- c) Development of effective local monitoring teams which prevent the misuse/abuse of the equipment or the energy generated should also be given top priority.
- d) The temptation to thrust technologies which the community cannot afford on their own must be avoided. It is better to limit the provision of free inputs to the minimum and introduce technologies for which the beneficiaries will be willing to pay at least some nominal charges. If the priorities of the beneficiaries (such as the need for drinking water or fuelwood) are properly ascertained, the chances of sustaining the motivation of the beneficiaries to adopt the programme can improve.
- e) The implementing agencies should not be guided by their value systems such as imputing opportunity cost for labour spent in gathering fuelwood, or the inconvenience and health hazards of inefficient traditional chulas and conclude that the beneficiaries will be guided in the same way in accepting the new technologies. Considerable effort in terms of education, demonstration etc. are needed to "sell" the new technologies

and products to the target beneficiaries.

- f) The role of the voluntary agencies must be limited to that of being catalysts and facilitators rather than being the implementors or delivery agents. The latter responsibilities must be that of the local administration, be it the panchayat or special task forces explicitly formed for the purpose of delivering the programme.

The studies also show that where the above strategies have been followed, the programmes have been relatively more successful.

Energy Flow in Rural Ecosystems/Productive Agriculture

The demand for energy in the rural sector is largely for productive agriculture and for domestic needs such as cooking and lighting. A study of *energetics* in a village in Karnataka revealed the high energy intensity of modern agriculture. Traditional energy sources such as manure contribute a minimal amount to the total energy used. The argument is often made that increase in agricultural productivity and rural incomes is possible only by increasing energy intensity of inputs. It is not clear if such increase in energy intensity is sustainable from either the environmental or the cost point of view. However, renewable sources cannot be considered a substitute for chemicals, irrigation etc., if agricultural productivity is to be maintained. Rather, a combination of different energy sources is needed in the Indian context to improve productivity and income.

A study of the planning and implementation of development programmes

based on alternative and renewable energy resources for achieving self-sufficiency in fuelwood, fodder, pulses and oil seeds was undertaken in a village near Bhopal. A survey to assess the energy use pattern for production agriculture, post-harvest operations, cattle raising and domestic activities, found that deficits existed in respect of fuelwood, fodder supply, pulses and oilseeds. Only production of cereals showed a surplus. There was also scarcity of irrigation water in the village. Action programmes were charted out in each of these areas to remove the deficits.

The implementation of these programmes to make the village self-sufficient has led to better resource utilisation by increased harnessing of solar energy for its conversion to food, fodder, fuel and fibre. In terms of employment generation also, the programmes were reported to be quite successful.

The coverage of renewable energy programmes should be widened to include environmental regeneration and agro-industrial development, in addition to more traditional uses. It would also be preferable to implement rural energy programmes on a watershed basis (the natural boundaries of the village).

A strategy for phased development of renewable energy resources, which gives emphasis to the utilisation of a conventional energy network in the initial stages must be considered. In the second phase, when significant bioenergy supply becomes available, renewable energy sources can be given a more prominent role. Industries which have the potential to use low and medium temperature could be supplied through renewable energy sources. However, all these benefits must be equitably shared so that they are not cornered by the more affluent groups.

Community efforts are needed to overcome the resource constraints by organising groups to manage bioenergy, to assess the bioenergy needs, to explore the avenues for using solar heating devices, wood gasifiers and biogas units, and for income generating activities that will benefit the rural poor.

Methodological Aspects

The workshop also highlighted the need for utilising various methodologies for the management of renewable energy. Survey methods have been used extensively to estimate current patterns of fuel usage in rural areas. At the micro level such as a village or watershed, it is possible to quantify all the major energy and resource flows, in order to identify deficiencies that need to be rectified. Energy flow accounting at the macro level requires sufficient secondary data, which

may not be available for non-conventional sources of energy. An alternative approach is the use of simulations or models, whereby the effects of various parameters on energy supply and demand can be explored. They also serve as heuristic devices in the training of energy managers.

Interventions such as Urjagrams or the National Biogas Programme can be evaluated using cost-benefit analysis, technology/impact assessment, or operational research methods. Since acceptance by the target group is a major issue in most technological interventions, the use of sociological or anthropological methods is indicated.

The deliberations at the workshop were fruitful, demonstrating the crucial need for an interdisciplinary perspective in planning and managing renewable energy resources in rural areas.

Publications of the Institute consist of the following categories:

1. **Publications brought out by Messrs Sangam* Publishers:** These consist of a series of monographs mainly relating to Rural Development of Tamilnadu brought out between 1972 & 1980. Detailed list including prices available on request from the Programme Coordinator of MIDS. Orders may be placed with Sangam Publishers, 11, Sunkurama Chetty Street, Madras - 600 001 for these.
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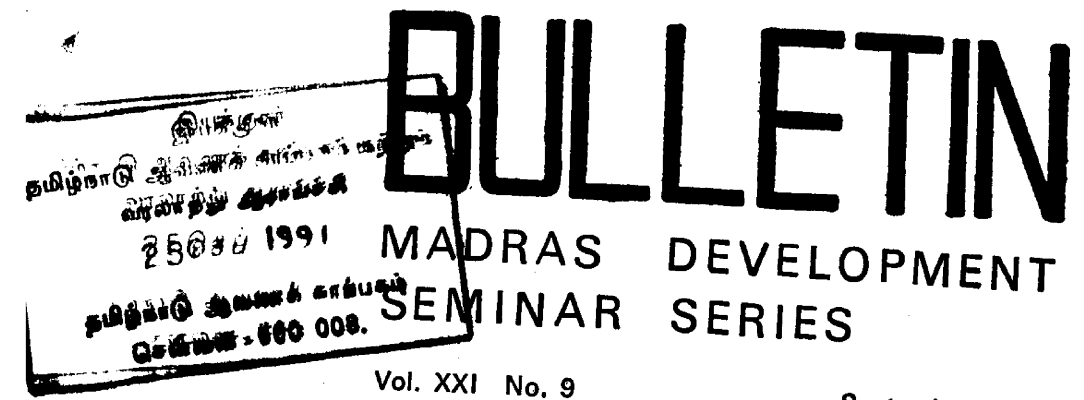
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The aim of the Institute is to contribute to the economic and social development in Tamilnadu and India.

The activities of the Institute are :

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September 1991

**Need based energy Management—
Distribution is the key**

**The Union Budget 1991 - 92
Some Quick Comments**

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EDITORIAL - SOME HIGHLIGHTS

I. General Economic Scene

State

1991—92 Proposals

In the reply to the debate on the Governor's address, the Chief Minister set forth a number of proposals, to be implemented from this year which increases the year's deficit from Rs. 307.31 crores presented in the interim budget for 1991-92 (see Vol XXI p 205) to Rs. 1200 crores. The 1990—91 budget shows a deficit of Rs. 209.86 crores and the year ended with a shortfall of Rs. 153 crores. The Rs. 1200 crores deficit for this year, 1991—92 comprises a) the deficit shown in the interim budget b) Rs. 220 crores for DAs, higher subsidy on PDS and debt relief to weavers and farmers, c) the loss of revenue of Rs. 322 crores in closing the cheap liquor shops, d) within a 5 year target of building 10 lakh building units, 1.2 lakh units to be built this year, including the units built by TN Adidraavidar Housing Development Corporation, the Tamil Nadu Housing Board, the Slum Clearance Board are the Cooperatives, with the balance to be

built by the private sector helped by availability of finances and building materials plus provision of drinking water facility to 2483 habitations including 943 occupied by Adi Dravidas at a cost of Rs. 10 crores and Rs. 7 crores to provide drinking water to 1087 Adidrauida habitations in other village, e) 12 cooperative spinning mills to be modernised at a cost of Rs. 25 crores, the IDBI contributing Rs. 18 crores and the state Rs. 7 crores, f) Rs. 25 crores for increasing oil seeds products and cooking oils on the basis of the project of the TN Oilseeds Growers Cooperative Federation, with a special oilseeds production programme in Dharmapuri and several extraction and bean oil nuts in other districts, g) Rs. 289 crores to compensate district cooperative banks on the loan waiver scheme of which the states share is Rs. 145 crores plus Rs. 54 crores as the first instalment repayment to the union government, h) an extensive programme of capital subsidy and sales tax concessions to promote industrialisation—the details of which are set forth in the industrialisation section, i) a granite polishing unit and a mango pulp unit in Dharmapuri, j) a

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Rs. 85 crores pig iron project in the joint sector in Mettur, k) a silicon unit also in the joint sector, l) a graphite beneficiation unit with an initial cost of Rs. 15 crores facilitating ancillary units of Rs. 200 crores m) a push to increase union investment which is a mere 5 per cent of total union investment in India, n) industries to be allowed to improve roads and collect tolls to meet its cost, o) a request for special union grant for export oriented centres like Tirupur, Ambur, Ranipet and Dindigul, p) on power, the clearance of the Rs. 2500 crores expansion of the first mine cut at Neyveli and the setting up of two 210 MW thermal plants lignite at Neyveli and the 1500 MW thermal station in the VIII Plan. In view of the difficulty of getting coal, the whole of Neyveli's power should be allotted to Tamil Nadu. q) the reopening of the closed spinning mills and starting Standard Motors factory, r) in the health field, priority for higher education, pay rise and deputation for foreign studies for doctors who opt to work in rural areas, the increase of medicines in PHCs from Rs. 30,000 to Rs. 400,000 involving Rs. 1.5 crores plus improvements to district hospitals, s) on rural development, upkeep of 1.2 lakh pumpsets involving a doubling of the allocation to Rs. 1.5 crores, Rs. 1 crore special grant to each Panchayat Union to enable them to pay their dues to the Tamil Nadu Electricity Board and the annual allocation for road improvements increased from Rs. 5.32 crores to Rs. 9.02 crores, and Rs. 65.85 lakhs to provide raincoats to 39,000 conservancy staff worker's in local bodies, t) special training for those appearing for union examinations and u) Rs. 20 crores for improving Madras city roads and Rs. 20 crores for removing traffic bottlenecks and provision of Rs. 100 crores for elevators on busy crossings on Anna Salai, Rs. 18.50 crores for laying

sewage lines and clear the city's water ways, and v) Rs. 9 crores to provide half kg of rice for weak and old persons, Rs. 374 crores for the self sufficiency scheme. All this industrial, Rural Development and Welfare measures are important and have been carefully programmed. The government stated to the Assembly that it is in the grip of a financial crunch and faces for the year a total deficit of Rs. 1200 crores. Now the budget for 1991-92 is looked forward to see a) how many of the schemes will become a reality in 1991-92 and b) what their cost is and how it will be financed.

Climate and Prices

July was a cool month, after the warm summer weather of the previous two months. There was also the rains during the month which covered not only the southern districts but this year also Madras and Northern districts. This year's south west monsoon has been good, as for the period June 1 when the monsoon started to July 10 all districts except Nilgiris received excess rainfall. Madras district received 320 mm against the normal 74mm which was a 331 per cent excess over the normal. Infact the normal rainfall for the entire season for Madras city (June 1 to September 20) is only 340 mm. The rainfall in the districts was also good, at 18 per cent above normal for Nilgiris, and 617 per cent for the Chidambaram district. The city has had cloudy weather throughout July. The government deputed a team to Kanyakumari to assess the damage caused by the rains and floods. The rain caused breaches in 14 tanks and 18 channels and several towns and villages have been inundated

in the district. On prices, CSO's monthly abstract of statistics for January 1991 (arriving 6 months later in July) reports the index number of consumer prices for industrial workers being stagnant at 185 for September 1990 and moving up 2 points to 187 in October 1990 with no data beyond September 1990 for index number of prices for agricultural workers and beyond October 1990 for urban non manual employers, reported already in Vol (XXI p208). Despite efforts made by the government and the promises of vegetable dealers to the food minister, the price of vegetables continued to be high in July. Tomatoes was selling at Rs. 25 a kg, carrot Rs. 16 a kg, beans Rs. 10, brinjals Rs. 6 and potatoes Rs. 6 a kg. Edible oil is selling at an incredible Rs. 50 a kg and pulses Rs. 22 a kg. the reasons for this sharp rise are not known and the profiteering seems undetected.

Power

The power situation in the state in July was normal with the continuing 25 per cent cut on HT industries. By July 18, hydel reservoirs had a storage equivalent of 1220 MUs (against 974 MU at this time last year and the total capacity of 2200 MMU). The south west monsoon is continuing to bring inflows during the month, and by the end of July the overflow from the KR Sagar and Kabini flowing into Mettur has raised its level over 110.45 feet on July 31, reaching the full level of 120 feet by August 2 or 3. The inflow into Mettur was 2.75 lakh on July 31. As a result, the TNEB has stepped up the hydel generation. Its storage at the end of the month was equivalent of 1630 MU against the full capacity of the reservoirs of 2200 MU. But the coal stock position for 3 thermal station is not good at 75,000 tonnes which is 3 days

consumption. There are substantial stocks available at the 3 loading ports—Haldia (14 lakh tonnes), Paradeep (42,000 tonnes) and Vishakapatnam (62,000 tonnes). TNEB is unable to lift the 1 lakh tonnes offered by AP chief minister from the Srirampur and Ramkrishnagar fields as Singereni has not permitted the use of its loading facilities because of the naxalite problem. Another problem area is that the expansion projects of NLC are held up because of the political changes in former East Germany. The first mine cut and the thermal plant expansion was to come from the erstwhile East Germany and the USSR for the thermal plant. Similarly the expansion plan for the briquetting and carbonisation plant is held up for the same reason. The plan now awaits the settlement of the political and economic situation in the unified Germany. The General Electric Company is setting up a Rs. 7 crore unit in Madras to make SF6 circuit breakers and isolators which will help the power industry in the state.

The power situation in the country was normal in July, with Karnataka having its hydel reservoirs full, so that it was able to lift the 25 to 30 per cent cut on HT users. However power shortage has hit AP's textile industry. Due to the devaluation of the rupee, the cost of the 710 MW Koelkaro hydel project aimed at developing the backward tribal adivasi area of Bihar has been increased by over Rs. 250 crores and has therefore been shelved. The government states that during the next 3 years 27,000 MW more power could be generated at a cost of Rs. 89,000 crores to be raised internally, for which Rs. 20,000 crores is needed in the Plan, and for which there is little hope as will be seen when the union budget is analysed. Will the power tariff be

cost based, cutting the subsidies on which it lives? The post budget period will answer this query. The question of gas price is now the subject of controversy. The Kelkar committee has rejected the suggestion that the pricing of natural gas when used as fuel for power generation should be fixed on the heat equivalent of coal. The committee has suggested that it is the total cost of generation that should be the base. The gas price for the power sector should be linked to the fuel oil replacement value, or the fertiliser sector to the Naphtha replacement value. The fuel/oil equivalent price will be Rs. 2000 per 1000 cubic metres against the current price of Rs. 1400 per 1000 metres. The Gujarat government has rejected the Kelkar committee report and wants a broad based price commission on gas.

Water

In July the major issue in the state was the non notification by the union government of the interim order of the cauvery water tribunal and the non implementation of the order by the Karnataka government. The government organised a bandh in the state on July 26 which was supported by all parties and the 11 Tamil Nadu AIADMK MPs have sent a memo to the Prime Minister that they would resign from the Parliament, on this issue. The Minister of Labour who is also President of TNCC-I resigned his ministership. Karnataka has contested this by organising a bandh on the same day, July 26 in protest against the interim order which it states it will not carry out as it is ultra virus and has passed an ordinance nullifying the ordinance. It is very doubtful if Tamil Nadu will get any water this year from the cauvery. Mettur has been receiving the

surplus water discharged from the Kabini and KR reservoirs in Karnataka and its level reached 110 feet against the full level of 120 feet. The inflow has increased to 1.3 lakh cusecs. The reservoir was opened on July 21 and it was hoped can stay open till January 1922 (if the interim order is carried out). The Papanasam reservoir which serves only Tirunelveli and Chidambaram districts is reported to be surplus which is rare in July and the water supply is being used for advance kar cultivation. The National Water Development Agency after a survey of the surplus water of the Pamba and Achankoil rivers in Kerala has drawn up a plan for transferring 664 cm of the surplus water of the 2 rivers (after meeting in full the existing and future water needs for irrigation, domestic and industrial use as per the norms of the government of Kerala) through a 10 km tunnel through the Western Ghat and the open channel in Tamil Nadu to serve the drought prone areas of Tirunelveli, Madurai and Ramanathapuram. This should be followed up by the two governments.

Housing, Water Development and Transport

The plan for building 10 lakh houses in 5 years, involving the building this year of 1.2 lakh houses by the Tamil Nadu Adi Dravidar Housing Corporation, Rural and Urban housing programmes, the Tamil Nadu Housing Board and the Slum Clearance Board and Cooperative was earlier referred to. Further a special Rs. 20 crore scheme for improving roads and bridges to remove traffic bottlenecks. A scheme for streamlining the distribution of uninterrupted water supply to all parts of city at a cost of Rs. 505 crores is to be taken up with the financial assistance from LIC

(Rs. 50 crores), HUDCO (Rs. 125 crores) and the World Bank (Rs. 350 crores). The Pallavan Transport Corporation reports that it has installed an inexpensive device—an accelerator pedal stopper—which increases the fuel efficiency from 3.3 km per hour to 4.6 km mph. This may enable the PTC to restore the services cut on Sundays with the substantial saving on fuel.

Self Sufficiency

As part of the 1991-92 proposals with which this section started, a Rs. 384 crores special self sufficiency scheme was announced to be launched immediately. This scheme is to provide basic facilities in rural areas which include roads, drinking water supply, street lights and health services. Each panchayat union is to get Rs. 1 crore for this purpose as noted earlier. All this depends on resource availability and on this the government has made requests to the union finance minister, the deputy chairman of the Planning Commission and the Prime Minister to increase the various grants to the states under Plan and non Plan heads.

Market Borrowing

In the RBI floated Rs. 1200 crores states borrowing, Tamil Nadu raised the 6th largest loan at Rs. 87.30 crores, the largest being that of UP at Rs. 204.40 crores.

National

Union Budget (Final) 1991-92

The final Union budget for 1991-92 was presented to Parliament in late July. Its major features are summed in the table below.

It will be noted from the above table that non plan expenditure (item 9) which was budgeted at Rs. 76,907 crores in the interim budget (which was a little lower than the revised 1990-91 budget) estimate has been raised to Rs. 79,697 crores that Revenue deficit (item 18) which was shown in the interim budget at Rs. 17,766 crores is reduced in the final budget to Rs. 13,884 crores, that the budgetary deficit interim budget (item 19) which was Rs. 9977 crores is reduced to Rs. 7791 crores and the fiscal deficit in the interim budget (item 20) which was estimated at Rs. 38,475 crores is now estimated at Rs. 37,727 crores. In introducing the budget, attention is called to some 35 items which the budget, directly or indirectly dealt and some 13 group of broad budget expenditure or income proposals: 1) The precarious balance of payments situation, the current account deficit of which has increased from 2 per cent to 2.5 per cent of GDP, 2) the fiscal imbalance which has been worsened by the Gulf crisis, 3) the inflationary pressure wherein at 31 March 1991 the wholesale price increase is 12.1 per cent and the consumer price index is 13.6 per cent, concentrated on essential commodities. 4) The large and persistent macro economic (imbalances) and low productivity of investment manifested in a) unsustainable increases in government expenditures, notably, b) runaway subsidies, c) a tax system with many loopholes, d) the public sector not generating investible surplus, e) the anti-

(All figures in Rs. Crores)	1989-90 Actuals	1990-91 Budget Estimates	1991-92 Revised Estimates	1991-92 Interim Budget Estimates	1991-92 Budget Estimates
1. Revenue Receipts	52296	57938	57381	63584	67529
2. Tax Revenue (Net to centre)	38349	45294	44318	49374	52500
3. Non-Tax Revenue	13947	12644	13063	14210	15029
4. Capital Receipts	30018	34165	38564	36006	38174
5. Recoveries of Loans	4980	4576	6005	5608	5666
6. Other Receipts	—	—	—	2500	2500
7. Borrowing & other liabilities	25038	29589	32559	28498	30008
8. Total Receipts (1+4)	82314	92103	95945	100190	105703
9. Non-Plan Expenditure	64505	68843	76761	76907	79697
10. On Revenue Account	52137	56671	60946	64304	64315
11. On Capital Account	12368	12172	15815	12603	15382
12. Plan Expenditure	28401	30466	29956	33260	33725
13. On Revenue Account	12071	14299	14020	17046	17068
14. On Capital Account	16330	16167	15936	16214	16657
15. Total Expenditure (9+12)	92906	99309	106717	110167	113422
16. Revenue Expenditure (10+13)	64208	70970	74966	81350	81383
17. Capital Expenditure (11+14)	28698	28339	31751	28817	32039
18. Revenue Deficit (1-16)	11912***	13032	17585	17766	13854
19. Budgetary Deficit (8-15)	10592	7206	10772	9977	7719*
20. Fiscal Deficit (1+5+6)(15-7+19)	35630	36795	43331	38475	37727**

* Includes transfer of Rs. 2300 crores of OCC deposits from Public Account.

** Including other variations in RBI's credit to central government.

*** Not independently estimated.

rural economy bias, f) the widening gap between government income and expenditure and g) the flight of capital from the country, 5) the fiscal deficit climbing to more than 8 per cent of GDP in 1990-91 against 6 per cent in the 80s and 4 per cent in the 70s 6) The internal public debt rising to 55 per cent of GDP with onerous debt servicing. 7) Interest payments being above 4 per cent of GDP, constituting 20 per cent of total union government expenditure. 8) The external debt including NRI deposits estimated at 23 per cent of GDP and the debt servicing being 21 per cent of current account receipts. 9) The current level of foreign exchange reserve falling to Rs. 2500 crores, covering a mere fortnight's imports. 10) A credible fiscal adjustment and macro economic stabilisation requiring progressive reduction of the fiscal deficit of the union government, a similar cut in the revenue deficit and reduction in the current account deficit in the balance of payment along with reduction in the levels of internal and external debt. 11) The need to back up this macro economic stabilisation and fiscal adjustment by economic policy reform to a) increase efficiency and international competitiveness of industrial production, b) for this to utilise more foreign investment and foreign technology, c) to modernise the financial sector and d) to improve the performance of the public sector. 12) Industry to shed barriers to entry and limits on size of growth of firms, reverse the proliferation of licensing which has led to monopoly. 13) Industrial Development is related to trade policies calling for changes in import-export policy aimed at reducing import licensing, promoting exports and compression of imports. 14) The exchange rate adjustments - Devaluation - on July 1&3 and the enlargement and liberalisation of the

replenishment license system which begins. 15) the transition from a regime of quantitative restrictions to a price based mechanism. The scope and area for the operation of market forces is to be expended as it is held that a reformed price system is superior to quantitative control for resource allocation. 16) There is to be a liberalised policy regimes for direct foreign investment, particularly in high priority industries which will be given prompt approval. 17) Foreign equity ratio of 51 per cent to be allowed for trading companies engaged in exports. A special board is to be constituted to negotiate with a number of large international firms and approve direct foreign investments in selected areas giving access to high tech and world markets. 18) The public sector is to be turned around to make it an engine for growth rather than an absorption of national savings without return. For this the portfolio of public sector investments are to be reviewed to concentrate its future operations in strategic areas requiring high tech and essential for infrastructure and in order to raise resources, widen public participation and promote greater accountability upto 20 per cent of equity in selected public sector undertakings to be offered to mutual funds and investment institutions in the public sector and their workers. Sick PSUs are to be referred to BIFR and there is to be austerity in management of PSUs. 19) The banking and financial system is to be reviewed to introduce production norms and improve profitability and for this a high level committee is to be set up to consider structure, organisation, function and procedures of the system. 20) Interest rates a crucial dimension of the financial sector can have some relaxation in intervention, on which RBI has started by providing a floor, the removal of all restrictions on interest rates of debentures which will be

governed by market forces. Similarly facilities are to be extended to small savings. 21) For the growth of the capital markets, protecting the rights of investors and preventing trading malpractices, the government is to set up a Board and give it its needed power. 22) A comprehensive review of policies and procedures on NRI investment is to be carried out and further relaxation made to remove all problems and obstacles. 23) The Board of Industrial Costs and Prices is to be transformed into a Tariff Commission to fix tariffs and domestic prices where there might still be need to protect Indian industry and ensure coordinated resources. 24) Fiscal adjustment requires reduction in government expenditure and increase in government income. The elimination of structural imbalances requires reduction in both fiscal deficit and revenue deficit as a proportion of GDP. The budget does this. 25) As noted earlier the fiscal deficit estimated by the interim budget at Rs. 38,475 crores was because of nothing being done in the 4 months since its presentation to Parliament, shot up to Rs. 52,000 crores. The budget deficit narrowly defined as borrowing through short term treasury bills for 1990-91 estimated at Rs. 11,400 crores was higher than the revised estimate of Rs. 10,722 crores because of a revenue shortfall particularly in Corporation tax revenues. 26) Turning to 1991-92, the increasing level of non plan expenditure financed through borrowing has led to a steep increase in interest payments, the revised estimated for 1990-91 on interest of Rs. 21,850 crores which was 38 per cent of net revenue receipts will be Rs. 27,450 crores being 42 per cent of net revenue receipt and by 1994-95 could shoot up to 50 per cent of the receipts, showing the need to reduce non plan expenditures

in the next 3 years. Total revised non plan expenditures for 1990-91 is Rs. 76,791 crores which would increase to Rs. 89,000 crores in 1991-92, calling for a reduction in it by at least 10 per cent. The major item of interest payment would rise to Rs. 36,000 crores in the next year and so points to the need for strict discipline in government borrowing during the remaining 3 years. 27) Defence outlay, the second largest component of non plan expenditure is not being reduced from the revised 1990-91 Rs. 15,750 crores but is being increased to Rs. 16,350 crores in 1991-92, which is to be regretted. 28) The export subsidy is substantially reduced as will be noted under the economy section as a result of the abolition of CCS from July, enabling the export subsidy to be reduced from Rs. 4300 crores to Rs. 1224 crores. 29) On fertilisers, the 4 low analysis fertilisers are freed from price and movement controls, increasing the prices of other fertilisers by 40 per cent along with a subsidy ceiling on super phosphates leading to its total deregulation in the future, inducing a reduction of cost and improvement of efficiency. 30) 50 per cent of Plan resources are to be invested in the agriculture and rural sectors. 31) The sugar subsidy of Rs. 350 crores on levy sugar is abolished and the levy price under PDS increased from Rs. 5.25 a kg (the free market prices is Rs. 10 a kg) to Rs. 6.10. The provision of food subsidies is being increased from Rs. 1800 crores in the interim budget to Rs. 2600 crores so that PDS could function effectively for the rural poor in the matter of foodgrains. 32) As a result of the July devaluation, the import bill for crude and petroleum products will rise and so petroleum prices—motor spirit, LPG, is to be raised by 20 per cent and the price of diesel and kerosene for

industrial use by 10 cent, while for domestic use is reduced by 10 per cent, which is a 50 per cent roll back in relation to October 15, 1990 prices. This will help the poor with kerosene and farms with diesel also whose price will not be increased. 33) On non plan expenditure excluding interest, defence and major subsidy, the total provision in 1991-92 budget estimates is Rs. 28073 crores, showing a reduction of Rs. 1538 crores compared to 1990-91 revised estimates. 34) As there is no provision for DAs and to avoid the ministries cutting into their plan allocation to meet their DA allotments, they are requested to prioritise their activities so that the low placed ones can be abridged or absorbed. 35) The non plan expenditure on the Rural Debt Relief Scheme which has introduced an expenditure of Rs. 1500 crores last year to meet Rs. 800 crores as its under estimate and for the year a future Rs. 1500 crores is provided. 36) As the budget had to be presented within one month of the new governments' formation because the vote on account expires at the end of July, the Annual Plan for 1991-92 has not been reoriented to reflect the new concerns, and more over being situated amidst the massive fiscal corrections which called for a reduction of the Union Plan and its assistance to states' plans, all of which are avoided. The Union Plan for 1991-92 records an increase at Rs. 42,969 crores and its assistance to states plans, at Rs. 14,710 crores have been protected. Against this background, the budget proposes a) the higher revenue from direct taxes, b) a national housing fund, a corporation for the welfare of backward classes and a national renewal fund for workers unemployed by closing firms. c) incentives for research and publishing industry, d) promotion of offshore country funds, e) incentives to software exports, f) relief to new hotels in hilly and remote areas,

g) correction of tax avoidance through transfer of assets, h) income and wealth remain unchanged, i) corporate tax raised j) interest tax rates revised, the direct taxes resulting in a net revenue of Rs. 2139 crores of which Rs. 97 crores will accrue to states, k) ad valorem, customs duties halved with a ceiling of 150 per cent, l) relief in auxiliary duty, m) extension of MODVAT to other items, n) providing relief for drugs, aluminium and newsprint, o) increase in special excise duty, on cigarettes, tax p) adequate allocation to sectors dealing with human resources and q) a grant of Rs. 100 crores in 5 years involving Rs. 20 crores in 1991-92 to the newly created Rajiv Gandhi Fund to function in 7 fields. All this places total receipts at existing tax rates at Rs. 103,698 crores, and total expenditures at Rs. 113,422 crores (Rs. 79,697 crores non plan and Rs. 33,725 crores Plan). Revenue receipts at existing rates of taxation yield a gross revenue of Rs. 66,218 crores this year compared to last year's revised estimates of Rs. 58,916 crores. The states' share of taxes is Rs. 15643 crores and the net revenue receipts of the union including more tax revenue are estimated to increase from Rs. 57,381 crores in 1990-91 to Rs. 65,524 crores this year. In capital receipts, market borrowing is Rs. 7500 crores against last year's Rs. 8000 crores and instead of increasing by 10 per cent to over Rs. 8800 from past trends, small savings collections will be Rs. 8000 crores and Rs. 2500 crores from the 20 per cent disinvestment of the equity, (which would also broaden the equity, improve management and increase their resources), external assistance is placed at Rs. 3510 crores (not allowing for devaluation) compared to Rs. 3984 crores in 1990-91. The result of all this is a budget deficit of Rs. 99,124 crores (without additional tax and resou-

rice mobilisation), the revenue deficit at Rs. 15,859 crores and the fiscal deficit at Rs. 39,732 crores—from each of which the additional resource mobilisation of Rs. 2005 crores should be deducted. The details of the tax proposals are: A) the indirect taxes 1) LPG up by 20 per cent, kerosene for domestic use down by 10 per cent, 2) colour TV excise increase by Rs. 500 to Rs. 750, with black and white TV exemption 3) excise on VHS, VCR and VCP to be increased by Rs. 250-400, 25 to 30 per cent 4) cigarettes, bidis and panmasala to net Rs. 337 in one year, 5) excise on refrigerators increased by Rs. 200-800, air conditioners by Rs. 2000 to Rs. 30,000 and compressors by Rs. 18,000, 6) the ad valorem rate of basic plus customs duties reduced to a maximum of 150 per cent (from the current over 300 per cent on some articles) except for alcoholic beverages and passenger baggage, 7) auxiliary customs duty relief of 10 per cent on items which had an increase of 20 per cent in December 1990, 8) for items like waste paper, wood, jigat (used to make agarbathi), ethylene, machinery for fuel injection, printing machinery, the auxiliary customs duty rolled back to the pre December 1991 levels, 9) import duty on capital goods and machinery and spare parts reduced from 85 to 80 per cent, 10) a concessional duty of 50 per cent for machinery under technology upgradation scheme, 11) excise on motor cars increased from 50 to 60 per cent, 12) excise on 2 wheelers of 50-75 cc reduced from 20 to 15 per cent, 13) excise on audio cassettes increased from Rs. 3 to Rs. 5 per sq metre and on video cassettes from Rs. 10.50 to Rs. 15 per sq metre, 14) 5 anti epileptic formulations exempted from duty, 15) yarns for fishing nets exemption from duty, 16) excise concession for pesticides and exemption from food processing items and agrobased products like butter, cheese, vegetable oils and

jelly beans, 17) aluminium doors and windows and edible oils fully exempted from excise, 18) tea, coffee and vanaspathi exempted from special excise, 19) no excise on bicycles and energy efficient choolas, and 20) the total excise exemptions of utensils extended to other household items. B) The direct taxes proposed are a) personal income tax rates and surcharge unchanged, b) no change in wealth tax rate, c) basic deduction of Rs. 10,000 under section 48 of IT Act for long term capital goods raised to Rs. 15,000, d) tax deduction at source to cover new areas like commission and interest paid by bank on time deposits and withdrawal from National Savings Schemes for payments above Rs. 2,000 a year, e) loss of transfer of capital assets will be set off only against gains from transfer of another capital asset, f) a last chance for tax evaders to declare their resources through deposits with the National Housing Board before November 30, 1991 and one more chance to declare unaccounted incomes which section 273 A of IT Act being amended, g) corporate tax for widely held companies raised from 40 to 45 and for closely held companies from 45 to 50 per cent, with existing 15 per cent surcharge to continue, h) general rate of depreciation for machinery and plant reduced from 33.33 to 25 per cent and depreciation for motor buses, taxis and other equipment reduced from 50 per cent to 40 per cent, i) 100 per cent depreciation to continue for renewable energy and energy saving devices, j) deduction from taxation profits of entire amount paid for social welfare schemes, k) tax concessions to fund social science research, incentives to authors and publishers and revival of deduction of 25 per cent profits from books and professional income of authors of Indian language texts for 5 years, l) 10 per

cent reduction on tax on dividend in comes from UTI offshore funds and its long terms capital gains, m) deduction under section 80U of IT Act for blind or physically handicapped raised from Rs. 15,000 to Rs. 20,000, n) tax rebates under section 88 IT Act to public, housing corporation schemes, under section 80HHC to software exports and processed minerals and concessions under section 80 extended to scientists, technologists and professionals, o) newly approved hotels in villages and remote areas exempted from expenditure tax for 10 years, p) tax exemption to incomes from horse races abolished, r) donation to African fund 100 per cent tax exemption, and q) in the human resources area, education has an increase of Rs. 112 crores to Rs. 977 crores in the current year, the employment generation for 900 million mandays have been provided Rs. 2100 crores, rural water supply Rs. 758 crores so that there will be no problem villages by March 1993 and the development of the corporation for backward classes welfare, National Renewal Fund to look after workers unemployed because of technical change (as noted earlier), a National Foundation for communal harmony to care for children orphaned in communal riots, youth exchange for national integration and a programme for South cooperation. The direct tax levies, it was earlier noted, will yield Rs. 2138 crores including Rs. 97 crores for the states. The income of revenue through the corporation tax will bring in Rs. 1304 crores, the interest tax an increase of Rs. 535 crores, personal income tax an increase of Rs. 125 crores through enlarging the net and better collection: on customs Rs. 510 crores will be lost through narrowing the range and reducing the maximum rate from 300 per cent to 150 per cent. The union excise

-will net Rs. 988 crores and the total tax revenue increase will be Rs. 2617 crores. On the expenditure side, major subsidies (export and fertilisers) have been reduced from Rs. 9550 crores to Rs. 7824 crores. On interest, the largest item, there is no reduction and there can be none in the short run but by reducing market borrowing future interest payments will be reduced. On expenditure reduction, it is capital expenditure, plan and non plan—that has been cut, with only a 1 per cent increase over last year's capital expenditure, while revenue expenditure has increased by 8 per cent. The ministries that have taken a cut in outlay are—fertilisers from Rs. 585 crores to Rs. 411 crores, civil aviation from Rs. 485 crores to Rs. 433 crores, industrial development from Rs. 244 crores to Rs. 70 crores, heavy industry from Rs. 594 crores to Rs. 531 crores and mines from Rs. 613 crores to Rs. 417 crores. All this reflects the intention of government to pull in its horns in these sub-sectors, and let private operators take over. The budget for the first time is the centre of a comprehensive national economic policy but like all budgets has its strong points and weaknesses. In assessing the union budget for 1991-92, the budget must be viewed as part of a 4 point package comprising a) the macro economic adjustments effected in the main by the budget introduced on July 24, b) the reduction in the balance of payments deficit on current account through the devaluation of the Rupee effected on July 1 and 3, c) complemented by the reforms in the policy on imports and exports brought into being on July 4 and d) the structural adjustments involved in the new industrial policy announced on July 24. This four part policy of which the union budget for 1991-92 is the decisive key and focus aims at bringing about a turn around in the economy through macro

economic stabilisation and adjustment in reducing sharply the fiscal deficit along with paying the rather heavy cost in taxes and charges which such adjustment involves. The budget on some items also take account of the devaluation of the rupee in computing the heavier debt servicing charges involved, though the effect on the larger rupee equivalent of foreign resources inflow is not reflected in the budget. Second, the tax increases which will bring in Rs. 2617 crores during the year are needed both to reduce the gap between government revenue and expenditure and to cut back consumption of goods and services not essential for the individual or household and economy. It is also good that the decline in direct tax receipts has been stopped and the excise increase are on what the government calls elite consumption. But if the NCAER survey referred to later is right, some of these items are now being consumed by the urban and rural poor. If they are doing so, they should also bear the burden of increased taxes. Third, the budget has made a start in cutting back on government expenditures mainly in reducing the cost of fertiliser subsidy, in abolishing the cash compensatory support which cuts back about three fourths of the export subsidy and reducing one part of the food subsidy namely that on sugar. In this area of cutting government expenditure, it is good that the government has asked the ministries to prioritise their items of expenditure, so that they could cut the last items for purposes of paying their DAs or our economy measures. Fourth, as a result a first step has been taken in the revenue deficit reduction from Rs 17,585 crores of the revised 1990-91 year to Rs. 13,845 crores for the current year and this process need not only to be maintained during the year, it needs to be intensified during the next 3 years so that by

the end of the VIII Plan there will be no revenue deficit. Similarly one fifth of the budget deficit has been cut from Rs. 10,772 crores in 1990-91 revised, to Rs. 7719 crores in 1991-92 which is 1 per cent of GDP. This again is a good start and should not be allowed to increase during the year and should be continued and intensified in the next 3 years so that the budget deficit at the end of that period is 0. Sixth, the reduction of the fiscal deficit from Rs. 43,331 crores (revised) in 1990-91 which was 8.5 per cent of GDP has been reduced to Rs. 37,727 crores for this year which is 6.5 per cent of GDP. This sets the stage for negotiation on the long term and longer IMF loan. But the aim in regard to the fiscal deficit also should be to bring it down to 2-3 per cent in 3 years time. There are also certain queries in the budget. First, on the cutting of non plan expenditures, not enough has been done on two fronts. One is the huge defence outlay which has not only not been cut but has actually increased. The other is the administrative costs of the government has not been cut nor the budget support and subsidies to the public enterprises. Here much more could be done in the next budget. Second, the loss making public sector enterprises are not being adequately dealt with in the budget. They are being referred to BIFR which is a waste of time, as the experience of the past few years since its creation shows. These perennially loss making units should have been closed or sold. The obstacle to this is the strong opposition of the trade unions and the political parties. It is hoped that the National Renewal Fund will begin functioning this year and give the trade union an assurance that the workers who are thrown out of work as a result of closing the loss making units will be retrained and deployed in the new units which the

funds raised from sale of their real estate should make possible. Meanwhile the Fund will provide a safety social security net to the unemployed workers. Second, the proposal to disinvest 20 per cent of equity of some public sector enterprises raises many issues. It should not be regarded as a revenue raising measure. Its receipts should not be used to meet the government's consumption expenditure. It should also cover loss making units and the funds so raised should be used as capital investment. Third, in the area of taxation, the biggest gap in the country is the absence of any tax on agriculture. This has been widely debated in the economy and it is to be regretted that the budget has not posed this issue as a question which demands serious attention in time for the next budget. Fourth, the inflationary pressure will be fed from four sources: first, the rise in petroleum prices and (railway fares and rate); second, the improved balance of payment through larger export earnings and higher import prices resulting from the rupee depreciation: third, the subsidy reduction of fertilisers and sugar will raise their prices: fourth the enhanced excise on the "white goods", TV, VCRs, VCPs. The contra force is the macro level deficit reduction and the decontrol, delicensing and deregulation which are long term anti-inflationary forces. Fifth, there is a feeling of unease over the various provisions made in the budget for dealing with black money. There is the amnesty scheme which will allow people to deposit their funds in the National Housing Rank, and on 60 per cent of it, the depositor can draw and use it as he likes. On the whole deposit, there is "to be no look in period". The other scheme is the foreign exchange remittance received by any person which will not be subject to gift tax and will not be subject to scrutiny under direct tax laws

and exchange control regulations. There have been some 7 schemes like this in the past which have failed to unearth black money and which are unfair to the honest tax payer. Sixth, the NRIs are being invited to send funds to India on the assurance that no question will be asked as to their source. This surely is an open invitation to NRI to bring in a larger way unaccounted money which they are doing now and using our banks to launder such black money. This is being done by the immunity to foreign remittances from direct tax laws and exchange control regulation referred to earlier and the dollar based Indian Development. Bonds to be issued for the use of NRI. What is even more disturbing is the statement of the government that it expects the flow of \$3 billion as a result, so that its loan from IMF could be reduced to \$2 billion. Here we are entering a very slippery path. Seventh, there is a suspicion that the reduction in the fiscal deficit is to some extent based on under budgeting of several items. Except for some items like debt servicing, the budget does not reflect the effects of the devaluation of the Rupee (and the rise in the railway rates). Barring a few items, most are budgeted at the same level as the interim budget, which was constructed before the devaluation of the Rupee. This may be a signal to the ministries to cut their spending when it is in rupees. But when the expenditure has to be in foreign exchange as in the case of embassies maintained by the Ministry of External Affairs, or in the case of the annual contributions to the United Nations and the specialised agencies, or in the case of defence imports, or purchase by the departments of space or atomic energies, there should have been 20 per cent over what was provided in the interim budget. There is no provision for this increased expenditure and to that

extent the budget is misleading. Eighth, it is well to bear in mind the World Bank caution in its 1991 World Development Report that while the structural adjustment programme on which we are embarked with IMF advice can and has improved the balance of payment position, there is no hard evidence that it leads to further economic growth and may, as in some countries, lead to negative growth and negative effect on investments. This is a sobering thought. Finally the open preference for the market—that World Bank and IMF Call Market friendly approach—raises many queries. The budget statement says “a reformed price system can be a superior instrument of resource allocation over quantitative controls” Will it? Does this weaken the planning process in the economy? Immediately after the above statement, the budget statement says “but markets can only serve those who are part of the market system. A vast number of people in our country live on the edges of the subsistence economy.” The poser is whether the budget and the economy should be “market friendly” or “subsistence economy personnel friendly”.

Railway Budget (1991-92)

The final Railway budget was presented to Parliament in July. The summary of the interim budget presented in February and this final budget is set forth below.

The most important factor in the above table to be noted is the jump in net traffic receipts from Rs. 345 crores in the interim budget to Rs. 1,089 crores in the final budget and the net railway receipts from Rs. 525 crores in the interim budget to Rs. 1,272 crores in the final budget which turns the deficit of — Rs. 512 crores of the interim budget into a surplus +Rs. 235 crores; along with the appropriation to the Railway Development Fund which was nil in the interim budget and which is Rs. 235 crores now and a sizeable fall in the operating ratio from 97.2 per cent in the interim budget to 91.8 per cent in the final budget. The increase in railway receipts and the consequences of it in the overall surplus and the provision for the Railway Development Fund is due to the increase proposed in the railway fares and rates as follows: a) freight ratios are to be increased by 10 per cent except for essential commodities in daily use like salt, edible oils, foodgrains, pulses, sugar, gur and jaggery and fruits and vegetables, as well as kerosene and diesel; b) rates for parcel and luggage are to be raised by 10 per cent; c) passenger fares for upper AC I Class, AC Sleeper, I class and AC Chair car to be increased by 20 per cent for distances upto 800 kms and 15 per cent for distances beyond; the special fares of Rajdhani, New Delhi—Bombay AC and Shatabdi Express are to be increased; fares for II class ordinary to be raised by Rs. 1 at the lowest slab to Rs. 5 for distance beyond 400 km. Second class Mail/Express fares to be increased by Rs. 1 for lowest slab rising to Rs. 20 for distances beyond 1,300 kms; for monthly season tickets, increase from Rs. 4-16 according to distance travelled in II class and from Rs. 15 to 64 in I class. These proposals will come into effect from August 16 so that the Railway Act which requires 1 month's notice for any fare

Actuals 1989-90	Budget 1990-91		Revised 1991-92	Budget 1991-92	
				As presented in Feb. 1991 (in crores of rupees)	As now proposed
10,739.41	12,060.00	(a) Gross Traffic Receipts	12,038.00	12,665.00	13,319.00
7,144.73	8,241.00	(b) Ordinary working expenses	8,241.00	9,270.00	9,180.00
1,715.00	1,950.00	(c) Appropriation to Depreciation Reserve Fund	1,950.00	2,050.00	2,000.00
728.00	900.00	(d) Appropriation to Pension Fund	900.00	1,000.00	1,050.00
9,887.73	11,091.00	(e) Total working expenses (b) + (c) + (d)	11,091.00	12,320.00	12,230.00
851.68	969.00	(f) Net Traffic Receipts (a) — (c)	947.00	345.00	1,089.00
130.39	149.00	(g) Net Miscellaneous Receipts	135.00	180.00	183.00
982.07	1,118.00	(h) Net Railway Revenue (f) + (g)	1,082.00	525.00	1,272.00
808.81	932.00	(i) Dividend Payment to General Revenues	927.00	1,037.00	1,037.00
+ 173.26	+ 186.00	(j) Surplus/Shortfall (h) — (i)	+ 155.00	— 512.00	+ 235.00
173.26	186.00	(k) Appropriation to Railway Development Fund	155.00	—	235.00
91.5%	91.8%	(l) Operating Ratio	91.8%	97.2%	91.8%
6.7%	6.9%	(m) Percentage of net Revenue before payment of dividend to General Revenues on the Capital-at-Charge	6.7%	3.1%	7.2%

and freight rise can be followed and any changes made by Parliament when approving the Railway budget can be taken into account. These proposals are estimated to yield Rs. 584 crores in the current year. The ordinary working expenses are reduced by Rs. 90 crores compared to the Interim budget. The Annual Plan of the Railways has been raised from Rs. 4830 crores in the interim budget to Rs. 5235 crores in the final budget and is an increase of Rs. 325 crores over the 1990-91 outlay. The priorities for the year are rolling stock traffic facilities, electrification, workshops and sheds and some renewal of track and other overaged assets. They do not include starting any new line or gauge conversion but to complete the new project lines totalling 2070 kms and 11 gauge conversions for 211 kms calling for Rs. 3,005 crores. The buzz word privatisation is used in the budget with the proposals to give catering and conservancy services to private contractors and operators. Whether this will improve the very poor passenger services and amenities remain to be seen. As usual a taskforce is proposed to prepare a 5-7 years blue print of the needed passage services. There are no new trains as the interim budget had announced 10 new trains and 7 whose services were extended till February this year. The freight performance in 1990-91 was 7 million tonnes short of the target of 325 million tonnes which is attributed to political disturbances. For this year the target is 335 million tonnes and in the first quarter this target has been exceeded at 80 million tonnes. For Tamil Nadu, the budget has a little lower allotment for MRTS at Rs. 13 crores against last year's Rs. 14.85 crores (of which Rs. 4 crores was returned unused, the completion of the electrification of the Jolarpet-Bangalore lines and Rs. 17.01 crores for the new BG line to Madurai. The Railway budget is what is to be ex-

pected in view of the serious financial crunch facing the government. In fact the final railway budget has not produced adequate resources for the country's needs. The acute shortage of rolling stock-wagons and locomotives, inadequate terminal facilities, the replacement of wornout railway lines, and the shortfall of coaches estimated at 1500 and the need to replace 5500 wornout coaches out of the stock of 28,000 are not going to be fully met. For the year, only 2100 coaches are to be acquired. There is also the problem of the effect of the rise in fares and rates on prices, earlier referred to. There will be no direct affect on prices of essential commodities consumed by the poor because no increase are proposed on their freight and the fares at that level are not being realised. But there will be a rub effect from the sharp rise in the prices of goods and services consumed by the upper and middle classes. Finally there is the question posed year after year, why is there a separate railway budget. Until the railway budget is amalgamated in the final budget, it will not be possible to look at the railway proposals and plans in the context of the national needs and opportunities. This hangover of the colonial day; should be ended. This hangover of the first structural reform that is again proposed. Further it is to be regretted that the advance railway budget discussion on the basis of issues and options facing the government, the railway and the country initiated last year (see Vol XX p232) has not been continued this year. The change in government and political party should not be the reason for changing a much needed and useful programme.

Economic Survey

The pre budget Economic Survey presented to Parliament on July 20

this year not only contained the usual assessment of the economy's performance in 1990-91 and a forecast for the current year, it had much more emphasis on the turnaround that the economy must make starting from now which involves a) hard days for most sections of the population, b) a rather harsh macro economic management policy to be set forth in the Budget presented on July 24, c) a cut in Plan and non Plan expenditure, including the defence outlay and food and fertiliser subsidies, d) a continued compression of imports, e) increased international competition of industrial products and f) expansion of rural welfare programmes particularly rural employment. While there will not be large increases in administered price, nor much higher indirect taxes, direct taxes are to be the main source of additional tax income as direct taxes yield have not kept pace with GDP increase. (This forecast was not realised). Petrol consumption is to be kept under check and a shift to natural gas as the energy provider is expected. On the whole the economic scenario painted by the survey is that of a grim picture. The survey recapitulates the many difficulties faced by the economy in 1990-91 due to political instability and the Gulf war which accentuated the country's fiscal imbalances and intensified the balance of payments strain. Despite all these obstacles, the economy grew, with agriculture and industry recording growth rates which may not be sustainable in the future. GDP in 1990-91 is estimated to have grown by 5 per cent but due to internal and external factors, the consumers have been subject to double digit inflation at 12.1 per cent during 1990-91 (compared to 9.1 per cent in 1989-90) which along with fiscal imbalances and the balance of payments deficit, faced the third oil shock, with oil prices shooting up to over

\$26 per barrel due to the Gulf war. In terms of Consumers Price Index, the inflation was 13.8 per cent against 6.8 per cent in the previous year. Money supply growth is influenced by both the budget deficit and the level of foreign exchange reserves. In 1990-91 money supply growth declined due to the large draw down of foreign exchange reserves. However money supply growth depends specially on the fiscal policy being related to monetary policy. The fiscal deficit at the end of 1990-91 was 8.4 per cent of GDP and the postponement of the 1991-92 budget worsened this situation. In 1990-91 the trade deficit widened fast because imports rose by 21.9 per cent, fuelled by the import bill for crude and its products. These various factors lessened foreign confidence in the Indian economy, so that borrowing abroad became difficult and the foreign exchange reserves declined from Rs. 5,050 crores in August 1990 to Rs. 4,388 crores in March 1991. The decline would have been much greater without the Rs. 1,173 crores, IMF loan in July-September 1990 (from India's quota) and a further Rs. 3,334 crores from IMF's CFF in January 1991. Foodgrains production is estimated at 176 million tonnes in 1990-91, sugar production 115 lakhs tonnes, tea at 719 million tonnes, but cotton was at lower level due to unseasonal rains. The budget provision for the debt relief scheme of 1990-91 was in deficit, and so the 1991-92 interim budget provided Rs. 1,500 crores to meet the deficit. The scheme contributed to the deterioration of the fiscal situation, the credibility and profitability of the Indian banking system and the farmer's incentive for the prompt repayment of his debt. Despite the Gulf crisis, industrial growth in 1990-91 recorded a growth of 8.4 per cent compared to be 8.6 per cent in 1989-90 with manufactures recording 9.2 per cent

compared to the previous years 8.6 per cent, due to the various export promotional measures to the VII Plan. But mining and quarrying declined from 6.3 per cent in 1989-90 to 3.5 per cent in 1990-91 and electricity from 10.8 per cent to 8.6 per cent. Infrastructure did not do well; with electricity, crude oil and refinery throughput delining, railways stagnating and floods and natural disasters damaging the infrastructure seriously. To highlight the role of health, education, employment, shelter, food and nutrition, in economic development and show how human resources reduces poverty and promotes social justice, the Economic Survey has introduced a chapter on Human Resources which gives a summary view of the progress made in these sectors. It repeats the government view that as a result of the anti-poverty and development programmes, poverty declined from 51.5 per cent in 1972-73 to 29.9 per cent in 1985-86. In education gross enrolment at primary schools have increased from 43.1 per cent in 1950-51 to 99.6 per cent in 1989-90, the literacy rates increasing from 18.3 per cent in 1951 to 52.1 per cent in 1991. But universal elementary education continues to be elusive due to high dropout rates and sex disparity ratios. Higher education institutions are proliferating but their quality and standards are low. In health, life expectancy has increased from 32 years in 1950-51 to 59 years in 1991, death rate has fallen from 27 per thousand of population to 10.2 but the birth rate has not declined and so the population growth rate is climbing. In housing (Hudco and National Housing Bank programme) water supply, sanitation and family welfare, both quantity are inadequate. The major concern with inflation, whose rates have been earlier referred, to is that it is concentrated on essential commodities. The Survey attri-

butes inflation to a) fiscal imbalances, b) supply and demand imbalances in sensitive commodities and c) inflationary expectation. In particular the price of essential commodities is attributed to i) increased procurement prices of cereals ii) sharp increase in price of edible oils and iii) Gulf surcharge and increase in transport costs. The inflationary pressure continues in 1991-92. The interim budget provided for a budget deficit of Rs. 10,772 crores in 1990-91, the increase being due to i) additional loans to the states, ii) higher interest payment, iii) inadequate provision for rural debt relief (as noted earlier), iv) higher burden of food and fertilisers subsidies and v) shortfalls in revenue. The survey states that India's medium and long term debt at March 31, 1991 was Rs. 1,20,000 crores. This medium and long term debt comprising external assistance "aid" on government and non government accounts, external commercial borrowings and IMF liabilities was Rs. 80,136 crores in March 31, 1990, but with NRI deposits outstanding was Rs. 97,966 crores which went upto Rs. 1.2 lakh crores in March 31, 1991 as noted earlier. In 1990-91 exports increased by 17.5 per cent and imports at 21.9 per cent and so the trade deficit is higher by 38 per cent from Rs. 7730 crores in 1989-90 to Rs. 10,544 crores in 1990-91. Net invisibles also fell due to decline in Gulf remittances, tourist traffic slowing down and steady increase in interest payments on growing foreign borrowings. In the capital account, while net aid disbursement increased in 1990-91, other items show the severe strain on the balance of payments. Our exchange reserve which had declined to Rs. 4388 crores in March end 1991 further declined to Rs. 2386 crores at June end. The 3 borrowings from IMF (the reserve tranche in July-September 1990, Rs. 1173 crores, the CCFF loan of

January 1991 Rs. 1884 crores and the first credit tranche under a 3 month stand by arrangement, Rs. 1450 crores were earlier referred to. Devaluation of the rupee which the saving calls "adjustment downward" of the rupee was effected by 7-9 per cent on July 1, 1991 and a further 11 per cent on July 3 in relation to major currencies, resulting in an overall appreciation of these currencies by 21-23 per cent. To cut imports and reduce aggregate demand, RBI introduced on July 3 a package, raising the bank rate from 10 to 11 per cent and the bank's deposit rates and RBI's refinance ratio as from July 4. The government announced major structural reforms in trade policy on July 4 which include a uniform REP rate (to be called EXIM scrip and to be freely tradeable at 31 per cent of the FOB rate of the exports, abolition of all supplementary licenses except for SSI and drugs, suspension of CCS. Under the policy REP will be the main instrument for export related imports. It is expected that the devaluation of the Rupee and the reform of the export-import policy from July beginning will stabilise the BOP situation in the short term and improve the balance of trade situation in the production terms. The devaluation will help in the realisation of outstanding export payments, increase remittances and remove destabilising expectations of the market. Similarly it will stimulate export growth and curb import increases and so improve the balance of trade over the years. The REP system will give a new impetus to exports and ensure import compression, which with the fiscal adjustment that the budget will introduce will make our BOP viable. This is the Survey's perspective and the key to it all, the report states, is fiscal adjustment *now* to be *followed by* fiscal consolidation. The report concludes with this prescription as the only way to

meet our balance of payments disequilibrium and keep inflation within manageable limits. The restoration of fiscal balance means that living on borrowing from abroad or within the country is out, we have to live within our means and for this the report concludes rather starkly "the time has come to adjust". With this perspective there will be general agreement — because there is really no alternative.

Plan

The Eighth Plan is to start on 1 April 1992, the Parliament was informed. The 1990-91 and 1991-92 Annual Plans are to be treated as annual Plans to be followed by the Eighth Plan. The government is now also finalising the appointment of members of the Planning Commission. Parliament was also informed that the new VIII Plan formulation will be completed before the end of the current year 1991-92 which will also enable the government to finalise the annual Plan for 1992-93. The budgets for 1992-93 will reflect the changed priorities that have been announced and put into effect as from July 1991.

Price

The rate of inflation for June was 1.2 per cent, the whole sale price index rising to 196.4 as at June 29. On a point to point basis inflation was 10.12 per cent for the year. It will be noted that both the Economic Survey and the Union Budget place the rate of inflation for the year ending 31 March 1991 at 12.1 per cent and the consumer price index at 13.6 per cent. The difference between the Economic Survey/Budget figures and those in this Bulletin is due to

a) the difference in dates, the Bulletin data being 3 months later as at 30 June when the base was higher (see Vol XX p227) and b) the difference between the average change which is the Economic Survey/Budget data and the point to point calculation which is the Bulletin data. In both data, the major impact of the inflation is on the essential and sensitive commodities—ragi, maize, rape and mustard seed, pork, pulses, eggs, condiments—which despite 3 continuing bounteous harvests seem to have no effect on inflation. The Economic Survey calls attention to the fact that the high fiscal deficit and the balance of payment deficit on current account increase the supply of reserve money and so fuel inflation. The government has therefore not been able to keep its election manifesto pledge to roll back prices of essential commodities, rather their prices are rising continually. The finance minister forecasts a 9 per cent inflation rate in 1991-92. The government has set up a cabinet committee on prices headed by the Finance Minister to monitor their trend in the 9 essential commodities. This can help signal the dangers of inflation of particular commodities, not avert them.

Stock Exchange and Budget

Parliament passed the vote on account of Rs. 1,15,942.22 crores for the period April–September. The government announced the first four new loans amounting to Rs. 2,000 for 1991-92, subscription to which are to be opened on August 5, 1991. The Statutory powers needed by the Securities and Exchange Board (SEBI) are still under consideration by the government. As of now its powers are uncertain, the Finance ministry devolving on it from time to time some powers, like transferring from RBI the

power of inspection of mutual funds. There is also the need for controls on the stock market. The Bombay Stock market prices are decided by a small group of 6 market operators and 3 mutual funds. SEBI can replace the controller of capital issues, if companies are allowed to decide these programmes. SEBI has made credit rating compulsory but ratings are not statutory. Similarly SEBI has drafted a code for all types of corporate taxes and, which cannot become effective particularly as in almost every issue black money is involved. Hence the need for statutory powers for SEBI is urgent and inescapable. The first reaction of the stock exchanges to the devaluation and trade reform has been an upswing, their sensitive indices rising sharply. CBSE rose by 60 points. Some speculators of course lost on the second devaluation on July 3 which they did not anticipate. In order to check the growing black money transaction, RBI issued a directive instructing banks not to allow transaction in cash—receipt or payments—for amounts exceeding Rs. 50,000. This would be one means of stopping the misuse of bank channels for laundering black money. RBI has also issued revised guidelines on credit planning and monetary control under the services area approach introduced in April 1989. These guidelines now include semi-urban and urban branches and new formats have been issued for integrating priority sector lending by the semi urban and urban branches of banks. This will bring some order into the credit system.

Economy

The major event in the economy in July was the devaluation of the rupee in two stages. On July 1, the Rupee was devalued by 8.5 – 9.7 per cent,

which was a 8.6 per cent of the regression dominated basket corresponding to a basket appreciation of 9.4 per cent and on July it was devalued by 17 to 19 per cent in terms of US dollars, pounds sterling, deutsch mark and Japanese yen and from the point of view of these currencies, their value rose by 21 to 23 per cent in Rupee terms. There were many official reasons given for its devaluation, that the rupee was overvalued and was therefore hurting our exports—that one steep drop is preferable to the current creeping depreciation of the Rupee etc; but the real reason which has not been admitted officially is that the country needs a large external loan of the order of SDR 5 billion, that the only source now left for the loan for the country is IMF, and IMF has established the devaluation of the rupee as one of the conditions for granting the loan. The effects of the devaluation will be positive in the short run. It will boost our exports as exporters will earn some 18 per cent more and further compress imports as they will become some 20 per cent more costly. But equally it will increase our external debt by that percentage. Our external debt has increased from Rs. 100,000 crores to Rs. 1,36,858 crores and interest on it Rs. 1034 crores, while our internal debt is Rs. 1,70,834 crores and interest on it Rs. 10,416 crores. An accompanying and consequential decision was in the external trade area, wherein the CCS has been abolished in view of the additional income that exporters will earn, and when imports have been further compressed by the decision that imports can only be made against REP licenses and REP licenses are to be traded freely. In macro terms, these decisions are justified, but there are individual industries and groups of industries like garments exporters which

have been hit by the abolition of CCS as are all exports to Rupee payment countries: similarly some industries like diesel engines essential for the economy which depend to the extent of 90 per cent imports for their functioning like MICO will be hard hit—infact face closure through making imports depending on the exports of a firm. These individual cases need attention in the coming weeks. As a further consequence of the devaluation, the Reserve Bank made changes in monetary policy to curb imports. First the Bank rate was raised from July 3 from 10 to 11 per cent and all other rates on credit from RBI are raised by 1 percentage point. Second, interest rates on deposits a) 40 days to 1 year from 8 to 9 per cent, b) 1 year to 2 year from 9 to 10 per cent c) 2 years to 3 years from 10 to 11 per cent and d) 3 years and above 12 to 13 per cent. This would enable banks to finance their loans out of their own resources and to compete effectively with alternative savings instruments. Third, to reduce aggregate demand in the economy and taking into account the increase in deposit rates, the lending rate on limits of over Rs. 2 lakhs raised from 17 per cent to 18.5 per cent, the effective interest rate on discounting bills of exchange will be 1 percentage point below the corresponding lending rate. There will be no change on the rates on loans to agriculture, small scale industry and transport operators. Fourth, in consonance with the increase in the bank rate and to align refinance rates with the increased lending rates, the interest rate on export refinances is raised from 9 to 9.5 per cent, stand by refinance from 12.5 to 13.5 per cent, discretionary refinance from 14 to 17 per cent and food finance from 11.5 per cent as minimum to 14 per cent as maximum. While the Rupee devaluation referred to

earlier will help raise exports and curb imports, the hike in the interest rate would encourage savings and reduce aggregate demand, and so curb the severe external payments imbalance in the economy and give the signal to the IMF, World Bank and donor countries of India's resolve to put the economy back in shape, stop the flight of capital and clear the way for quick loan disbursements. The other important event in July was the President's address to both houses of Parliament on July 11 in which he unfolded the government's economic strategy comprising high priority to reduction and protecting the interest of the weaker sections of society. He stated that the country had been living beyond its means and adopting soft options and now the price has to be paid in some hard and unpleasant decisions which have to be made. The balance of payments management is one of the areas where difficult decisions to make for a turn around will have to be made. It was noted that the President also avoided using the straight forward term 'devaluation' and spoke in terms of 'adjustment in the exchange rate'. He spoke of the budget and other government policy, taking corrective measures in the trade policy, industrial policy (which 1990-91 recorded an industrial growth of 8.4 per cent against the previous year's 8.5 per cent) to enhance competitiveness of exports, limit growth of money supply and cut government expenditure. Small savings have to be increased, incentives offered for higher production, strict fiscal discipline to keep the budget deficit within manageable limits, checks on government of black money and changes in procedures to induce foreign countries and NRI investment in India were referred to. He also referred to the reform of the public sector, in which a policy of disinvestment, including worker's participation in equity and

'vacating' areas of activity where public sector need not be involved, as the private and joint sectors had developed capabilities in these areas. Apart from a reference to an estimated 177.2 million tonnes of foodgrains production in 1990-91 and the previous reference to the industrial growth rate for the year, there was absence in the President's address the usual recounting of the economic achievements and events of the past year (mainly because there were few, almost none). Assurances on early completion of the VIII Plan, more emphasis on Science and Technology in the Plan, expansion of ICDS, improving the quality of water for the Plan, expansion of ICDS, improving the quality of water for the rural poor, increased employment through IRDP and Jawahar Rozgar Yojana, a National Institute of Biologicals to further strengthen the health care system, reviving the National policy on Education, giving literacy and universal primary education primacy and control of inflation and improved PDS and strict enforcement of the essential commodity Act to prevent hoarding, profiteering and black marketeers are referred to. The address is important in giving a clear and unmistakeable warning that the budget is to be presented in 2 weeks and a number of bills and resolutions during the session will be dealing with the economic crisis of 'un-economic magnitudes'. This is its main message. Another event that has attracted Parliaments' interest and attention is the export of gold. RBI pledged 25 tonnes of confiscated gold in May for which it received \$20,000 as noted in the last issue. With the concurrence of the government, RBI exported 46.91 tonnes of gold from its reserves of 330 tonnes to the Bank of England during July against which it can borrow \$500 million. These two action in May and June were undertaken to meet

our foreign debt servicing obligation. The RBI Act allows 15 per cent of the Bank's gold stock to be held abroad. This provision is now exhausted with the export of 46.9 tonnes of gold from its reserve. The government has pledged to repurchase the gold, which is not necessary as gold reserves is meant to meet emergency like this. IMF announced a bridge loan of \$220 million on July 17 from its contingency compensatory fund to enable the government to meet its foreign debt obligation. On the general economic scene, the commerce ministry announced at the end of June that more powers are being given to Development Commissioner of the Export Processing Zones (EPZs) and 100 per cent export oriented units (EOUs) in order to provide flexibility to exporters to adjust their product mix in response to the international market demand. The Consumer Corporation of India records impressive growth in the first quarter of the current year and will realise its huge target which has been set at 40 per cent increase for 1990-91. The ministry of finance announced, following the budget presentation, that the export panel to consider the structure, organisation, function and procedures of the financial system will address itself to the health of the banking system, the loss of its credibility following the loan waiver scheme, and the rigidities and weaknesses that it had developed and how its basic role as an essential agent to economic growth and competitive efficiency can be restored. The panel is to be chaired by the former finance secretary, M. Narasimhan and should submit its report in 3 months. The role of black money in the country has entered serious proportion which the Income Tax Commissioner estimates at Rs. 50,000 crores being generated every year and being about Rs. 300,000 crores as a

stock. This large unregulated sum could defeat the purpose of the macro economic adjustment, and the fiscal and economic policy correctives being brought to the economy as discussed above. Another worrying issue is the leakage in tax collections. The Comptroller and Auditor General calls the attention of the Union Excise and Customs Department to the under assessment of the tax and loss of revenue of Rs. 231.47 crores. On customs Rs. 543.64 lakhs will be the loss and on excise Rs. 117.72 lakhs. This is a sample of the loss on tax collections. Similarly he finds gaping holes in the summary assessment scheme of the IT department where he estimates a revenue loss of Rs. 782 crores for 1988-89. On the economy, CMIE forecasts both inflationary and anti-inflationary forces at work in 1991-92. The reduction in the budgetary expenditure and fiscal deficit on the one hand and increase in commodity taxation and administered prices on the other, with price increase of about 8 per cent need watching. Real income is projected to increase by 4 per cent in 1991-92, the first year when the impact of the balance of payments crisis will be felt. This implies a fall of one per cent in growth compared to the 5 per cent growth estimated in 1990-91. This is also the forecast of the finance minister. The small growth in 1991-92 is forecast as being due to the smaller growth in agriculture and the industrial growth rate will be affected by the import restrictions now in effect and industrial growth is forecast at 7.3 per cent. Finally of importance is NCAER's quadrennial household survey covering the years 1986-1990 which takes incomes at constant prices, after adjusting for inflation, where low income group is defined as those with less than Rs. 12,500 per annum, lower middle class those between that and Rs. 25,000 p.a., upper

middle class those between that and Rs. 56,000 p.a. and higher income households those with Rs. 56,000 p.a. and above. The survey shows 1) the highest growth of population as among middle and high income groups, with rural low income households showing a decline, 2) cities with population of 1 million and above and smaller cities had low population of middle class income households 3) 58 million households or 3000 million belonging to lower middle class and middle class use such products as transistors, radios, cooking oils, tea, toothpaste, toilet soaps, washing cakes, PVC footwear, tooth powder. 4) The low income and lower middle income households account for 25 per cent of these purchases, rural India having a dominant share of consumer products and consumer durables. 5) The number of wrist watches in the country is 120 million, bicycles 60 million, radios 59 million, washing cakes were bought atleast once during the year by 133 million households (out of a total of 142 million), tea by 112 million and toilet soap by 124 million. 6) If the purchase of consumer goods indicates a middle class, that could not be equated with a particular income group as the purchases run through all income groups. 40 per cent and more of consumer products were purchased by lower income groups, and so it is necessary to use other than income to classify the middle class. 7) A household that pays no rent or cultivates its own land, or is living on subsidies in the defence forces has more disposables purchasing power than a household living only on its income. The survey shows that consumer products have penetrated the rural areas and poor households. 8) Our middle class is unique, they have started to buy consumer products and durables, many of them are not educated upto to SSLC, but they are in the market for manufactured

products. 9) Below them are the under class-the poor-numbering 14,895 in urban and 68,914 households in rural areas (with incomes below Rs. 12,500 p.a.), have not bought consumer products but through TV are exposed to the products and see some of their number becoming consumers. So there is the start of rising expectations.

Trade Policy Reforms

As part of the 4 point package of the restructuration earlier referred, the trade policy has been subject to a major reform comprising : a) the suspension of cash compensatory scheme (CCS) from July 3, saving over Rs. 3000 crores in export subsidy, b) replenishment licensing scheme (REP) to become the principal instrument for export related imports. It will be called Exim scrips and will be freely traded, c) All exports to have a uniform REP rate of 30 per cent of the Freight on Board (FOB) value, replacing the present 5 to 20 per cent of the FOB value. Special rates for gems and jewellery and metal based handicrafts and books and magazines will continue. d) The new REP scheme to give maximum incentive to exporters whose import intensity is low, such as agriculture exports. e) All supplementary licenses are abolished except for small scale sector and producers of life saving drugs who can import under OGL or supplementary licenses. f) All additional licenses granted export houses are abolished-except for REP rate of 30 per cent of FOB plus an additional REP of 5 per cent of FOB value. g) All items in the limited permissible list now to be imported through REP. h) Unlisted OGL contained in the Excise policy are abolished and all to be imported through the REP schemes. i)

Advance licensing for obtaining imports for exporters will remain open. REP rate for advance licensing for exports is being increased from 10 per cent of Net Foreign Exchange (NFE) to 20 per cent of NFE. j) All import licensing for capital goods and raw materials except for a small negative list to be removed in 3 years. k) All items to be decanalised except that are essential. Major changes in entire canalisation policy to be announced. l) Financial institutions will also be allowed to trade in. Exim scrips. In due course, the Exim scrip to be replaced with foreign exchange certificates which will be tradeable. m) The Rupee expected to be fully convertible on the trade account in 3 to 5 years. This reform of the trade policy is aimed at a structural reform which will give fiscal incentive promoting exports and a liberal REP system. There are problems in the operation of the new system such as the future of cheap export credit, the export control regulation which do not require exporters to quote these export bills in convertible currency. As the system functions, these problems will have to be solved.

Industrial Policy

On July 24, the government announced a new industrial policy which basically shifts decision making on investment from the government (Minister / Ministry) to the entrepreneur. This also is part of the total package of economic policy reform referred to earlier. Its main elements are: a) licensing dispensed for all industries except 18 including coal, petroleum, sugar, motor cars, cigarettes, hazardous chemicals, drugs and chemicals and some luxury items. b) All registration schemes including that of

DGTD are abolished, entrepreneurs have only to fill an information memorandum on new projects and expansions. c) MRTP Act is to be amended to remove the threshold limits of assets of MRTP companies and dominant undertakings. d) The newly constituted MRTP commission to be given more powers to initiate investigations suo moto or on complaints received about monopolistic, restrictive and unfair trade practices. e) MRTP Act to be amended to a) remove the proviso of prior approval of union government for new units, expansions, mergers, take overs and appointment of directors and b) to bring under its purview public sector undertakings. f) Reservation of items for small scale industry to continue. g) The preeminent place of the public sector in 8 core areas like arms and ammunition, atomic energy, mineral oils, rail transport, coal and minerals to continue. h) Automatic clearance for import of capital goods provided foreign exchange is ensured through foreign equity. i) With foreign exchange position improving from April 1992, automatic approval of capital goods imports for upto 25 per cent of plant and machinery subject to Rs. 2 crores limit. j) Existing and new industrial units provided broad banding facility to produce any article if no additional investment in plant and machinery required. k) Mandatory convertibility claim for financial institutions converting loans into equity dispensed with. l) Direct foreign investments upto 51 per cent equity in 34 high priority industries. Companies with 50 per cent foreign equity to be encouraged to be export trading houses. These include commercial vehicles, two wheelers, inorganic fertilisers, chemicals, manmade fibres, drugs and pharmaceuticals, paper, tyres, portland cement, hotels, food processing, sugar products

and industrial and agricultural machinery. Outside of this foreign equity participation in excess of 51 per cent to be granted by the empowered Board. m) Expatriation of dividends to be through export earnings. n) Foreign equity proposals need not be accompanied by foreign technology agreements. o) A special board to be constituted to negotiate with international firms and approve direct foreign investment in selected areas. p) Automatic permission for foreign technology agreements in high priority industries upto a lumpsum payment of Rs. 1 crore, 5 per cent royalty for domestic sales, and 8 per cent for exports, subject to total payment of 8 per cent of sales over a 10 year period from the date of agreement or 7 years from commencement of production. q) No provision needed for hiring foreign technician or foreign testing of locally developed products, with payments to be made from blanket permits or free foreign exchange. r) Public sector investment to be reviewed s) While reservation of industries for the public sector remains no ban for opening such areas to the private sector selectively. t) Public sector to be allowed entry into areas not reserved for it. u) A part of government's share holding in the public sector to be offered to mutual funds, financial institutes, general public and workers. v) Chronically sick public sector units to be referred to BIFR for formulation of rehabilitation schemes. w) A social security mechanism to protect workers interested in such affected public sector to be set up and new policy to promote workers participation in management and workers cooperation in order to make sick units healthy. x) A set of measures to prevent industrial pollution of cities and ensure environmental control. y) The review of existing portfolio of public investments to examine with

greater realism all public sector industries based on low technology, those in small scale and non strategic areas, those in areas with nil or low social considerations or public purpose, inefficient and unproductive enterprises and units in industries where private sector has developed sufficient expertise and resources. A package for the small and tiny sector is to be announced separately. This reformed industrial policy is part of the reform of economic policy. It is difficult to evaluate it at this early stage. One welcome feature is the delicensing, deregulation and debureaucratisation which is over due. The last clause of the public investment withdrawing from low priority, routine areas and those in which the private sector has developed experience—if this is what is meant by privatisation (an ugly word recently coined) it should be welcomed. The queries relate to complete abolition of control over monopolies and oligopolies (which exist in all industrial countries) and the repeated emphasis on 51 per cent foreign equity participation. These need to be watched. Probably the most serious question is while entry has been made free, there is no provision for exit of unviable enterprises. This is serious. Further there is a good deal of small fine print as in clause K & L of the note, which need further study. On the whole, the freeing of Indian industry, including the public sector from the accumulated shackles of over 40 years should give a spurt to industrial development in the country. The policy should also be employment generating on which nothing is said.

Industry

CSO reports that the industrial output index rose by 4.3 per cent in February, giving a rise of 8.6 per cent for the 11

months, April 1990-February 1991, (the Economic Survey records 8.4 per cent for year 1990-91) with manufacture doing better at 9.2 per cent compared to the previous year's 8.6 per cent. The sugar industry has recorded 116.74 tonnes sugar production in the eight months ending May 31, 1991 (which is higher than the 1989-90 whole years 109.88 lakh tonnes) and might exceed 120 lakh tonnes for this year. There is scope for sugar exports, taking advantage also of the Rupee devaluation and the Foreign Exchange certificates. BIFR has recommended setting up an independent agency to physically oversee execution of turn around programmes by it for sick industrial enterprises. This would change the current practice of direct package negotiations between the promoters of a sick unit recommended for rehabilitation and financial institutions and banks, pushing the latter to the background. The financial institutions and banks have not done well on industrial rehabilitation and this would be a corrective. In regard to the new industrial policy inviting foreign firms and nationals to invest 51 per cent equity in select areas and for which a specially constituted board is being set up with enough flexibility to examine these offers on a case by case basis, a study by a Washington Research Organisation points out that Foreign Direct Investment (FDI) has the same potential for creating gains for efficiency growth in the 90s as trade had in the 50s and 60s. It points out that while by the end of 1989 companies from US, UK, Japan, Germany, and France owned nearly \$1 trillion of direct investment assets abroad, 70 per cent of which were acquired in the 80s, most of the FDIs were by the industrial countries themselves. The stock of FDI in 1989 owned by the 5 major industrial countries was US (\$389 billion),

UK (\$226 billion), Japan (\$158 billion), Germany (\$91 billion) and France (\$69 billion). The fear of FDI, it says, is a hangover from the protectionist thinking in the trade field.

National Production Front

Steel

The data on steel in July is positive. It is reported that the SAIL plants have broken the low performance syndrome for the first time since inception. The five plant produced 2.39 million tonnes of hot metal, 2.17 million tonnes of crude steel and 1.80 million tonnes of saleable steel during the first quarter of April-June. Steel product exports recorded a 30 per cent increase in the quarter at 51,500 tonnes and plan to double their exports in the second quarter to 1,25,000 tonnes. To diversify and expand its product range for exports, SAIL has included engineering goods made of steel in the exports list. Steel output is planned at 7.7 million tonnes for the year. It is also planned to add 10 million tonnes (Rs. 28,000 crores) capacity by the end of the IX Plan. Even all this leaves, the steel industry in India far behind that of China.

Crude

The news on crude in July is not encouraging. ONGC, in addition to the \$1100 million loan from World Bank, ADB and Japan which it has received, is looking for \$2000 million more of resources for execution of the remaining projects in the pipeline. This needs some study and control, because that kind of money is simply available. Further, ONGC records a fall of Rs. 554

crores in its profits for 1990-91 and attributes this decline to the new accounting systems relating to the writing off dry wells and revaluation of external commercial borrowing due to devaluation of the Rupee. But the major reason is the decline in its production which it glosses over. It accepted in its MOU a target of 33 million tonnes and it produced 3.3 million tonnes below the target. That was the main reason for the fall in profits. Again for 1991-92 against the target fixed by the Planning Commission at 34.1 million tonnes, it is expected to produce a little over 27 million—which is about the same as in 1990-91. Against this background, its demand for a 50 per cent increase in domestic crude price is unconvincing. Some increased items have to be cut that would be to set off against the increased cost of the crude import bill of Rs. 1000 crores due to the devaluation.

Coal

The coal situation in July was very bad. Cuts in coal to western and southern India has been over one per cent, causing severe hardships to industries in Gujarat, Maharashtra, Karnataka, Tamil Nadu and parts of MP. The non core sector in these states—rayon, paper, heavy chemicals, vanaspati, cotton, sugar, and polyester report that they have cut their production programmes to 10 per cent and some are on the point of closure. Because of Singareni not being able to raise the coal it mines, even the core sector in the South—thermal plants and cement units—are starved of coal supplies. This is a serious crisis for the states and the industries and the claims that coal production has increased to 31.72 million tonnes in April and May 1991 from 29.72 million tonnes in April and May 1990 and that

in 1990-91 output was a new high makes no sense in terms of the coal supply situation in these states. A hike in coal price is expected. The ministry is pressing for it and cabinet approval is awaited. The other depressing piece of news is that the country imports Rs. 600 crores worth of coal (3.5 million tonnes) for the steel mills. This is a heavy drain on the very slender foreign exchange of the country. More efforts should be made to use Indian coking coal, particularly the new deposits which have been discovered with low ash content

Non Ferrous

The chief item in July was the report that during the quarter April-June 1991, Hindustan Zinc produced 120 per cent of its zinc target at 17,399 tonnes and 108 per cent of its lead target at 6,248 tonnes. Also the production of 6586 kg of silver and 48,965 kg of cadmium by Hindustan Zinc were on target and to that extent a saving in foreign exchange. NALCO reports that it will produce 5.2 lakh tonnes of aluminium this year, up from 4.5 lakh tonnes for 1990-91 and will export 60,000 tonnes and the private sector 10,000 tonnes.

Agricultural Production

The resumption of the South West monsoon after a 20 days delay on July 20 in the northern agricultural area—of MP, UP, Haryana and Punjab is a source of relief and makes the foodgrain target of 182.5 million tonnes possible. Between June 1 to July this region suffered a rainfall deficiency-20 to -59 per cent but after that has received copious rains. The kharif strategy is being worked out by the farmers, the state government have been asked to make adequate

supply of power and diesel to the farmers to make up for the delayed monsoon through adequate irrigation. So far there has been no drying up of crops reported by any of the states in the belt nor any attack of pests. There is a problem with the imbalance in foodgrain production in the country with 15 per cent of the cultivated area producing 50 per cent of the growth in agricultural output (Punjab, Haryana, West UP and parts of Tamil Nadu and AP). The growth of foodgrain products is 126 per cent in the northern region, 36 per cent in the central region, 23 per cent in the eastern, 38 per cent in the southern and 32 per cent in the Western region. The difference is due to the failure of the green revolution to make an impact on rainfed areas. Only 50 million hectares out of the total gross cropped area of 130 million hectares is irrigated. The eastern region gives cause for concern with a declining growth rate in production. Hence several crop yield programmes are being implemented in that region. The programmes are Integrated Programme for Rice development (IPRD), the Special Foodgrains Production Programme (SFPP) for wheat, maize and millets, the special Jute Development Programme (SJDP) and the scheme for conjunctive use of surface and ground water to maximise agriculture production. The states covered by the programme are East UP, Bihar, West Bengal, Orissa and East MP. While the region accounts for an area of 57 per cent under rice and 33 per cent under wheat, 24 per cent under maize and 23 per cent under sugar cane; its contribution to total foodgrains production is only 45.4 per cent in 1988-89 and only 45 per cent to total rice production. Hence the programme now underway on accelerating the growth of yield and production of rice is urgent.

Foreign Trade

The trade deficit during April-May 1991-92 declined by 78.4 per cent compared to April-May 1990-91 from Rs. 8114.23 crores to Rs. 2680.18 crores at Rs. 240.16 crores (\$118.96 million). The monthly BOP gap during 1991-92 has been estimated at \$400-430 million which is the difference between the total inflow and total outflows on both current and capital accounts. In the previous years, the gap was the same and was met by commercial borrowing. NRI deposits or drawing on foreign exchange reserves. These three sources are no longer available for these years (the 1989-90 NRI inflow of \$1.3 billion stopped in 1990-91 and so 46.9 million tonnes of gold was pledged with the Bank of England for a one month loan of \$400 million). It remains to be seen as to how the package of policy reform will affect this forecast estimate. The withdrawal of CCS affects exporters to the Rupee trade area, as many of them without CCS will be losing and so there may be defaults in export contracts to the Rupee trade area. This is also true for value added marine exports which may be affected. This needs attention. In the remaining 7 month, exports are expected to rise by 16 per cent in dollar terms by FIEO. On individual items cotton handloom exports rose by 20 per cent in 1990-91. Engineering exports rose by 46 per cent in April 1991 but for the rest of the year may stagnate because imports constitute 25 per cent of the export turnover and the restriction on imports will affect the exports.

Aids and loans and External debt

On the aid/loans side the World Bank bridge loan of 150 million to assist the oil and gas sector with its additional

imports, the IMF energy loan of \$220 million under CCFF, the \$200 million against the 25 tonnes of gold shipped as security by the Bank of England and Bank of Japan have been earlier referred to. ADB approved a \$6 million loan to the International Centre for Integrated Mountain Development for the development of sustainable mountain agriculture in the Hindu Kush-Himalayan region. Sweden has provided a grant of \$65 million towards the country's poverty alleviation programme. On India's *external debt*, as a result of the devaluation, India's external debt has increased from Rs. 1,31,000 crores to Rs. 1,62,000 crores from 38 to 47 per cent of GDP. This has serious implication for India's debt servicing which according to the Finance ministry for the first time turned net transfers to India negative by Rs. 936 crores. That is, gross borrowing of commercial borrowing during 1990-91 amounted to Rs. 3050 crores, while servicing the commercial debt was Rs. 40006 crores—including Rs. 2137 crores for amortization and Rs. 2137 crores as interest payment. There are many reasons given for this serious situation, such as the downgrading of India's credit rating for long term loans, the postponement of the regular budget, the Gulf crisis and its effect on the balance of payments, the sharp decrease in foreign remittances especially from the Gulf, and the decrease of credit from foreign commercial banks who were concentrating on strengthening their capital base and reducing their credit expansion. All this is no doubt true, but for India the major lesson is that relying on external commercial borrowings to finance the current account deficit has brought the country to this pass and this should be immediately stopped and the current account deficit reduced as fast as possible and pursued within India's resources.

International

World Bank/IFC

At long last, after some hard negotiations with the US which on grounds that the World Bank itself should divert 50 per cent of its loans to the private sector in each country had raised objections. The International Finance Corporation of the World Bank has been allowed to increase its capital by \$1 billion — from \$1.3 billion to \$2.3 billion. This was the result of a compromise under which the other countries agreed to review the World Bank charter to give greater emphasis to the private sector. This is the kind of pressure which does not help even the private sector.

World economy

The UN annual world economic survey states that the growth of world output slowed in 1990 to 1 per cent, down from 3 per cent in 1989 and 4.3 per cent in 1988. The slow down was particularly sharp in the second half of 1990, worsening prospects for the following years, with perhaps the second half of financial resources from developing to industrial countries of \$32 billion in 1990, so that for over a decade now the developing countries will carry their debt for another decade, as they have done for over 10 years. The economic slow down in 1990 was sharpest in UK, Canada and US with all major economies in recession and Europe and USSR registering the worst drop in economic activity since the war, contracting by 11 per cent. South and South East Asia with 6 per cent growth was the world's fastest growing region where apart from Malaysia and Korea which did very well, India, Pakistan, Burma and Sri Lanka did better in 1990 than in 1991. Africa

has recorded a sharp decline. It finds it difficult to assess the impact of the Gulf crisis separately from other factors. Even though world economy is forecast to pick up towards the end of 1992, the survey refers to many uncertainties which call for industrial countries adopting a policy mix to stimulate economic growth, keep down unemployment and invigorate the economies of the developing countries and USSR. The IMF study on "the domestic public debt of externally indebted countries" show the close link between two in the group of 15 countries studied when the average ratio of domestic public debt to GDP rose from 10 per cent in 1981-82 to 16 per cent in 1987-88 and 25 per cent and 1990-91. The growth of drastic public debt has led to sharp increase in debt service payments, which have depressed public investment and promoted higher inflation which has averaged more than 200 per cent a year. The link between the domestic and external debt is that the higher the government's net worth, the greater would be its ability to service its external debt and the lower the secondary market discount on that debt. Here the industrial countries which are in a similar position, through their ability to raise revenue from efficient tax collection and a wider tax base are able to generate fiscal surplus that help their economies to move forward. This the developing countries also should learn to do. A new World Bank study predicts that regional disparities in growth which became sharp in the 80s will continue. It says that the unlikely likelihood of convergence and as the uncertainty about aggregate growth intensifies, the risk is that the number of the absolute poor in the world will rise gradually—particularly in South Asia and Africa south of Sahara which have become net exporters of resources.

World Development Report 1991

The World Bank's World Development Report 1991 sets the agenda for development, brings together the various separate aspects of development dealt with in its past Development Reports. In this report the interaction between government and markets is deemed as the central issue of development. It advocates a synthesis of the government and markets, the governments yielding to the dictates of the market. "Strategies in which government support rather supplant competitive markets offer the best hope for meeting the challenge of development" it says. But while for decades the Bank has been asking economies "to get the prices right", the 1991 report asks both industrial and developing countries to get macro economic policies right. While so far South Korea was held up as a model, in the report the role of the states in the East Asia miracle is acknowledged. Why has Japan succeeded in development and not others, and it answers the question by pointing out that Japan facilitated a judicious mix of state intervention and the operation of a competitive market. The report recognises that no free market has ever eradicated poverty, and so states intervention and funds are needed to alleviate poverty—even in countries like the US. In place of growthmanship the report says "the challenge of development in the broadest sense is to improve the quality of life", which it sees in a free market carrying this social justice facilitated by states intervention. A large part of the report examines the role of education in economic development and the building of indigenous technological capacity. Its emphasis on development of human capital and indigenous technological capability includes the statement that "no country has been able to build a modern

industrial economy without first tackling mass illiteracy". There may be a tendency to overemphasise education as an equaliser which leads to the neglect of land reform and distribution issues. The report marks a middle ground between elitism and free marketeers and stresses that the 2 have to be brought together in varying degrees for macro economic policy reform which economic development calls for. Its two boxes on economic reform (box 6.2 and box 8.1) bring out the mechanics of the reform process—the gradualism vrs the shock treatment method (box 6.2) and building reform because of external aid and not through internal consensus (box 8.3). In this connection, the section of the report on the sequence of reforms, when stabilisation policies work on the demand side to reduce inflation and external deficits, structural policies are concerned with the supply side addressed to resource use, efficiency on trade, finance and industry, for adjustment programmes suggested by the World Bank and IMF address internal and external imbalance. The study shows the strong association between adjustment programmes and improvements in the balance of payments, but the effects in growth is less clear. The report refers to one study which found a negative effect of the adjustment programme on growth but after 3 or 4 years there is a positive association. (In relation to the adjustment programme now under way in India, the effects on growth this year should be accepted as being negative, as pointed out earlier.)

UNCTAD

As UNCTAD VIII is being prepared in the UNCTAD Trade and Board where instead of arriving at a consensus on protectionism and structural adjustment

vis a vis the Uruguay round, a North vrs South battle is shaping up. Industrial countries want to focus on the 'management' of the national economies of the developing countries. They are resisting all attempts by the developing countries to discuss the state of management in the world economy. This is a regrettable development as it means that UNCTAD VIII will waste its time in a North—South battle.

World Food and Population

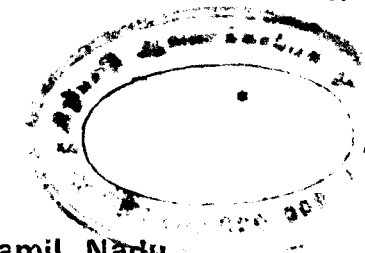
The problem particularly in the developing countries of food production not keeping up with population increase was debated at the consultative group on International Agricultural Research meeting at IRRI in the Philippines. The world population crossed 5.4 billion in the second week of July and according to UNFPA will reach 8.5 billion by 2025. But land planted to major cereals has not increased since the mid 70s and yields have plateaued off as improved seed have reached their technological limits. There was agreement that in face of this situation, there is no alternative to population limitation.

SAARC and ASEAN

The ninth council of minister of SAARC meeting in July agreed on institutionalising cooperation in tourism and trade and manufacture and services. This institutionalising of trade relations and the decision to give the most favoured treatment to each other in trade is a major breakthrough for the region. The six member South East Asian Association (ASEAN) in the summit meeting in July have agreed to establish a free trade area by 2000.

This decision to allow the free flow of goods among the 6 countries is also a major development. It is to be hoped these developments of SAARC and

ASEAN will not weaken their fight for freeing trade at the Uruguay round which is still going on with the same loss of steam.



II. Agricultural Development in Tamil Nadu

Paddy and other crops

With the rains in July, farmers have begun ploughing and preparing the land growing seedlings for the kuruva crop. The release of water from Mettur from July 21 has enthused the delta farmers, who after a gap of 6 years have begun their work for the short term kuruva crop. They expect to extend the kuruva crop over 3.25 lakh acres in the Thanjavur district and 75,000 acres in the Tiruchi district. Also adequate quantities of the short duration ADT-36 are being readied for the kuruva crop. The cooperative central banks in Tiruchi, Thanjavur, Kumbakonam and Pudukottai have geared themselves to extend the short term loan to the farmers for the crop. The water released from Mettur reached the Grand Anicut on July 25. The Kuruva crop can yield 5 to 6 lakh tonnes of pulses. But all this is based on the assumption that the interim order of the cauvery water tribunal will be carried out. The Karnataka government has passed an ordinance which nullifies the interim order of the tribunal and the union government has referred the matter to the supreme court, which means that nothing can happen with regard to the interim order now. But the plentiful inflow into the Mettur due to the rains in the catchment area of the cauvery and the overflow of the

KR Sagar and Kabini reservoirs will ensure the kuruva crop. The farmers also will be raising samba paddy out of the 1.10 lakh hectares planted. The only dark spot is that the dry crops like cholam and cumbu could not be cultivated because of the poor SW monsoon in this area.

Research results

On the 36 research reports recorded in July, a group of 4 reports are of particular interest to the farmer as their results can be applied immediately.

Of the group of 3 research reports on rice, one from the agricultural research station of TNAU Vellore which has tested 11 different crops in the irrigation water polluted from the tanneries effluent at Ambur finds that CO1 maize, CO13 ragi, Africa's tall maize, and BN2 grass yield higher, product and fodder and can be used now by the farmers in Ambur and the surrounding villages in North Arcot: the second from the Bhuvaneshwar agriculture college finds that iron chlorosis in rice particularly in Coimbatore, Madurai and upland areas can be countered by broadcast soil application of inorganic salts, foliar spraying and application of ammonia sulphate and can be used by the farmers in the area; the third report is

from FIPPAT, padappai which shows that seed treatment with fungicides can stop seed rot disease of rice and can be used now by farmers facing the problem. A second group of reports will help farmers growing other cereals: for the sorghum growing farmers facing sorghum insect pests the midge resistant sorghum varieties developed by ICRISAT should be used: the regional agricultural research station, Tirupathi recommends to the pulse growing farmers, green gram varieties PS-16, PIMS-4, ML-267, Pusa-105 and LGG-127 as high yielding summer pulse crop: TNAU, Coimbatore reports to help chick pea growing farmers that the suitable varieties should be grown as a post monsoon rainfed water crop preferably during the first fortnight of October, the agricultural college and research institute states that cotton farmers should know that sequential inter-cropping systems, cotton and black gram followed by radish (3 crops) improved yield of cotton one could be followed by cotton, black gram—amaranthas and cotton black gram—coriander which yields between Rs. 16,000—Rs. 17,000 per hectare: TNAU water technology centre recommends that farmers using gravity flow irrigation can apply herbicides to crops planted in rows or beds that are furrows or flood irrigation. Similarly maize growing farmers can use knap sack sprayer, onion growers can use fluchlorain in the irrigation channel, gingelly growers can use 1 litre plastic collapobis glucose and groundnut farmers can use fluchlorain as a spray fluid on the soil surfaces— for weed control. A third group of reports is of interest to fruit farmers: from the college of agriculture, Rajendra nagar, the mango fruit growers are advised to use fanvaler EC as spray and from the Krishi Vigyan Kendra Pondicherry, 5 steps from maintaining 100 trees per hectare to using insecticides are suggested to control mango hoppers. Indian Institute of

Horticultural Research, Bangalore recommend bio control through use of mealy bugs to fruit farmers growing guavas to eliminate some 80 species of insect pests, The National Pulses Research Centre, Vemban advises banana farmers that the Rhizon weevil threatening banana can be controlled by use of—infestation free suckers and the out ends covered with a layer of clay: similarly TNAU, Coimbatore advises the Poovan growers that two rounds of foliar applications of one per cent urea with two per cent muriat of potash during preflowing stage will check premature ripening, the Kottayam experiment advises banana growers that banana aphids can be controlled by use of coccinelids beetle as predator. A fourth group of reports refer to the cure to animal diseases. The farmers developing chicks are advised by the TN Veterinary and Animal Sciences university, Tiruchi that new duck syndrome which is a killer disease can be treated by mixing sulphur quinescaline at 0.05 per cent infeed for five days. The college of veterinary science advise cattle growers that ascariasis in calves can be treated by giving doses of piperazine, morantal or lavamisole and proper disposal of faecal matter of sick calves. VCRI Namakkal advises buffalo owners that buffalo pox can be treated by cleaning the lesions with 1:1000 solution of potassium permanganate followed by antiseptic ointment: affected animals should be isolated and milked by a separate milker.

Fishing

On July 11, government imposed limits on fishing to nautical miles this side of the international boundary line. This restricted severely prawn fishing which were developed by spending a great deal of money, converting their

fishing vessels to make them suitable for prawn fishing. Besides this 600 prawn fishermen, 5 lakh fishermen in five districts will be affected and their livelihood taken away from them as upto the 5 mile limit the sea is rocky and fishermen lay their net only when they cross this limit. Hence the July 21 relaxation of the limit and fishing allowed in groups of 10 vessels accompanied by wireless sets and government officials - both to prevent smuggling and prevent the Sri Lankan Navy interfering with the fishermen was a relief to the fishing community.

Rubber

The natural rubber front faces both glut and stagnant prices and the credit squeeze limits the purchase capacity of rubber users. The glut is due to under consumption. It is reported that nearly half the 300 tonnes of rubber arriving at the Kochi and Kottayam markets is unsold and 10,000 tonnes are in stock with growers. This is the offseason, so that in 3 months when the season is in full swing the situation will worsen. The manufacturing sector is unable to lift the rubber because of the credit squeeze and there is their complaint that the required quantum of RMAIV grade

rubber is not available. RMAIV prices at Kottayam are Rs. 21.15 per kg. against Rs. 23.25 per kg this time last year. STC is not buying because it has a stock of 25,000 tonnes. Following devaluation of the rupee imports of rubber have become dearer and so the manufacturers demand for imports of 20,000 tonnes is out of the question. The new trade policy which requires that you do not import unless you export, also implies not importing more than what is needed. For 1991-92 production at 3,65,000 tonnes will be marginally higher than the estimated domestic consumption and so the import question should not arise. Under the new trade policy it is estimated that the import and export will be 27,000 tonnes, with 22,000 tonnes being imported under the REP scheme, leaving only 5000 tonnes to be met from domestic consumption. Against this background, the union government's decision to study the cost of production of rubber is good. The demand for imports will come up against the BOP problem, the growers resistance to imports and the expectation of a sharp rise in global prices. When prices are going to raise and imports are ruled out, the cost study may do little to remove the misgivings of bulk users but the facts on costs should be established in the interest of both growers and users.

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III. Industrial Development in Tamil Nadu

Industrialisation in the state in July had the usual plus and minus points.

On the plus side *first* there is the increase in the quantum of capital subsidy to be made available to medium and major new industries—an increase from Rs. 15 lakhs to Rs. 25 lakhs for investment above Rs. 100 crores. Also new industries with an investment of Rs. 50 crores to Rs. 100 crores will have sales tax waiver for 5 years or deferral of tax for 10 years and for those with investment above Rs. 100 crores, the waiver for 6 years and deferral for 12 years. *Second*, TIIC has decided to waive the recurring credit guarantee fee of 1.25 per cent of loan amount and instead make a one time charge of 0.75 per cent. It has waived the collateral requirement from SSI loans, enhanced the sanctioning powers of its regional offices to Rs. 12.5 lakhs and gives relief of penal interest at 5 per cent an amount due for the period of delay instead of the earlier 2 per cent on the whole loan period. *Third*, the union government has approved the Rs. 40 crores Narimanam project for LPG production. The plant will be part of the 0.5 million tonnes crude refining project being set up by the Madras Refineries at a cost of Rs. 115 crores at Panangudi, Nagapattinam. *Fourth*, Bharath Petroleum Corporation announces that it is setting up a Rs. 15 crores lubrication oil plant in Madras. *Fifth*, Leather exports now (1990-91) at Rs. 2500 crores is to be expanded to Rs. 10,000 crores by 2000, with Rs. 3500 crores by 1984-85. *Sixth*, TIDCO announces that it will launch 8 new projects at an estimated cost of Rs. 500 crores this year including a nitro phosphate complex at Chidambaram district with a capacity of 1000

tonnes a day at a cost of Rs. 300 crores, an acylic complex at Thanjavur at a cost of Rs. 100 crores, a heat transformer fluids plant in South Arcot for Rs. 40 crores, a 50 tpa fruit process plant at Dharmapuri (Rs. 10 crores), a unit for coconut based product at Kanyakumari (Rs. 20 crores), a 1400 tpa diktene derivatives plant at South Arcot (Rs. 30 crores) a 200 lakh tpa unit to manufacture the neutral alcohol for export and a 30 million tpa plant for manufacturing fly ash bricks at Chinglepattu (Rs. 5 crores). For these, it has letters of intent and it is advised that they be established in the associate sector where the state's stake will be limited to 11 per cent. *Seventh* the black granite industry is in good shape in the state and the demand from many countries for polished black granite from Tamil Nadu should lead to a vigorous export industry. *Eighth*, the Ambattur Industrial Estate is developing an export consortium or export house to take advantage of increasing competition in the domestic market and decline in the foreign exchange value (devaluation of the rupee). *Ninth*, General Electric Company, as noted earlier, is setting up a Rs. 7 crore plant at Poonamallee to make SF 6 circuit breakers and isolators. It will have a licensed capacity of 1360 SF circuit breakers and 620 isolators, both upto 800 KV. *Tenth*, Ashok Leyland reports a very good performance for the year ending March 31, 1990 with gross turnover of Rs. 9123.90 crores (+13 per cent over the previous year), production of 24,976 vehicles (+11 per cent). The (Press Metal Corporation) Ambattur Unit which supplies frames for Ashok Leyland vehicles was amalgamated with Tube investments. Ashok Leyland reports that it has readied the first phase of its investment programme of Rs. 570 crores

for expansion of existing capacity, modernisation and introduction of new range of commercial vehicles and has tied up the source of finances for this. *Eleventh*, Tamil Nadu's 58 public sector units for the first time report making a profit of Rs. 1.07 crores for 1989-90 against a net loss of Rs. 47.10 crores in 1988-89 and Rs. 62.95 crores in 1985-89. The margin on sales which has been negative (-3.87 per cent in 1985-86) turned positive in 1989-90 for the first time. This heartening record was mainly due to Tamil Nadu Newsprint which earned a profit of Rs. 31.02 crores for that year (1989-90). Of the 10 groups of the PSUs, manufacturing turned from a loss of Rs. 15.40 crores in 1988-89 to a profit of Rs. 24.17 crores. So too agriculture and allied activities turned from the loss of Rs. 1.87 crores in 1988-89 to net profits of Rs. 7.43 crores in 1989-90. The states transport sector and trading continued to perform poorly with transport increasing its loss from Rs. 12.20 crores in 1988-89 to Rs. 21.88 crores in 1989-90 and trading from Rs. 6.55 crores to Rs. 13.71 crores. This is on the whole heartening record. For 1989-90 of the Tamil Nadu capital investment of Rs. 1661.65 crores (35 units made profits compared to 25 in 1988-89, and the other 10 units record a loss of Rs. 48.20 crores). The question arises whether the government should be involved to this extent in investment and production. *Twelfth*, Tamil Nadu Petro Products is setting up two plants - a Rs. 94 crores caustic soda unit at Thanjavur with a licensed capacity of 100 tpd and turnover of Rs. 45 crores; a Rs. 45 crore heavy normal paraffin plant at Manali, with a capacity of 15,000 tonnes per annum. The company is already licensed to manufacture linear alkyl benzene (LAB) which is parallel to heavy paraffin. *Thirteenth*, PIC had a good record in 1990-91 despite the difficulty it faced in availability

of its important raw materials and disagreement of its management with the government. Despite serious shortage of important phosphoric acid and ammonia, its overall turnover was marginally higher at Rs. 863.06 crores and its net worth to Rs. 144.34 crores. *Fourteenth*, CLRI is establishing a model rural slaughter house as an alternative to existing system of meat production and handling. If favourable, it will lead to a chain of rural slaughter houses in the state and the country. *Fifteenth*, the Alam Steel plant, a unit of SAIL, not only broke even during the year, it was able to export 3800 tonnes of stainless steel (Rs. 13 crores) despite the global decline in steel exports due to the Gulf crisis. The plan this year is to double its exports to over 6000 tonnes. *Sixteenth*, the long pending Madras gas cracker project, the National Aromatics and Petro Chemicals Corporation (NAPCO) with the original promoters, Madras Refineries (MRL) and SPIC has been recosted in view of the devaluation of the Rupee, and is now before the cabinet for approval on the basis of the fresh estimates. *Seventeenth*, Food processing is emerging on the thrust area in the state, with growing investment in it. On the negative side, *First*, the sugar industry in the state faces a serious problem, with a high production (as of early July 11.31 lakh tonnes was recovered compared to the previous year's 8.72 lakh tonnes despite a lower recovery rate at 9 per cent the year against 9.36 per cent in (1989-90). It cannot however release more sugar over what is already allowed. It has been checked with the tying up of capital and their demand by the demand for urgently needed working capital funds. So far the banks have financed only the expansion and modernisation and have not funded the working capital needs, and now with the tight financial situation and the RBI directives on restricting

loans and raising of bank rates, the mills face a real quandry. It is also not in their interest to release more sugar to the market, as that will bring down the price and create another set of problems for them. *Second*, and related, the 31 sugar mills in the state have *accumulated molasses*—the carry over stock as on October 1, 1990 was 1.04 lakh tonnes and for the current year (with average molasses recovery of 4.47 per cent) 5.62 lakh tonnes of molasses will be produced, giving a total stock of 6.66 lakh tonnes. The 8 distilleries in the state by June 1991 have taken 2.39 lakh tonnes and in the remaining 3 month will take 0.79 lakh tonnes—a total offtake from the factories will be 4.03 lakh tonnes in 1990-91. The net surplus of 2.63 lakh tonnes is a burden for the mills and environmentally polluting as the mills are forced to let the surplus molasses to be exported which will earn \$7.9 million, as the foreign demand for molasses is high. This will also add to our foreign exchange earnings. The union government is insisting that only value added should be exported in this case is wrong and short sighted. *Third*, BHEL, Tiruchi is in a bad way: because of import restrictions on its 700 crores imports for 1991-92, it has had to cut its shop floor production by 50 per cent and has already laid off 600 casual workers. Its letter of credit (LC) application is lying unopened in RBI, and so its purchases have stopped, its ancillary units having no orders from BHEL. Hence BHEL has appealed to RBI for some relaxation on its LC, but there is little hope of this, as this is part of a national issue. *Fourth*, the two and half year closed *Standard Motors Products* (SMPL) is still under BIFR study. Should it be reopened as a result of Trade Union pressure and state government insistence? Will it become another loss making unit? BIFR

has now passed the ball to the Banks and Financial Institutions (who are themselves in none too good a financial position to come up with a package of reliefs and concessions which will enable SMPL to be reopened. This reopening of a sick unit is a question mark. *Fifth*, another similar sick enterprise MALCO has gone to the High Court to challenge the show 'cause notice of BIFR for winding up the company. BIFR is very clear about the unit not being viable because of its sub optional capacity of 25,000 tonnes and the absence of assured power supply from TNEB. When the Board has after full investigation clearly proved that there is no option but to close the unit, the 2 months stay obtained from the High Court is merely prolonging the agony and postponing the day of reckoning. The enterprise should be closed. *Sixth*, the small scale pesticide units in the state are facing complete collapse because the state order is that pesticides should be purchased only from SSI units is not being observed by whole-salers, retailers, and consumers and because the 15 per cent price preference both for small and large units as directed by the Union government (and observed in all other states) is not being observed in Tamil Nadu because the government states that it is not in the farmers interest. Even the state governments' own demand is being met not from the SSI units but by the State Agro Industrial Corporation. This needs to be urgently sorted out and settled as it is clear that while the manufacture of technical pesticides belongs to the larger modern enterprises, formulations should be in the exclusive production domain of the smallscale enterprises. *Seventh*, another industrial group which is in a similar position of difficulties in the *State handloom sector*. Handloom

weavers are faced not with shortage of hank yarn used by them, are not being turned below 20 counts hank yarn which they use, but with a sky rocketing price rise above 80 per cent. This is because that the below 20 counts hank yarn are not being turned out by our spinning mills which find that yarn above 20 counts, is in great demand abroad, and so its high price has led them to concentrate on its

manufacture. On top the large export of cotton, and the new REP licenses attached to it under the reform policy is starving both above 20 counts and below 20 counts hank yarn of the needed cotton. What is needed is for the state cooperative spinning mills to produce the below 20 counts hank yarn which the handloom weavers desperately needs, as otherwise there will be a collapse of the sector.

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IV. Education Science and Health

Educational reforms

The new government has announced a return to the Education Policy 1986 including the continued setting up of Navodaya Vidyalaya. Such recommendations of the Ramamurthy Committee which are appropriate to the Policy and will improve its execution will be incorporated in the programme. The government has ruled out the proposal for raising the fees of higher education to make it pay for itself. This wholesale dismissal of an important means of financing the resources for improving higher education, which is also in the interest of equity is to be regretted. It is necessary and should be done gradually.

Literacy

In the literacy area, 6 universities in the state have incorporated adult literacy teaching and learning as part of their curricula and have taken steps to get two more universities and 15 autono-

mous colleges to join in this obligatory literacy programme. Annamalai University has launched a two month large voluntary literacy programme in which 1500 students and 300 teachers are participating to make 459 villages with 40,000 illiterates fully literate in 4 blocks—Mebhuvanagiri, Parangipettai, Keeralapalayam and Kumaratchi in S. Arcot district. The university has allotted Rs. 5 lakhs for this programme and the State Resource Centre is providing the training input. The programme besides literacy covers social hygiene, population control, environmental and ecological balance, precautions against cyclones, small savings and welfare measures. Under the National Literacy Mission, 3 districts have launched programmes to become 100 per cent literate districts—Kamarajar, Pasumpon Thevar and Pudukottai.

Science

The Comptroller and Auditor General in his report for 1990-95 is critical of the

Council of Scientific and Industrial Research for the way in which its funds on scientific projects have been wastefully expended. It refers to the Rs. 40 lakh released for a photo synthesis unit, which was closed after spending Rs. 25 lakhs on equipment, the Central Leather Research Institute developed 75 technologies since its inception but only 9 were commercialised. The Central Mechanical Engineering Research Institute spent Rs. 10 lakhs on developing software but closed it down because the user did not want it. Rajasthan Atomic Power Station imported Rs. 1.14 crores of equipment which is lying unused. The Department of Electronics is criticised for inadequate appraisal and monitoring of a project sanctioned at IIT. The biotechnology centre at Anna University reports developing a biocide to fight mosquitoes. It states that with the help of SPIC it will be commercially developed and marketed. The Tamil Nadu Veterinary and Animal Science University reports

that it is launching an import substitution programme with planned production of sera, diagnostic reagents and various hormones. A Rs. 7.2 lakh project is also under way at the Tuticorin Fisheries Research Institute on fisheries feed technology using squid wastes. This would give a fillip both to domestic feed production and avoid imports from Taiwan and Japan.

Health

India's population was 849,883,925 on July 1—the World Population Day, according to International Research Institute for Population Studies, Bombay. Since 1990 the country's population had increased by 6 million. It would overtake China's population by 2035, China's population which was 1.139 million in June 1990, whereas at the present rate, India's population will be 1.4 billion by 2025.

V. Employment and Labour Relations.

The government accounded in Parliament on the basis of the results of the 43rd round of NSS 1982-88, the backlog of unemployed (usual principal status) was 13.1 million in March 1990. In 1990-91 employment is estimated to have grown at 1.8 per cent (against the target of 3 per cent). On conditions of employment, increased technological and economic development seems to lead to a decline in women's work participation rate because a) with such technical advancement, the need is for highly specialised jobs calling for special education, qualifications and skill against

which should be set the low female literacy level. In Rajasthan, for instance, female illiteracy is 89 per cent, in the country 75 per cent of women are illiterate against 43 per cent of male illiteracy. b) industrialisation and modernisation has brought in its wake reduced dependence on agriculture, reducing their demand for women's employment. Computerisation reduces women's employment as can be seen in pharmaceuticals and the food industry, where women are employed only in low paid, clerical jobs. Even though employment of women in the organised sector is increasing, they

constitute a mere 6 per cent of total women workers who are mainly concentrated in factories and plantations. In fact the legislation providing for equal opportunities and equal pay for women has contributed to the decline of the employment of women, who were employed because of the low wages payable to them. Welfare legislation like compulsory maternity leave and rules regarding working hours has also led to the decline in women's employment, as employers fight shy of these rules and regulations. A study sponsored by the ministry of labour shows that in rural areas 35 per cent of families are solely supported by women and for another 35 per cent more than half the family income comes from the women. The 1991 census report which records the declining sex ratio is further an indication that women are being cut in the job market, in health and

in economic development. Despite the overall situation in Tamil Nadu which shows that 4.58 per cent of the total child population is involved in wage earning work, the share of child labour in agriculture has risen sharply between 1980-1990 from 25.26 per cent to 47.07 per cent. Even in agriculture labour, the tendency is for children who complete the V Standard and crossed 10 years to leave school to take up work in the field to add to the family income. An IFAD study states that the number of rural women living in poverty increased 50 per cent in the past 20 years covering 550 million. Of them, 365 million live in Asia, 130 million in Africa and 43 million in Latin America and the Caribbean. They work for 17 hours a day, as poverty is forcing them to work even harder. Small, \$50 loans are enough to lift the women out of poverty.

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VI. Other Items

Madras Chamber of Commerce and RBI

The Madras Chamber of Commerce and Industry organised a workshop in early July on Development imperatives. There was discussion on the macro economic balances which should promote development and agreement of establishment of fiscal equilibrium and reform of trade policy. There was some disagreement on the role of the public sector and the market in the development process but there was agreement that in face of the serious economic crisis gripping the country, there should develop rather quickly a consensus on the short term and medium measures that need to be taken to restore the

health of the economy. There was on the same day a meeting of the RBI Board of Governors where the first draft of the Annual Report for 1990-91 was discussed and in light of which the final report, including the perspectives ahead, will be drafted. There was a discussion on the 2 step devaluation on July 1 & 3 effected by the Bank and it was explained that the first devaluation was intended to test the waters which it did successfully.

Adult Literacy

There were two meetings on Adult Literacy, teaching and learning. The first was a meeting of the 15 Vice-Chancellors

of Tamil Nadu universities and 36 Principals of Autonomous colleges. 8 vice chancellors and 25 principals attended the meeting at which the 4 models used by 4 universities and 1 autonomous college which incorporate adult literacy in the curriculum was noted. All the universities present who had not done so and 17 autonomous colleges made commitments to introduce literacy teaching in their curriculum during the coming academic year so that during the next summer vacation the staff and students would follow the curriculum in the villages in which they would be living. The other event was the literacy jatha organised by the BGVS in Madras as the start of a fortnight intensive Jatha activity in the Madras slums to stimulate literacy learning. The main organisers are the leading slum dwellers who are enthused by the literacy programme in their location.

World Bank on Indian Agriculture and Alliance Francaise

There was a seminar in mid July on the World Bank country paper on Indian Agriculture. There was general appreciation of the statistical compilation and interpretation of Indian Agriculture and general agreement with its main thrust that Indian agriculture has not developed its full potential and was unbalanced spatially in its development. There was criticism at the neglect of the movement for decentralisation which was involving the panchayats and mandals in agricultural development, the neglect of the importance of land reform in the analysis and some of the unrealistic conclusions drawn. In fact there was the feeling that there is need for a section on the implementability of the suggestions made, carrying further the prospects for action made which

are heavily market oriented. A meeting of the council of Alliance Francaise reviewed the state of the organisations finances and in light of its sound nature recommended that the Bank loan of Rs. 50,000 outstanding for the last 5 years should be repaid. It also noted that the programme is well organised and enacted that the building programme support the intellectual activities.

IIC and ICRIER

The monthly panel discussion of the India International Centre on Decentralisation in Planning and Plan implementation was led by Arun Ghosh, ex Planning Commission member and BH Minhas of the Indian Statistical Institute. There was general agreement that the potential for enriching and making more realistic through panchayat involvement in the annual and five year plans was not being exploited and the need to make a start on the West Bengal or Karnataka Model was generally accepted. In fact this decentralised planning rather than going in for what is termed indicative planning is the need of the hour. A meeting of the Board of Governors of ICRIER followed by a meeting of the General Council was held towards the end of July. The programme of activities was reviewed and suggestions for further improvement of the research output were made. At this time when the economy is being thoroughly restructured, the research input of ICRIER can be an invaluable element. The need for raising a corpus of Rs. 5 crores to meet both its building programme and further fund its research programme was discussed in detail and a committee was set up to raise the funds, after explaining to the government its interest and commitment.

Seminar on Fiscal Management and National Foundation

The Indian Economic Association Trust and Department of Economics of the Madras University organised a seminar on Fiscal management in India. This event on the eve of the budget concentrated on the Fiscal deficit and means of cutting it, the inflationary pressure of the economy and means of dampening it and the balance of payments disequilibrium. On all 3 issues there was major agreement—on the need to cut government expenditure and increase government revenue through tax and non tax measures as an urgent means of reducing the fiscal deficit; on holding back the cost push factors following from devaluation and, the trade reform to keep the rate of inflation from further rising, and the compressing of imports, promotion of exports and improvement in invisibles as a means of reducing the current account deficit of the balance of payments. There will be medium term economic policy reform that will have to be faced. There was a meeting of some industrialists and planners and administrators to consider the feasibility of setting up a National Foundation with a corpus of Rs. 100 crores to fund some 7 main programme areas. The problems and difficulties of raising these funds from private sources were discussed and it was agreed that this first meeting will be followed up by further such meetings in Bombay, Calcutta and Delhi and also in the US, UK, Germany with NRIs to explore the perspectives.

SRC—TNBCE and MANAR committee

The meeting of the Governing Council of the State Resource Centre met at the end of July and reviewed the programme

of the centre which is now being fully engaged with the 100 per cent literacy programme of the 3 districts referred to earlier. There are 3 more districts being ready to join the 100 per cent district literacy movement plus Madras city. The work of the cadres was reviewed and suggestions made for their improved functioning. The finances of the Council as reviewed by the Standing Finance Committee were noted as being satisfactory. The executive committee of the Tamil Nadu Board of Continuing Education also met and reviewed the state of the building programme for the headquarters and its financing by the union government and the state government. The Committee also reviewed the preparation for the Annual Conference to be held in October in Virudhunagar. It approved the programme and decided to invite the minister of education to inaugurate it. The Director General of the National Literacy Mission, Mr. L. Mishra will deliver the keynote address. The Mass Action for National Regeneration (MANAR) Committee met in the last week of July and received a report on the Anna University semester on adult literacy from the organisation. The programme and achievements were different from that of Madras Christian College received at the last meeting and universities, particularly professional universities, would face similar situations and problems. It was agreed that Tamil Nadu Agricultural University, Veterinary and Animal Sciences University and MGR Medical University should develop the literacy component in their ongoing rural programmes on which Anna and Madras Christian College can help. Similarly these 3 universities can help the other universities and colleges with the rural, agricultural, animal sciences and health inputs in their literacy programmes.

Dr. C.T. Kurien's farewell

There was an impressive farewell to Dr. Kurien who retires after serving for 12 years as Director and Professor of the Institute. His invaluable services in building up the Institute were recalled and his unique scholarship which helped in producing 3 books as joint Institute Research Publications and his final theoretical research work on the functioning of the market were recalled. Dr. Kurien will continue as Emeritus Professor of the Institute.

August Development Seminar

The paper for the August Development Seminar, "Need Based Energy Manage-

ment-Distribution is the key" by M.G. Devasagayam along with the summary of the discussion of the seminar appears as the first article.

Second Article

Paper on the Union Budget 1991-92 : A comment, appears as the second article.

Book Review

A review by Prof. A. Vaidyanathan of the book, "Irrigation: Analysing and Improving the Performance of bureacracies" appears under the book review section.

M I D S News

Dr. P.V. Sukhatme delivered a lecture on "Current Status of the Nutrition Debate" on 13th August, 1991.

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Prof. T. Hayashi formerly of the Institute of Developing Economics, Tokyo and currently Professor at the Daito Bunka University gave a seminar on "Japanese Experience in Technology" on 21st August.

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Dr. C.J. Fuller of the London School of Economics delivered a lecture on "Indian Anthropology in the 1980s" on 22nd August.

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Dr. T.K. Sundari from the Centre for Development Studies presented a lecture on "Some Preliminary results of a Health Survey of Scheduled Caste Households in Chingleput district on 26th August.

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A seminar on "World Development Report 1991" jointly organised by MIDS and Institute for Financial Management and Research was held on 11th September at IFMR premises.

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Prof. A. Vaidyanathan participated in a function to celebrate 20th anniversary of the founding of the CDS, Trivandrum on 14th August, 1991.

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He also presented the results of a joint paper with Dr. B.G. Kumar on 'Morbidity' at CDS on 16th August.

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Prof. Nirmal Sengupta attended a discussion session with the Action Research groups at NIRD, Hyderabad on 14th September.

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Dr. Paul Appasamy presented a paper on "Reuse of Wastewater" at a seminar on "Water for Madras" organised by the Tamilnadu Science Forum, Madras on 7th September.

Need based energy Management - Distribution is the key

(A paper based on Haryana experiment)

by

M. G. Devasahayam, I.A.S. (Retd.)
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Power shortage in India is endemic. Despite heavy investment in the power sector and additional power generation every year there appears to be no chance of the shortage syndrome easing up in the near future. Barring Andhra Pradesh, Himachal Pradesh and Kerala all other States and Union Territories have perpetual power deficits. There seem to be no escape from this crippling deficits if we go by the figures than are being published from time to time.

Were these deficits related to the need or the projected demand? This is a question that should be asked and answered sincerely if we are to get out of this shortage syndrome which has become the order of the day. In the power sector, it has almost become a ritual to insistently clamour for more projects, more power plants and more generation. According to experts, this is the only way to meet the projected demand of today, tomorrow and the day after. This school of thought, which is the predominant majority, believes in the classical concept of load management which emphasises the continuous and copious supply of energy to all sectors of the economy and to all types of consumers at all times.

This is alright as an ideal proposition. This ideal could be achieved if only we had unlimited resources at our command. But in actual practice, the resources are not only limited but scarce. And these scarce resources need to be spread over several areas all calling for urgent attention. It, therefore, follows that a demand based energy management would only result in the shortage syndrome repeating itself endlessly since the ever growing 'demand' could never be met fully and satisfactorily.

A better alternative would be to replace the demand based energy management with a need based one. In the power sector there is a distinct difference between demand and need. Consumers of electric power could be classified into five broad categories-the industrial users, the agricultural sector, commercial organisations, the domestic consumers and essential services. Industrial users could be further subdivided as shift based industries and continuous process industries. Agricultural sector would include irrigation, tubewells and rural industries. Out of these several groups and sub-groups, only three - continuous process industries, domestic consumers and

essential services - need power round the clock. Others may demand power 24 hours a day, but they don't need it.

On an approximation only about 10% of the industries in India are in the continuous process category. Another 10 to 15% would be doing two/three shifts. The vast majority (about 75%) are just single shift industries who do not need assured good quality power supply for more than 8 hours a day.

In the agricultural sector, this demand-need dichotomy is even more pronounced. This is further aggravated by a major distortion that has taken place in Indian farming. Traditionally, paddy had been cultivated in water rich areas with abundant rainfall. But in the past few years, this water intensive crop has been flourishing in areas which depend upon canal and tube well irrigation to a very large extent. It is all right as long as it is confined to canal irrigation. But the recent trend has been towards tubewell irrigation even for this highly water-intensive crop. This was certainly not in the original scheme of things.

All the same, even for raising the best paddy crop through tube-well irrigation, 10 hours of power supply per day during the season is enough. For a less water-intensive crop like wheat, 6 hours of power supply in 24 hours is more than sufficient. Whereas the "demand" here may be for 24 hours, the actual "need" is only of the order that we have seen. There is no need for the supply grid to remain 'energised' for more than this 'needed' period.

Same goes for the rural industries. Agro based industries like sugar and cotton ginning are seasonal in nature and require full power only for part of the year. Cold storages need 12 to

14 hours of power supply preferably split in two or three parts.

Energy which is the time integral of power is the most perishable of commodities. Once generated, it has to be transmitted and consumed. A need based energy management would

- a) identify the need of the various consumers
- b) forecast the generation requirement based on the need
- c) plan power generation as per forecast
- d) lay down a suitable distribution network
- e) regulate distribution as per need
- f) monitor matching of need with supply.

The greatest bugbear of need based energy management is the distribution network. Consumers cannot be supplied power as per their need since the distribution network is not designed for that purpose. The present day power distribution is full of constraints and is clumsy to the core. The ills of the system are many-poor reliability, high line losses, low voltage profiles, overloading of transformers, poor maintenance, absence of conservation measures, stealing of power, haphazard layouts, whimsical load connection, inadequate clearance, etc. With a single feeder connected to all type of consumers there is no load discipline and the distribution network is exposed to several malpractices and distortions.

Generation of power also suffers as a result, engineers incharge of power generation in State Electricity Boards are not enthusiastic about optimising power generation since they feel it only helps those in charge of the chaotic distribution system to make more money. A positive demotivating factor if there is one. So it is that if the power problem is to be solved, distribution holds the key.

Haryana Case Study

This was the scenario that faced the Haryana State Electricity Board (HSEB) in late 1984/early 1985. Haryana perhaps is the typical example of how chaotic the power sector could be. The total power "demand" of Haryana was to the order of 160 lakh to 180 lakh units per day and the State was supposed to receive it from an assortment of sources. As against this demand, the average daily availability in the first four months of 1984 was in the range of 98 to 120 LU. It has been dropping since then. In the first four months of 1985, there was further drop recording the lowest average availability per day in April 1985 (83 LU). The captive generation of HSEB from the thermal stations of Panipat and Faridabad (with an installed capacity of 415 MW) never went beyond 42.5% of the availability. The balance came from varied sources outside the State such as Bhakra Dam, Deharm Pong and Bairasai-all Hydro Electric Projects, the Indraprastha power station at Delhi, Singrauli thermal plant of NTPC and the Punjab and Rajasthan State Electricity Board, when they had surplus power to spare.

In the face of persistent and acute power shortage, HSEB has been resorting to power regulatory measures almost perpetually. The one in vogue in end 1984 had categorised rural, industrial and urban feeders separately. The State was divided into two rural groups each running for 10 hours on alternate days. Industries were required to observe 3 off days and allowed 8 hours supply on working days. The continuous process industries and large power consumers with independent feeders were permitted to run all the seven days with a 60% power cut. The urban feeders were ON

only in the night from 18.00 hours to 06.00 hours.

Good intentions and efforts notwithstanding this regulatory system had several defects and loopholes.

i) Available power was flowing in all the feeders simultaneously. Enforcement of the timings and power cuts depended on the discipline of the consumers which was totally lacking. Since power available was low and uncertain, consumers often resorted to panic utilisation.

ii) Continuous process industry had indeed become a farce. Anyone with influence or clout could get his unit in this category and draw power without fixed quantum of units provided he is willing to keep the people concerned in good humour.

iii) In rural areas, farmers would keep their electric pumps switched on so that they could water their fields at whatever time power was available. There were large number of stealthy and unauthorised connections to tubewells which were not accounted for.

iv) In areas where power was supplied only in the night for farming, there was lot of hardship to the farmers and wastage of precious water.

v) Need based energy management was not possible since from most of the grid sub-stations located in urban areas, the feeders catered to urban/semi-urban and rural loads. Even otherwise, there were no separate feeders for supplying power to distinct categories as per need.

vi) Even to cater to the demand of essential loads like hospitals, water supply and sewerage, the entire urban/

rural feeders had to be switched on facilitating unauthorised overdrawal of power by various categories of consumers connected to such feeders.

vii) With vast discretionary power vesting with junior level functionaries, it was a field day for the unscrupulous and vested interests. Senior officials could not do much in view of the powerful patronage some of the consumers enjoyed at high political levels.

All these factors lead to a situation where there was virtual chaos in the power front in the State of Haryana towards end of 1984. The crops were withering, industries had come to a grinding halt, there were severe disruptions in essential services and the domestic consumers were spending dark nights. Despite peak load restrictions from 18.00 hours to 22.00 hours, there was heavy overdrawal on the Bhakra system which in fact was the base load constituting about 40 to 45% of the power availability. With this base load drawn within a matter of hours, Bhakra power was cut off in the early hours of the morning leaving the system entirely dependent on the erratic thermal generation and unreliable outside sources of power. This resulted in frequent shut downs, tripping and voltage fluctuations. The quality of power available was very poor. There was a situation in which it was the Bhakra Management Board and not HSEB who were calling the shots and controlling the power availability and supply in the State of Haryana. With the power position in such a mess, there were convulsions in the political plane also.

It was at this point of time that a need based energy management system was quickly put together and enforced in the

HSEB around the middle of January 1985.

In nutshell the new system was this :

Consumers were categorised into :

- a) shift based industries
- b) continuous process industries and industries having independent feeders.
- c) irrigation tubewells
- d) peak load requirement
- e) domestic connections
- f) essential services

After allocating 4 to 6 hours in the evening for peak load, the day was divided into three parts of six hours each. The State was also grouped into three regions each having 4 sub-stations of 220 KV. After the peak hours, power feeders in one group would be switched off from the 220 kv sub-station itself in rotation for six hours. If the power availability fell below a certain level, only one group would be on in rotation of six hours. For the essential services, continuous process industries and independent feeder industries, amperage/units were fixed and power released accordingly round the clock. Thus for shift based industries and tubewells assured power was made available for 6 to 12 hours. For tubewells, the power was sufficient since it was uninterrupted and industries could run one shift either exclusively with HSEB power or in tandem with generators. In addition, for special needs like water supply, timings were fixed and power made available outside these group timings.

This system of energy management which was effected through power regulatory measures was strictly enforced. It was a combination of PR, vigilance and technical supervision-PR to make the consumers aware of the

measures. Vigilance to put the fear of God into the field officers and technical supervision so that no one could act smart. It worked well and the effort was rewarding. Around the middle of 1935, an evaluation was made of the new energy management system. Here are excerpts from the report of the experts:

"Critical analysis of the effect of new regulation - benefits accrued thereof"

With the implementation of the new power regulatory measures, a large number of benefits have accrued to the Board/power system as a whole. The feed back from the field offices and the general public indicates positive results and signs of general satisfaction inspite of serious power shortage. Some of the direct benefits derived are discussed as under:-

a) Assured supply of power

Under the new regulations, all the consumers were sure about the receipt of power during pre-determined hours. During the zone hours already publicised, the consumers can pre-plan their activities and adjust their power requirements accordingly. On the contrary, in the earlier system inspite of the announcement of working hours, supply used to be switched off due to unscheduled restrictions imposed by BBMB due to system constraints. For example, a small entrepreneur who had called his labour for one shift working assuming power to be available, had to lay off the labour because of unscheduled power cut. Now he can call the labour in the pre-determined hours and get maximum production benefits.

b) Equitable distribution of power

In rotation during fixed hours, under the new regulation, power flow is regulated according to the daily overall availability. This system assures equitable distribution of available power throughout the State as there are no possibility of manoeuvring by the field officers. When the power supply is switched on, all the consumers in that zone get power and for the remaining period, power is switched off from the sub-station itself.

c) System discipline

As controlling officers in the field and the consumers are aware of the timings during which they have to get power supply, they neither misuse power nor have any temptation to get supply by unscrupulous means. Earlier in case of power cut from BBMB or other stations, consumers used to get agitated and there have been instances of manhandling of the local officers considering them to be the cause for non-availability of power supply. This has now stopped and consumers by and large co-operate with Board officials to derive maximum benefit.

d) Improvement in quality of power

With the switching off loads in zones by rotation, the quality of power available improves considerably. All the concentration of power flow is in the particular area which helps in maintaining parameters to the desirable level.

e) Reduction in system losses

There has been remarkable reduction in the system losses due to switching off feeders in the non-working zones. With lines remaining uncharged there is considerable reduction in the losses, transformer damage, etc. The saving is upto

5%. Another important factor is that when the line is not charged, there are no chances of pilferage of electricity or misutilisation of electric power. This helps in reducing not only transmission losses but reduction in unauthorised drawal of power by unscrupulous elements.

f) Streamlined control of power distribution

In the earlier system, transmission lines remained energized and the actual control for implementation of power regulatory measures was in the hands of junior functionaries leading to several malpractices. Now that power is to be supplied for limited hours, control is in the hands of senior officers and any misuse could be detected easily.

g) Transfer of control from BBMB to HSEB

With the present system, BBM was not required to apply any cuts and the regulation of power consumption is done by HSEB itself. We are able to control each power supply system in a pre-determined manner without any fear of sudden cuts by any outside agency.

h) Impact on the performance of Regional Grid

Earlier the system peak used to occur around 11 a.m. and 8 p.m. and there was a steep rise in the peak demand as compared to the rest of the day because of increased drawal by all categories of consumers. Now the power distribution is evened out over the day thereby helping in flattening the daily load curve. Comparative graphs at Figure B-1 and B-2 reveal a steep rise in the load factor because of these regulations. These graphs are for typical days before and after the new load management system. It will indicate that with the same availa-

bility of power (97 to 99 LU/day), load factor had improved substantially because of load management. This meant uniform and steady availability of power and better quality. Moreover, the capacity utilisation of the generating system has also improved because of the reduced load duration and suppression of peak demand. This has resolved the peaking constraints on the system to a considerable extent.

i) Higher consumer satisfaction and economic efficiency

With assured supply of power, there is a general feeling of satisfaction amongst the categories of consumers inspite of power shortage. Consumers have developed better faith in the distribution system of the Board and they are able to pre-plan their activities which have resulted in their economic efficiency.

j) Improved generation due to disciplined distribution system

Under the new system, the load demand during particular hours could be forecast to comparatively factual level and the generation can be programmed accordingly. System is not subjected to sudden unforeseen demands thereby helping the generating system within its working parameters. With the suppressed peak and flattening load growth, the generating stations can work as base load stations without much variation in their generating levels. This discipline has resulted in improved performance of generating stations and better availability of units.

Limitations of the new system

a) However, the new system had certain limitations which were inherent to a

distribution network controlled manually. All continuous process industries could not get round the clock supply. Only those getting supply from Grid Sub-station through independent feeder could get the real benefit.

b) System constraints

The supply could not be given to all the consumers satisfactorily during zone times due to following system constraints:

- i) Inadequate capacity of Power Transformers/Distribution Transformers.
- ii) Weak Transmission system.
- iii) Tripping due to low voltage prevailing on the system, i.e., inadequate reactive compensation.

Distribution is the key for a need based energy management system. Load despatch control is the core of any distribution network. The improvements that had been brought about was all through a manual process of regulation and despatch. Even then certain long standing myths and presumptions had been shattered. Prior to the management measures, the average daily energy demand of Haryana was 160 LU, the satisfaction level was 140 LU and crisis level was 120 LU. The single most achievement of the new regulatory measures and management was to bring these levels down by a full 20 lakh units. As and when 140 LU power was available on days when the BBMB generated at full capacity and outside power came in as per share, HSEB could supply full demand of power to all consumers for 24 hours. At 120 lakh unit availability all sections had a satisfactory level of availability catering to their need with which they could carry out their economic activities. At 100 LU availability, there was crisis but no panic and there was reasonable level of satisfaction

with a scaled down power supply. In short, within a period of about 4 months it was established that while the demand for power in Haryana was projected between 160 to 180 LUs, the actual need was only between 120 to 140 LUs, a substantial saving of about 25%.

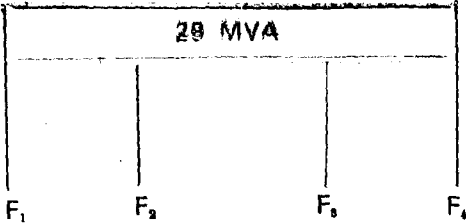
The distinct advantages of the need based energy management system are:

- a) It ensures high reliability of supply to consumers meeting their specific demand effectively for the specific period of actual requirement.
- b) The location and removal of faults become easy.
- c) The system losses are substantially reduced since line and equipment do not get overloaded for the full day.
- d) The voltage profile at all levels is improved and the problem of motors losing their pep at low voltage is successfully resolved.
- e) This is the easiest, quickest and the most economical way of meeting the power requirements of various types of consumers.
- f) This scheme facilitates the adoption of energy conservation schemes and energy audit policy.
- g) Power cuts are reduced and quality of power improves, leading to better industrial and agricultural growth and productivity.

All these were achieved manually with a distribution and load despatch system full of constraints. Yet the energy saving brought about at the level of a load centre was upto 48%. With a marginal improvement in the load despatch network, i.e., seggregating mixed feeders, a further saving of over 15% could be effected. Let us see this with an actual case in point.

Haryana State Electricity Board Experiment for Typical Load Centre

Case-1 : Practice that existed
T/f capacity is 28 MVA



1) F_1	=	City Feeder Capacity	:	4 MVA
2) F_2	=	Mixed load	:	16 MVA
3) F_3	=	Rural load	:	28 MVA
4) F_4	=	Continuous process industry load	:	2 MVA
Total				<u>50 MVA</u>

With the conventional approach, it was just impossible to feed a peak load of 50 MVA with the distribution capacity of only 28 MVA, even if the full generation was available.

Case-2 : After grouping

Group A		Group B
F_1	= 2 MVA	26 MVA
F_2	= 8 MVA	
F_3	= 14 MVA	
F_4	= 2 MVA	
Total		<u>26 MVA</u>

With this the city feeders, continuous and semi-continuous process industries such as cold storage, etc. could be fully fed as per requirement since the peak load was 2 MVA less than the max. capacity of 28 MVA.

Case-3 : After grouping and seggregation of Mixed feeder

Group A		Group B
Peak load		Peak load
F_1	= 2 MVA	22 MVA
F_2	= 4 MVA	
F_3	= 14 MVA	
F_4	= 2 MVA	
Total		<u>22 MVA</u>

RESULT

1. Saving in MVA capacity in Case-2 compared with Case-1

$$= \frac{(50 - 26)}{50} = \frac{24}{50} = 48\%$$

2. Saving in MVA capacity in Case-3 compared with Case-1

$$= \frac{(50 - 22)}{50} \times 100 = 56\%$$

3. Saving in MVA capacity in Case-3 compared with Case-2

$$= \frac{26 - 22}{26} = \frac{2}{13} \times 100$$

$$= \frac{200}{13} = 15.38\%$$

ECONOMICS

When this method was adopted for the load and energy management in one load centre, quite a lot of relief was felt by the consumers on account of the fulfilment of justified demand.

If the distribution system and necessary elements of transmission system are modified to suit the new plan, the advantages would be remarkable.

Additional expenditure involved for this modification exercise is only about Rs. 20 lakhs for this small sub-system. But the power saved would be 4 MVA. For generating this much of power, an investment of Rs. 6 crores is needed. Thus we can see as to how cost-effective distribution improvement is vis-a-vis additional generation. And the time required for effecting these improvements is only about two to three months as against 2 to 3 years required for bringing equivalent generation to the bars.

When projected to the entire Haryana State grid, the saving amounts to an additional power equivalent of 215 MW. For generating this much of power, a Rs. 320 crore investment is needed and it would take 5 to 6 years for completion. On the other hand, for saving this much of power with a need based energy management and improved distribution network, the cost involved is only Rs. 16 crores and the lead time is just about 8 to 10 months for manual operation. For incorporating computer control, it may take another 6 to 7 months.

Blown up for the whole country the saving of power would be a whopping 6300 MW which would cost Rs. 9000 crores to generate!

Following steps and measures would greatly help in improving this system of load management further:

- a) Proper urban land use planning and enforcement clearly demarcating areas

for specific socio-economic activities like residential, commercial, industry and essential services.

b) For the existing urban and industrial centres having haphazard and disorganised spread of these activities. Power distribution and supply could be regulated by installing wireless control systems at the 33/11 KV sub-stations giving signals to circuit breakers installed in the premises of the consumers. Different frequency is used for operating different types of load.

c) A scientific and systematic study of the need of each major consumer and sector and tailoring the distribution network accordingly.

d) Setting up of an effective carrier communication system.

e) Energy economics should become an important factor in evaluation of power generation and supply requirements. Presently it is too much engineering oriented which tends to get lopsided at times.

f) Need based energy management can be successful only if there is political will to go through the measures and administrative commitment to implement faithfully. These are pre-requisites since vested interests are bound to be affected in any rational and scientific management system.

These are low cost options vis-a-vis augmentation of generation capacity. This innovative need based energy management system can be further refined and carried out with precision with the help of modern real time computers to be installed at the load despatch centres of a State grid with necessary provision for integration with the regional load despatch centre. In the event, saving in power would be considerable, quality of power supplied would be good and consistent, and the level of consumer satisfaction would be of high order since their need would have been fulfilled. The bonus would be a substantial saving to the exchequer.

Summary of Discussion

Mr.P.C. Cyriac the Chairman of the seminar in his introductory observations pointed out that the paper is based on the experiment done in Haryana for the management of power shortage on a permanent basis. He further added that without power there was no meaning for the concept of economic development in the country. However in the context of the country's planning and decision making, to overcome this lacunae is not stimulative, because the present policy is to 'pay the cash and carry the coal' for generating energy. Hence this paper provides some practical solutions via the alternative method such as need based energy management instead of demand based management.

The author in his exposition highlighted the importance and need for the alternative energy management on a continuing basis. For this purpose, he explained the success story of "distribution aspect" of energy management in particular, the distribution during the lean (deficit) supply periods. He emphasised the point that 'the energy need is always less than the demand'. Further, he pointed out the 'inefficiency' in the energy distribution system. As a result, in Haryana, there was a gap in utilisation between power generation (140 mega watt) and actual consumption (100-120

mw). In order to obviate the situation he emphasised two aspects of management:

i) to carefully project the need based energy requirement and ii) effective implementation of energy distribution according to various needs. If it is done carefully there would be a substantial saving ranging about 25 percent of energy and a very satisfactory utilisation rate among the consumers.

The presentation was followed by an interesting discussion. One of the discussants raised his doubt that if a system is working in a very good manner but the "political" clout intervene and dilute the system (for instance, giving enormous power subsidy to farmers and other small entrepreneurs etc), then how to remedy the situation? The author responded that it is possible first of all to create a public awareness regarding energy saving and its proper consumption then the political interference should be removed.

Another participant raised an issue about how to bring a system with equity in power distribution. The author explained to achieve this there should be some centralised planning necessary, which is also happening now and there

should also be an inbuilt system for several types of industries. For equity in distribution market mechanism (supply and demand aspect of management) is not suggestive, because it is a judicial matter and the privatisation process is purely captive in nature. However, while adopting concrete planning methods, intellectuals should not be allowed once the system is streamlined as the system itself is liable to change.

In the concluding remarks, the chair person stressed that the focus of the paper has on how to manage the situation of power shortage when the demand is high and how to distribute the shortage to everybody without pain in a suitable way. Further he pointed out the power situation in Tamilnadu as follows:

Presently in Tamilnadu there is no power cut, because all Thermal Power stations have enough capacity for generation. Every day in three central stations (Neyveli, Kalpakkam and Ramagundam) a total of 3000 mega watt (2000 Hydel + 1000 mw thermal) or 65 million units is generated. He further added, that

Tamilnadu is one of the best states in the country. Regarding power utilisation (90%) of thermal capacity and even during power cuts the state is in a better position than many other states. For the better distribution of power supply in Madras city there has been an allotment of Rs. 1700 crores by Asian Development Bank to re-design the distribution system within a few years. In Neyveli 3 more units each of 310 mega watt is to be set up soon. In Koodankulam 2000 mega watt would be generated by 2000 AD.

Apart from this optimistic picture he further added that in Tamilnadu there are 2200 section officers available which are covered by 29 distribution circles - all over the state. To build up a good system of distribution and to ensure better productivity a committee numbering 2000 consumers on an average, per section office was to be set up soon to hear the consumer's grievances regarding the power supply.

K. SIVASUBRAMANIYAN

The Union Budget 1991 - 92 Some Quick Comments*

by

Malcolm S. Adiseshiah

Magnitude

The 1991-92 budget at Rs. 113,422 crores is over 20 per cent of the Gross Domestic Product of the country for 1990-91, the latest year for which provisional figures are available. In magnitude, it is an impressive amount, though an attempt has been made to reduce its growth by about 50 per cent from the growth of the 1990-91 revised estimates which was over Rs. 14,000 crores above the 1989-90 actuals, to the growth of less than Rs. 7000 crores as between the 1990-91 revised budget and the 1991-92 budget estimates.

Breakdown

The 1991-92 budget places total receipts at existing tax rates at Rs. 1,03,698 crores and total expenditures at Rs. 1,13,422 crores, comprising Rs. 79,697 crores as non plan expendi-

ture and Rs. 33,725 crores as Plan expenditures. Revenue receipts at existing rates of taxation yield a gross revenue of Rs. 66,218 crores this year compared to last year's revised estimate of Rs. 58,916 crores. The share of the states in the tax revenue is Rs. 15,643 crores, and the net revenue receipts of the Union government including non tax receipts are estimated to increase from Rs. 57,381 crores in 1990-91 to Rs. 65,524 crores in 1991-92. On capital receipts, market borrowing is placed at Rs. 7500 crores against last year's Rs. 8000 crores, and instead of increasing by 10 per cent to over Rs. 8800 crores following past trends, small savings collection will be Rs. 8000 crores. The 20 per cent disinvestment of equity of public sector enterprises, which it is claimed will broaden the equity, improve management and increase their resources, will bring in Rs. 2500 crores. External assistance is placed at Rs. 3510 crores (not allowing for devaluation which should increase the

amount by 15 to 20 per cent compared to Rs. 3984 crores in 1990-91. The result of all this is a budget deficit of Rs. 9724 crores (without the revenue from additional taxes and additional resource mobilisation), a revenue deficit of Rs. 15,859 crores and a fiscal deficit of Rs. 39,732 crores, from each of which the additional tax and resource mobilisation of Rs. 2005 crores should be deducted.

One of unique features of this budget is the section on financing human resources development, comprising an increase of Rs. 112 crores to Rs. 977 crores in education in the current year, the provision for employment generation of 900 million mandays, at Rs. 2100 crores, the sum for rural water supply of Rs. 758 crores so that there will be no "problem villages" by March 31, 1993, the development of a corporation for backward class development, a National Renewal Fund to look after workers who are rendered unemployed because of technical change, a National Foundation to care for children orphaned by communal riots and a youth exchange programme to promote National integration.

The increase of revenue is through the corporation tax which will bring in an increase of Rs. 1304 crores, the interest tax an increase of Rs. 535 crores, personal income tax an increase of Rs. 125 crores through enlarging the net and improving collections: on customs Rs. 510 crores will be lost through narrowing the range and reducing the maximum rate from 300 per cent to 150 per cent. The union excise will net Rs. 985 crores and the total tax revenue increase will be Rs. 2617 crores. On the expenditure side, major subsidies (export and fertilisers) have been reduced from Rs. 9550 crores to

Rs. 7824 crores. On interest payment which is the largest expenditure item there is no reduction as there can be none in the short run, but by reducing market borrowing in the future, interest payments will be reduced. On expenditure reduction, it is capital expenditure, plan and non plan, that has been cut, with only a 1 per cent increase over last year's capital expenditure, while revenue expenditure has increased by 8 per cent. The ministries that have taken a cut in outlay are—fertilisers from Rs. 585 crores to Rs. 411 crores, civil aviation from Rs. 485 crores to Rs. 433 crores, industrial development from Rs. 244 crores to Rs. 70 crores, heavy industry from Rs. 594 crores to Rs. 531 crores and mines from Rs. 613 crores to Rs. 417 crores. All this reflects the intention of government to pull in its horns in these sub sectors and let private operators take them over.

The budget for the first time is the centre of a comprehensive national economic policy, but like all budgets has its strong points and weaknesses.

Strength

The 1991-92 budget is the decisive key and focus for bringing about a turn around in the economy, its own specific contribution to it being the reduction of the fiscal deficit from 8.4 per cent of the gross domestic product last year to 6.4 per cent of GDP during this year. This involves rather heavy increases in taxes and charges (with more to come in administered price increases), and reductions in government expenditures to be referred to later.

Second, the budget takes account of the major effect of the devaluation of

* An article for the Southern Economist by Dr. Malcolm S. Adiseshiah, July 31, 1991.

the Rupee in computing the heavier debt servicing charges involved, though the effect of the larger rupee equivalent of the inflow of foreign loans and assistance, along with a number of items which should have been adjusted, which will be referred to later, are not reflected in the budget.

Third, the tax increases which will bring in Rs. 2617 crores this year are needed, both to reduce the gap between government revenue and expenditure and to cut back consumption of goods and services which are not essential for the individual or household economy. It is also good that the decline in direct tax receipts has been slowed (there is some difference of opinion on this). Also the increases in excise duties are on what the budget calls items of "elitist consumption". But the NCAER quadrennial households survey (1986-90) shows that some of these items like transistors, radios, TVs, VCRs, are being consumed by the urban and the vast rural lower middle classes (income between Rs. 12,500 to Rs. 25,000 per annum), and if that is so, they should also bear the burden of additional taxation.

Fourth, the budget has made a start in cutting back on government expenditures mainly in reducing the cost of the fertiliser subsidy, in abolishing the cash compensatory support which cuts back about three fourths of the export subsidies and reducing one part of the food subsidy, namely that on sugar. In this area of cutting government expenditure, it is good that the government has asked the ministries to prioritise their items of expenditure, so that they could cut the last items for purposes of paying their DAs or as economy measures. The real subsidies to be reduced are in the states—on road transport, electricity and water.

Fifth, and as a result, a first step has been taken on the revenue deficit reduction from Rs. 17,585 crores of the revised 1990-91 year to Rs. 13,854 crores for the current year and this process needs not only to be maintained during the year, it needs to be intensified during the next 3 years so that by the end of the VIII Plan there will be no revenue deficit. Similarly the budget deficit has been cut from Rs. 10772 crores in 1990-91 revised, to Rs. 7719 crores in 1991-92 which is 1 per cent of GDP. This again is a good start, it should not be allowed to increase during the year and should be continued and intensified in the next 3 years so that the budget deficit at the end of that period is 0.

Sixth, the reduction of the fiscal deficit from Rs. 43,331 crores (revised) in 1990-91 which was 8.5 per cent of GDP to Rs. 37,727 crores for this year which is 6.5 per cent of GDP is a good start. This sets the stage for negotiation on the long term and larger IMF loan. But the aim in regard to the fiscal deficit also should be to bring it down to 2-3 per cent in 3 years time.

There are also certain queries in the budget.

Queries

First, on the cutting of non plan expenditures, not enough has been done on two fronts. One is the huge defence outlay which has not only not been cut but has actually increased by over Rs. 500 crores. The other is the administrative costs of the government has not been cut nor the budget support and subsidies to the public sector enterprises. Here much more could be done in the next budget.

Second, the loss making public sector enterprises are not being adequately dealt with in the budget. They are being referred to BIFR which is a waste of time, as the experience of the past few years since its creation shows. These perennially loss making units should have been closed or sold. The obstacle to this is the strong trade unions opposition and that of the political parties. It is hoped that the National Renewal Fund will begin functioning this year and give the trade unions an assurance that the workers who are thrown out of work as a result of closing the loss making units will be retrained and deployed in the new units, which the funds raised from sale of their real estate should make possible. Meanwhile the fund will provide a safety social security not to the unemployed workers.

Third, the proposal to disinvest 25 per cent of equity of some public sector enterprises raises many issues. It should not be regarded as a revenue raising measure. Its receipts should not be used to meet the government's consumption expenditure. The exercise should also cover loss making units, and the funds so raised should be used as capital investment.

Fourth, in the area of taxation, the biggest gap in the country is the absence of any tax on agriculture. This has been widely debated and it is to be regretted that the budget has not posed this issue as a question which demands serious attention in time for the next budget.

Fifth, the inflationary pressure on the economy will intensify and be felt from four sources: first the rise in petroleum prices and railway fares and rates; second, the improved balance of payment through larger export earning and higher import prices resulting from the Rupee devaluation; third the subsidy reduction

of fertilisers and sugar will raise their prices; fourth, the enhanced excise on the white goods; TV, Refrigerators etc. The contra-inflationary force is the macro level deficit reduction and the decontrol, delicensing and deregulation which are long term anti-inflationary forces.

Sixth, there is a feeling of unease over the various provisions made in the budget for dealing with black money. There is the amnesty scheme, which will allow people to deposit their unaccounted funds in the National Housing Bank, being able to draw 60 per cent of it, and use it. On the whole deposit, there is "to be no look in period". The other scheme is the foreign exchange remittance received by any person which will not be subject to gift tax and which will not be subject to scrutiny under direct tax laws and exchange control regulations. There have been some 7 schemes like this in the past, which have failed to unearth black money, and which are per contra unfair to the honest tax payer.

Seventh, the NRIs are being invited to send funds to India on the assurance that no question will be asked as to their source. This surely is an open invitation to NRIs to bring in a larger way unaccounted money, which they are doing now, and using our banks to launder such black money. This is being done through the immunity to foreign remittance from direct tax laws and exchange control regulations referred to earlier, and through the dollar based India Development Bonds to be issued for the use of NRIs. What is even more disturbing is the statement of the government that it expects an flow of \$3 billion as a result, so that its loan from IMF could be reduced to \$2 billion. Here we are entering a very slippery path.

Eighth, it is well to bear in mind the the World Development Report that while the structural adjustment programmes, on which we are embarked with IMF advise, can and has improved the balance of payment position in the countries adopting such programmes, there is no hard evidence that it leads to further economic growth and may, as in some countries, lead to negative growth and negative effect on investments. This is a sobering thought.

Ninth, as referred to earlier, the budget except for some item like debt servicing, does not reflect the devaluation of the Rupee and the rise in railway freight rates. Except for a few items, most are budgeted at the same level as the interim budget. This may be a signal to the ministries to cut their spending (when it is in Rupees). But when the expenditure has to be in foreign exchange as in the case of embassies maintained by the ministry of external affairs, or in the contribution to the UN and specialised agencies, defence imports, purchases abroad by the departments of space and atomic energy, there will be around 20 per cent increase of what was provided in the interim budget. But the final budget makes no provision for the increased Rupee expenditure and to that extent is misleading.

Tenth, the budget's fiscal deficit correction has resulted in a lower Union Planning outlay (in real terms). The nominal increase in the plan outlay (Rs. 42,969 crores) is 12.9 per cent but with inflation at 12.6 per cent on the basis of the whole sale price index and 13.6 per cent on the basis of the consumer price index, the Union Plan outlay has not only not increased but has marginally declined in real terms. This together with the heavier cuts in capital expenditures, referred to earlier, will hold back the growth impulses of the economy.

Finally the open preference for the market—that World Bank and IMF call the market friendly approach—raises many queries. The budget statement says "a reformed price system can be a superior instrument of resource allocation over quantitative controls" Will it? Does this weaken the planning process in the economy? Immediately after the above statement, the budget statement says "but market can only serve those who are part of the market system. A vast number of people in our country live on the edges of a subsistence economy". The poser is whether the budget and the economy should be making friends with "subsistence economy personnel" "rather than with the market.

Book Review

Managing Irrigation : Analysing and improving the performance of bureaucracies
by Norman Uphoff with Priti Ramamurthy and Roy Steiner, 1990;
Sage Publications, New Delhi, pp. 230; Price Rs. 180/-.

This book is concerned with "how to improve the performance of bureaucracies having responsibility for irrigation management in developing countries". It is in 2 parts: Part 1, dealing with factors affecting performance of irrigation systems and their bureaucracy, consists of 4 chapters. Chapter 2 discusses characteristics of different types of management structures and the factors (including the nature of the system) affecting them. The objectives of irrigation management, the activities involved in it and the criteria by which performance is to be judged are reviewed in chapter 3. This is followed by a discussion of the relevance of 'context' (physical, technical, economical, historical, social etc) in shaping objectives and performance. The orientation and structure of irrigation organisation, their activities, capacities and relation with other concerned agencies is the subject of Chapter 5. Part II, dealing with elements and processes of reorientation to improve performance, focusses on what is called "improvement in management structure and style", (ch. 6) various alternative approaches to effecting the necessary

reorientation (Ch. 7) and the role of socio-technical analysis, and institution building and development in the process (ch. 8).

The necessity for such a wide and interdisciplinary perspective to analyse performance of irrigation systems is correctly emphasised. However, the discussion is, for the most part, abstract, rather heavy with the jargon of organisation/management science and reads more like manual giving check lists of factors to be considered than a definitive, unified treatment of the problem. That the nature of an irrigation system, the agro-climatic and social context in which it operates and the management of the system interact with each other in influencing overall performance is obvious enough. The nature and implications of these interactions, and their impact on eventual outcomes in terms of output and its distribution are however not adequately brought out. The discussion of the role of the "context" in which irrigation systems operate is particularly anaemic. The authors could have used their

knowledge of the specific systems in different parts of the world (listed on p.23-24) for this purpose far more effectively than they have.

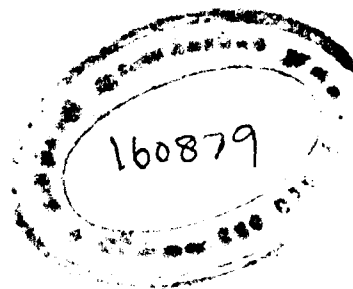
Even at the abstract level, some aspects of the treatment are somewhat questionable: For example, the distinction between bureaucracy managed and user-managed systems: Bureaucracy, in the sense of personnel employed to discharge specialised functions involved in managing irrigation, is necessary and are found even in user managed systems (eg. the tanks of South India). The difference is in the extent and manner of users involvement in making rules and in supervising the bureaucracy.

The bureaucracy is viewed as mediating between the government (which constructs and funds the system) and the users (who are supposed to have different goals) but it is also concerned about protecting its own interests. This characterisation, especially of the relation between the three groups is far too simplistic. The design and allocative role of government owned systems are supposed to reflect a particular balance between maximising returns to resources invested in developing and using irrigation and the interests of "equitable distribution" of benefits which is considered appropriate. Inconsistencies between the objectives, the design and the allocative rules, defects in the formulation of the rules and interference with the enforcement of rules by the bureaucracy can and do

cause problems in management. As for users, in the Indian context at any rate, the government does not even consult them about allocation rules, nor are they informed about the rationale for these rules. Be that as it may, conflicts among users over the use of water are inevitable even if they are consulted. An important function of the bureaucracy is to mediate these conflicts on the basis of well defined principles and procedures but problems arise when this power is undermined by encouraging extra-organisational channels to intervene in settling disputes and violations in ways which are inconsistent with the prescribed principles.

The strategies for improving performance are again mostly by way of outlining different approaches to improvement current in the management literature, but with occasional reference to experience of specific projects. System performance being the outcome of the system design, the physical and social context and management—the amalgam of which varies from project to project—such general formulations are not of much value as prescriptions for institutional reform. The authors have been involved in actually implementing operational programmes for improved irrigation management in different parts of the world. A critical account of the experience of some of these programs informed by the perspectives advocated in this monograph will have been more useful.

A. Vaidyanathan



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Publications of the Institute consist of the following categories

1. **Publications brought out by Messrs Sangam* Publishers:** These consist of a series of monographs mainly relating to Rural Development of Tamilnadu brought out between 1972 & 1980. Detailed list including prices available on request from the Programme Coordinator of MIDS. Orders may be placed with Sangam Publishers, 11, Sunkurama Chetty Street, Madras - 600 001 for these.

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- b) *Area Studies Bibliography Tamil Nadu* (1984) published by MIDS, pp. 226 Rs. 30/- for paper cover & Rs. 40/- bound volume.
- c) *Social Science Research in South Indian Universities—Listing and Review of Ph.D. Dissertations* (1989) Published by MIDS and ICSSR, SRC, pp. 260, Rs. 20/-
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- a) *Poverty—An Interdisciplinary Approach* edited by B. Sarveswara Rao & V. N. Deshpande (1982) & published for MIDS by M/s Somaiya Publishers Pvt. Ltd., Bombay, pp. 296, Rs. 125/-
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- c) *Some thoughts on the Seventh Plan* by Dr. Malcolm S. Adiseshiah (1985) & published for MIDS by M/s. Dialogue Publishers, New Delhi, pp. 136, Rs. 70/-
- d) *Shaping National Events* by Dr. Malcolm S. Adiseshiah (1985) & published for MIDS by M/s Dialogue Publishers, New Delhi, pp. 335, Rs. 180/-
- e) *Tamil Nadu Economy: Performance and Issues* by MIDS (1988) & Published for MIDS by Oxford and IBH Publishing Co. Pvt. Ltd., Delhi, Rs. 60/-

*These publications may be ordered directly from the respective publishers.

tables state the source as the Director of Statistics. What is necessary is to know from where the Director of Statistics got his data - as in the case of Table 1.8 Perspective Population by Districts, or table 3.1 rainfall : season wise, or table 3.4 land utilisation by districts or Table 6.1 Index Number of Industrial Production, etc. In this connection it is of interest to note that the document treats statistics from non government expert agencies like CMIE and MIDS on all fours with data from government agencies, which is sound.

A third issue is to review the tables set forth in Part II in order to see whether some of them can be omitted because they are not used by any governmental or non governmental agency and for them to be replaced by other needed data. For instance the use of some tables like 3.20 and 4.2 can be reviewed, while data on the state of poverty derived from NSS's 43rd and 44th rounds survey of consumer expenditure in rural and urban Tamil Nadu would be useful particularly if in the community they are related to the poverty line in Tamil Nadu.

Finally the sources for analysis and understanding Tamil Nadu Economy in 1988-89 are limited. They are the document Tamil Nadu—An Economic Appraisal 1989 (by the government's Evaluation and Applied Research Department), the Census of India 1991, Series 1 paper I of 1991 of statistics, series 2.3 Paper I of 1991 of Tamil Nadu, the 43rd and 44th round of NSS, CMIE's Basic statistics relating to the Indian Economy Vol 2 states, September 1990, and the twenty two issues of the 1988 and 1989 Bulletin of the Madras Institute of Development Studies and the Institute's Tamil Nadu Economy—Perspectives and issues.

Purpose of Appraisal

The purpose of the Appraisal is to see how far the Economy has, during the year, moved towards attaining or not attaining the Plan goals of increased employment/reduced unemployment, im-population movements to facilitate this, proved health care resulting in a falling infant mortality rate and improved nutrition, particularly of children and pregnant women, increased protected drinking water supply, acceleration of literacy and education, reduced levels of poverty, and for these various ends how far agriculture, food and non food crops production have increased along, with the allied segments of animal husbandry, fisheries, forestry and irrigation, and how manufactures and the infrastructure have developed both to provide the goods and services needed by the people, and make available to them the needed employment, so that they have the resources to buy the goods they need.

1988-89 which the Appraisal document covers is the penultimate year of the state's Seventh Plan - to which there is no reference at all in terms of its objectives and targets in the document. There is a basic continuity in our Plans—the sixth, seventh and the coming Eighth plan at last as far as the goals to be attained are concerned.

As usual, the Appraisal document concentrates on the rate of growth—the annual average rate of growth, the pace of growth of the Net State Domestic Product (NSDP) for 1988-89 and for the period of 1980-81 to 1988-89. It states that "for the second year in succession, the growth rate of NSDP during 1988-89, exceeded the annual average growth rate visualised in the Seventh Plan period". However the

pace of growth registered at 6.5 per cent for the year was slower than in 1987-88 at 8.2 per cent. In Table 1 in chapter 2, State Income, it sets forth the annual average growth rates in each of the year 1930-81 to 1988-89 and concludes that for the period the Tamil Nadu growth rate at 5.64 per cent "did not differ much from the all India rate of 5.52 per cent". This is followed by analysis of the trend and pattern of growth between 1984-85 to 1988-89 (para 2.3), the growth rate of the sectoral composition of income (table 3) the growth rates of the 16 sub sectors into which the total income is divided (table 4) and a similar exposition of the growth rates of per capita income in both current prices and 1980-81 prices in table 10.

As pointed out in previous reviews, this detailed expose of the growth rates of NSDP and the sectors comprising NSDP and per capita income seems to have a magnetic quality on its own, into which all of us specialists and the public get trapped. It sets the terms of the analysis and review. For this, discussion is on whether a) the growth rate for the year (1988—89) was higher or lower than for i) the previous year (1987—88), ii) all India or other state's rates, b) the growth rate was in conformity with the target rate envisaged, c) the rate of growth of the sub sectors are higher or lower in Tamil Nadu than that for all India, and d) a new table (table 9) where, the percentage share of each sub sector is compared as i) between its contribution to NSDP and employment in the year and ii) between state and all India. Naturally one is lost in these growth percentage and takes their behaviour as being equal to the behaviour of the economy. In fact attention is diverted from the status of employment,

health, education etc to the percentages of growth. It is implied that if Tamil Nadu has a higher growth than last year or All India, it is better off. Better off—why and who is better off?

It needs to be remembered that this heavy and sole concentration on the growth rates is highly misleading for many reasons. For one thing the Net State Domestic Product which is set forth as Rs. 11,07,524 lakhs for 1988-89 compared to Rs. 10,39,499 lakhs in 1987-88 is a highly aggregative figure which puts together all the goods and services produced in the state (cows and apples, paddy and scientific research) in one total and to derive from it a per cent of growth for the year is really to turn the aggregative figure into an abstract mathematical/statistical quantity. The rate of growth tells us even less about the economy in 1988-89. There is no meaning to the statement that the rate of growth "did not stand a favourable comparison on the face of it with that of the national economy at 10.9 per cent". What is it that is being compared? They are 2 abstractions. Why should they be compared? The state economy as an open ended economy cannot be compared with national economy, which is relatively a closed economy.

Instead of pursuing this futile path of growth rates, growth percentages, etc we may turn to the performance of the economy in 1988-89 in terms of the objectives referred to earlier, on which the document: Tamil Nadu: An Economic Appraisal says little and in some cases nothing, compared to its sectors on growth, NSDP, Agriculture and Industry.

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**MADRAS INSTITUTE
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The aim of the Institute is to contribute to the economic and development in Tamilnadu and India.

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