Bulletin

Mds Development Seminar

Series

No. 3

XXII

March, 1992

93

BULLETIN

MADRAS DEVELOPMENT SEMINAR SERIES

Vol. XXII No 3 March 1992

Containerisation and Multimodal Transport

Structural Adjustment in the Indian Economy-an assessment

CONTENTS

EDITORIAL - SOME HIGHLIGHTS

I. General Economic Scene

State

Overview of the State's Economy

The Governor in his address at the start of the assembly at the end of January attempted an retrospective and prospective over view of the economy making the following 12 points: First, that despite the rise in the issue price of rice by the Union government, the State government retained the price of common rice at Rs. 2/- per kg involving a very heavy subsidy for the state government. To control prices of rice and essential commodities the trader's levy has been kept in abeyance with an assurance from traders that they will bring down the prices of open market rice. Second, the government in its programme for the poor launched the scheme of providing free dhoties and saries to 1.20 crore poor persons at a cost of Rs. 41.56 crores. Third, the government joined other state governments in the National Development Council to modify the Gadgil formula which though not completely satisfactory to the state is an improvement on the previous formula. The government regrets that though the part of union government assistance to the states is stepped up considerably, there is no perceptible increase in the flow of assistance to this state and this does not qualify for assistance under the 20 percent component to assist the states where per capita income is below the national average between 1982-85. The state feels that there are difficulties in correctly computing the per cent income which should be corrected. It is hoped that because of its problems, the state will receive some assistance under the 7.5 per cent component reserved for special problems along with a special allocation of market borrowing for Tamil Nadu which has been requested. Fourth, the government has proposed an Eighth Plan outlay of Rs. 9500 crores but there is a problem with the size of the Annual Plan for 1992-93 and both will be decided after further discussion with the Union Planning Commission. Fifth, the south west and north east monsoon have been satisfactory, some northern districts have suffered from floods and cyclone and the state government has spent Rs. 30 crore as flood relief, exhausting the entire calamity relief fund. The government has formulated a major reconstruction programme for restoration works in the flood affected areas and is urging the union government to take this up with the World Bank for assistance. Sixth, due to the good rains, rice production in the state will be a record 65.25 lakh tonnes and total foodgrain production 90.45 lakh tonnes for 1991-92 Similarly the production of sugarcane, pulses and cotton are at record levels. The government is also giving priority to fisheries and has launched a scheme to further develop brackish water prawn farming and for this purpose to bring 1000 hectares under the scheme this year. Similarly the afforestation programme is being vigorously implemented along with upgrading of denunded and degraded forest areas and under which 2000 hectares are being taken up. Similarly large areas of private sector land reserves are not being put to proper use and a scheme for using these lands for raising fuel wood, fodder and tree based products are being taken up. Seventh, a New Industrial Policy of the government has been formulated and launched (to be dealt with under the Industrial Development of Tamil Nadu sub sector later). In view of the union government's delay in approving the 3 growth centres for the state, the state government is going ahead launching the centre on Paanangudi in Nagapattinam, Perundurai in Periyar district and Gangaikondan in Tirunelveli-Kattabomban district. With the good rains in the catchment areas, and good hydel generation, the state has been free from power cuts and it has been possible to build up coal stocks to ensure uninterrupted power generation in the summer months as pledged in the New Industrial Policy In this context the Rs. 7000 crores 1500 MW Jayamkondam Cholapuram Lignite Power project is important and is awaiting Union decision. Eighth, the government is paying special attention to the maintenance, repair and upgrading of roads and has contracted a Rs. 30 crore road development project at Nagapattinam with the Maharashtra Public Sector Infrastructure Leasing and Financial Systems Ltd., which will collect tolls to finance the project. Along with road development, bus transport services are being upgraded to reach even remote rural areas, so that every village with a population of over 1000 will have a bus connection before the end of December 1992. Nineth, on the provision of safe drinking water, of the 2483 rural habitations which lacked it, according to the survey on 1.04.91, 2422 habitations have been provided and the balance will be covered by March 1992. The Telugu Ganga project has been discussed between AP and Tamil Nadu government and the agreement reached is to follow a timetable so that the water reaches Madras in June 1991. Tenth on education, the total Literacy Campaign is operating in 7 districts covering 18.35 lakh active learners and the other districts will be covered next year so that by 1993-94 the campaign will be completed. All the single teacher primary schools are being given an additional teacher and all high and higher secondary schools are being provided with seperate toilet facilities for girls and boys. School buildings will be provided by government upto elementary level, and appeal is made to the private sector to provide buildings to the secondary and higher secondary schools. Eleventh, on

health care, where the health facilities do not reach the people, the new 10,000 free health camps is launched to be held over a 6 month period, under which the best health service, health personnel and drugs and medicines are being made available to all persons. The noon meal scheme is being strengthened by attracting industries, voluntary agencies and philanthropists to construct buildings for the scheme. A new programme, the Integrated Women Development Programme has been launched to promote self employment for 1 lakh women in rural areas. This programme operating in 3 districts has been extended to Madurai and Ramanathapuram districts also and the entire state is planned to be covered during the plan period. Twelfth, a broad based new scheme of land record management is being introduced through a patta pass book scheme on a state wide basis. Finally the government is confident that the 1991-92 plan outlay of Rs. 1600 crores will be fully implemented.

VIII Plan

The meeting in January between Chief Minister of the state and the Deputy Chairman of the Union Planning Commission on the Plan outlay for Tamil Nadu in 1992-93 has given rise to sharp differences. Against the state's request for an outlay Rs. 1751 crores and the 1991-92 outlay of Rs. 1605 crores, the Deputy Chairman of the Planning Commission announced an outlay of Rs 1486 crores for 1992-93. He stated that this would involve the state government going in for an additional resource mobilisation and widening the tax net. The Chief Minister of the state did not accept this lower outlay which is Rs. 119 crores lower than the 1991-92 outlay (lower by 8 per cent). She has asked for an outlay which would enable the state to build up infrastructural facilities, particularly power and to augment agricultural production. Some of the suggestions advanced to the state government was to cut subsidies like getting farmers to pay 15 paise per unit of power which is as of now and increasing the emphasis on the private sector. In this connection references is made to the contract with a Bombay based company to build a net work of roads in Nagapattinam and collecting a toll tax from people using the facility. As a result of this disagreement over the size of the Annual Plan, the state government has not accepted the invitation of the Union Planning Commission to send its officers to discuss the sectoral allocation for 1992-93. The state government is right, that till agreement is reached on the Annual Plan size, the sectoral breakup cannot be discussed and much less agreed upon. The Deputy Chairman's statement on January 27 that the commission is examining the request for a higher outlay and is being examined related to these resources likely to be available in 1992-93.

Climate and Prices

January was cool and dry with the effects of the plentiful monsoon helping the state's irrigation and drinking water problem. The weather is moving to a warmer climate at the end of the month, presaging the end of the cool weather in February. With regard to prices, CSO's monthly abstract of statistics reports that the index number of consumer prices for industrial workers shows a rise of 6 points (2 per cent) in June and 4 points (1 8 per cent) in July. The index number of consumer prices for agricultural labourers shows a rise of 16 points to 848 in July (2 per cent), over the rise of the 16 points to 832 (2.3 per cent) in June. The consumer price index for urban non manual workers records a change of points at 179 for Madras, at 172 for Coimbatore, at 165 for Salem, 2 points for Madurai at 177, at 177 also for Tiruchirapalli. Hence once more the heaviest inflation rate is found in rural areas and the lowest in urban areas. The January increase in price of rice and coal through PDS increased both the state subsidies (for rice alone it increased the food subsidy by Rs. 15 crores over the existing Rs. 350 crores) : similarly the Rs. 70 a tonne increase in coal prices will cost the Tamil Nadu Electricity Board an additional Rs. 75 crores, which cuts into the Rs. 75 crores that the recent tariff hike was expected to obtain a full year. This means that these prices will have to be further increased just to avoid increasing the state government subsidy, that what happened on January 25 when the PDS rice price for fine and super fine variety were raised from Rs. 2.50 per kg. to Rs. 3,50 per kg. Similarly milk price was raised by Rs. 1 per litre.

Power

The power situation in January was normal. The Neyveli break down of power due to floods have been repaired and Neyveli was generating at full capacity. The coal price rise in January, referred to earlier is adding the Tamil Nadu Electricity Board's financial problems, as it will have to pay the Rs. 65 crores in a full year which will certainly mean a further hike in the electricity tariff over and above last month's rise. The major development in the power sector in the state in January was the announcement that the Soviet aided nuclear power project at Koodankulam has been dropped and the National Power Corporation has disbanded the staff assigned to the project. The break up of the Soviet Union and the lack of any communication from the Moscow authories, with the indication that the project is off has led to this decision. The National Power Corporation is seeking the government clearance for setting up two 500 MW reactors of Indian design in the same place. But the prospect of this substiution being approved are dim in view of the resources crunch of the union government. This decision reduces further the power capacity of the state by 2000 MW and presents a serious situation for the state's agriculture and industry. Of the 5 power plants offered by foreign companies for a total generating capacity of 2000 MW awaiting union government clearance, 3 are to be located in Tamil Nadu, a 210 MW lignite based company by an NRI company, a 240 MW lignite based plant by a consortium, Coleman Associates, Australian government and NLC, and a 250 MW coal based plant by Austrode, an Australian consortium. Of the 13 Indian private companies awaiting government clearance - 2 are in Tamil Nadu - 500 MW lignite based by GM Swami, the 1500 MW Jayamkondam lignite project by M. Bharat, and TIDCO. The government announced an increase in power tariff by 10 per cent per unit in February 1 for all persons except domestic consumers and households.

The power situation in the country in January was beginning to show its usual variation. While the South generally had a fairly normal power scenario, AP state electricity board imposed a heavy 25-35 per cent cut in demand, 30-40 per cent cut in energy consumption, on HT consumers from January 6. The cut is justified by the estimated gap between

demand and supply of energy of 11.7 million units per day during the non monsoon months. This has been in force for the non monsoon months in AP for the past 6 years and the expectation is that it will continue for the next 2 or 3 years. The Union Planning Commission has announced a cut in the power outlay programme of the Power Ministry by Rs. 43,000 crores which involves a reduction in its additional capacity target by 5645 MW. Hence the VIII Plan outlay will be Rs. 83,000 crores against the Rs. 1,26,000 crores sought by the ministry, reducing the capacity addition from 34,645 MW to 33,000 MW. Out of the approved outlay, Rs. 27,000 crores is for the union sector and the balance for the states sector. This will worsen the power scarcity faced now and this will worsen in the VIII Plan, particularly in the hydel sector, which will in turn continue and worsen the wastage of the country's water resources. Against this, the Department of Nonconventional Energy Sources and the relevant state governments' agencies report that for the promotion of alternative sources of energy, standards for equipment in mini and micro hydel stations, are to be established at greater speed and lower cost. This will be linked with the World Bank's $ 70 million programme to aid the development of mini-micro hydel units in the 4 southern states and Punjab (see Vol. XX p 352). The government reports that despite India's power generation capacity of 66.000 MW the shortfall between demand and supply at peak hours is 10,000 MW. The Deputy Chairman of the Planning Commission reports that the participation of the private sector in power has not taken off as only so far 4 proposals for 5000 to 6000 MW have been received by the union government. This has forced the government to reduce the power sector by 38000 MW during the VIII Plan, resulting in a very tight resource situation.

Water

The comfortable water position in the state due to the bountiful south west and north east monsoons in relation to the state's hydel reservoirs, irrigation and drriking water have been set forth in earlier issues of the Bulletin. The cauvery water dispute between Tamil Nadu and Karnataka has now involved over 1.2 lakh Tamilians leaving their agricultural lands, business and houses in Karnataka and coming to Tamil Nadu as refugees. Some Kannaddigas from the Gudalur areas have been similarly driven out by the Tamil mobs comprising mostly Sri Lankan Tamil repatriates in the Nilgiris who want their lands. This dispute whose immediate cause was the gazetting by the union government of the Tribunal's decision needs to be settled by the state governments in stages - first to assure protection to the refugees from the two states so that they can return to their homes, second to ensure that their lands and properties are returned to them. third on that basis to discuss the means of implementing the tribunals decision on the sharing of the cauvery waters and such modifications in it as may arise from the implementation. Thus the cauvery dispute is still live in January 1992 and needs to be addressed by the two governments. The other major water project - the Telugu Ganga - where the cooperation between Andhra Pradesh and Tamil Nadu to carry out the agreement to provide Madras city with 12 tmcft of Krishna water agreed to by Maharashtra, AP and Karnataka back in 1982 (see Vol. XII pp 125 & 126) was reviewed in January by the two Chief Ministers of AP and Tamil Nadu at a meeting in Hyderabad. The project started in 1983 was to be completed in 10 years by March 1993 but due to various political and administrative problems and engineering bottlenecks, was revised to be completed by 1994. Now the latest review of the project by 2 Chief Ministers has resulted in the further pull forward of the project by a year to June 1992. The problems which have led to this delay are the delays in getting the union government's environmental clearance in problems of land acquisition, reforestation and the unsettlement of those who have been displaced. In addition Karnataka has raised strong objection to the AP government's plan to use the project also to meet the irrigation needs of Rayalaseema, which has led to the planning commission delaying the approval of the project and the release of the funds. There has also been problems in planning and designing the reservoirs. Now all these have been solved. The problem now left is the rapid escalation in the cost of the project, now reckoned at Rs. 1120 crores against which only about one third-Rs. 393.07 crores have been spent. So the two governments have decided to make their contribution to meet the costs of the project promptly and, even so give the further rise in the cost of the project to concentrate on priority items of work that are effected for the supply of drinking water to Madras and irrigation to Rayalaseema. There is also the assistance from the World Bank for the treatment, storage and distribution of the 12 tmcft of water that Madras will be receiving which has been held up because of the delay. It is hoped that with this January 1992 decision of the 2 government (called the Hyderabad declaration)- the funds will be released to speed up the project. Both governments are also trying to raise funds from NRIs. The major issue now is resources for the project.

Roads

As noted earlier, a first step towards privatisation of road development and maintenance, the state government has an agreement with a Bombay company - the Infrastructure Development and Leasing Company - for the construction, maintenance and repairs of about 1000 km. of wide road network in the Nagapattinam district. The entire cost of the work estimated at Rs. 150 crore is to be recovered from the users through a toll. Already the government has decided to collect a toll tax from tourist vehicles plying in Yercaud, Ooty and Kodaikanal. The funds so collected are to be used for repairing and maintaining the roads in these tourist spots. It is important that the toll collection at the various points should be done speedily in order to prevent wastage of petrol or diesel by waiting vehicles and also to save time in the operation. In the industrial countries toll collections have been automated to meet this problem. It will be some time before we move in the direction of computerised automation and till then the operation should be run speedily and swiftly.

Madras Corporation

The Madras Corporation reports a rather bleak financial position. Its annual per capita tax revenue is Rs. 49, while its per capita maintenance expenditure is over three times at Rs. 177. The capital works are implemented with grants and loans averaging Rs. 10 crores a year. The budget of the Corporation was Rs. 60 crores in 1990-91; it had an accumulated deficit of Rs. 40 crores and its income is stagnant as in the absence of an elected council, it is not in a position to increase its taxes. A 6 year analysis of its income shows that 36.8 per cent comes from

other taxes, 38.2 per cent from taxes assigned by the government and 4 per cent from grants. The assigned taxes are duty free on transfer of property, entertainment tax and the surcharge on sales tax. On the expenditure side, 62 per cent goes towards personal costs (salaries etc) 7 per cent to operating expenses and and another 7 per cent towards repairs and maintenance and 12 per cent for depreciation. The major expenditure items are conservancy (21.3 per cent) and road maintenance (18.3 per cent). The analysis points out that the corporation's tax receipts do not increase as fast as its population which was 25.73 lakhs in 1971 with tax receipt at Rs. 10.12 crores and in 1989 the population had increased to 37.67 crores but receipt only for Rs. 18.36 crores. It is clear that unless the finances of the corporation are increased mainly by increasing its rates and taxes (for which an elected body is essential), it will continue to face the present difficult financial situation and even so, to its excessively dependence on the state government which is itself facing a resource crunch.

Debt Relief

The "across the board" debt relief scheme implemented by the union government in 1990 (see Vol. XX p 97) has affected the banks in the state. The public sector banks face a liquidity problem, the cooperative banks, which have not been fully reimbursed for the debt relief it was asked to undertake, are now facing a sharp fall in their profitability. Tamil Nadu which stood first in implementing the debt relief scheme which involved benefiting 18 lakh farmers by Rs. 490 crores - Rs. 290 crores through cooperatives and the rest through public sector banks is now facing a crises. The union and state governments were to reimburse the banks, but the state government has pleaded financial difficulties and the union government has attained a NABARD loan for the cooperatives which still have owing to them, Rs. 70 crores, with a similar sum owing to public sector banks. To enable the cooperative and public sector banks to continue financing agriculture, which is a priority area, these dues should be settled by the union government this year.

Quarrying and stone cutting

Massive illegal sand excavation from very near the coast is posing a damage to Injambakkam near Madras. Above 54 lakh tonnes of beach sand (cost Rs. 2 lakhs) has created a dangerous ravine - over 200 metres and 50 meters deep. This also threatens the sweet water of the area. This needs to be regulated and stopped by the government. Again, 6 forest quarries in villages in the Tambaram district are to be reopened soon. This as part of 96 quarries were closed by the union government on the ground that they were reserved forest land. Now the Unemployed Graduate Stone Crushers Owners Association have made representations to the union aud state governments and moved the Madras High Court, and as a result the quarries are being reopened along with some more quarries, providing employment to members of the Association and Harijan workers.

National

Eighth Plan

The Annual 1992-93 Plan for the state and Union territories are nearly completed except for Punjab, Maharashtra and Delhi (Tamil Nadu is still in dispute). The total plan size so far approved for 1992-93 is Rs. 25,134 crores against Rs. 23,805 crores for 1991-92 which is a meaore nominal 5.5 per cent increase for 1992-93. When the inflation rate of 13 per cent is taken into account, the real Plan size for 1992-93 will show no increase - but a decrease which is a reflection of the resource crunch facing the country. This raises questions about the VIII Plan. Against the projected 5.6 per cent growth for the Plan, mainly on the ground that this was the rate achieved in the VI & VII Plans, account should be taken of the memorandum of agreement with IMF which speaks of a 4 per cent growth in the first year of the VIII Plan which will call for a 6 per cent growth in the subsequent 4 years. If the fact that the 2 non Plan years 1990-91 and 1991-92 which registered an average growth of 4 per cent is taken into account the average rate for the remaining 4 years of the VIII Plan will have to be even higher at near 7 per cent. (Planners estimate a 2.5 - 3 per cent growth in 1992-93). These factors and the continuing resource crunch which will last for atleast the first 3 years of the plan point to the need to reexamine the Plan and its assumptions. An important report of the Planning Commission task force on self management institutions recommends a review and change in the administrative structure and decision making. In place of the current centralized decision making which has slowed down the pace of work, decline of people powers, it recommends that there should be clearly defined role for ministers and departments, a large scale induction of professionals, replacing the "regulate and control approach" by a result and mission oriented approach. This will also correct the collapse of the panchayats and give the cooperatives an identity, which they have lost. CAPART has been reduced to a funding agency for rural development and should become a major channel for mobilising the voluntary agencies for rural development. The report is important and calls for consideration by the Planning Commission, the Union and state governments, who are all involved in the analysis and recommendations.

Prices

The rate of inflation in December on a point to point basis was a low 0.4 per cent, the wholesale price index standing at 212 for the week ended December 28. On this basis, the annual rate of inflation was 13.1 per cent. The index for the major group of primary articles rose by 0 5 per cent, food articles rising by 0.6 per cent, the group fuel, power and light rose by 3.2 per cent, while manufacture products remained stagnant. For the calander year 1991, the annual rate of inflation was 13.5 per cent against 9.1 per cent for calender year 1990 and for the "first 3 quarters of 1991-92, April-December, the inflation rate was 13.7 per cent against 9.3 per cent for the same period in the previous year. To attain the finance minister's target of 10 per cent at the end of the year, March 1992, the whole sale price index has to remain at 210.9 at the end of the fourth quarter where it is already at 212 at the end of December as noted above. The rate of inflation at the high level is not due to demand because the increase in money supply and credit has been squeezed, it is not due to supply factors as the foodgrain harvest is plentiful for the third year running and the latest news on the oil seeds front is of a good harvest and so is the expectation of rising prices, seen in periodic administered prices hikes; panic buying by consumers and hoarding by traders and farmers. Against this there should be massive import of foodgrain and edible oil, as agricultural prices have shot up by 30 per cent accounting for 36 per cent of the inflation, while manufactured prices

have risen only by 10 per cent. Government economists attribute the unusual spurt of the price of essential commodities to the sharp rise in the proxy holding power of farmers, as traders in these commodities are using the farmers as "proxy" to stock large quantities of the commodities without actually lifting them. During the month the government raised the issue price of rice and wheat which has saved the government Rs. 308 crores. Similarly the rising coal prices and the rise in the surcharge of the 4 petro goods prices in 11 states will divert Rs. 300 crores to the Union by the end of the year. Does this make the case for switching from administered prices for these goods to market related system of oil prices? The only positive effect of the high inflation was that it will enable the government to stay its fiscal deficit within the 6.5 per cent of GDP limit. The government can increase the deficit by Rs. 1000 crores over what is provided in the 1991-92 budget.

Union Budget and Loans

The government reports that the immunity schemes announced at the time of the budget (see vol XXI p381) have collected $955 million, with Indians receiving these funds being exempt from all tax laws. The government states that it expects to collect over $1.5 billion by January 31 under these schemes. In the budget, Rs. 12,000 crores are spent on Union government staff salaries and allowances and the Prime Minister has announced that 1000 posts would be abolished in 3 Key departments-office of Chief Controller of Imports and Exports, the Development Commissioner for Cement Industry and Director General of Technical Development. One curious factor is that though 10 per cent of all government posts totalling 3.60 lakh have fallen vacant, the wage bill has risen by Rs. 215 crores because of the revised pay and allowance rules, annual increases and release of additional DA. Thus it is going to be difficult to cut their gargantuan bureaucracy or even hope that vacant posts will produce some savings in the wage bill. In January 2 union loans for Rs. 1500 crores have been floated making the receipts from market borrowing this year to Rs. 6,282 crores.

Stock Exchanges

In December the spectacular rise in the Bombay Stock Exchange of 30 share sensitive index by over 113 points to a new high of 2115.89 on January 17 as an euphoric reaction to the complete decontrol of steel products and to 2300 on January 30 raises once more the question of how good are stock exchanges barometers as an indicator of the health of the economy. The answer is in the negative, the economy is in troubled waters and corporate profitability in the second half of the year not doing too well, this bullish rise has nothing to do with the state of the economy. Under these conditions the introduction of "stock invest", is helpful in protecting the investors, especially those who have not got the share allotment. Again the SEBI directive limits the public issue expenses of companies to amounts permitted by it is good, even though these expenses may go up because of the government provision that every share application must be accompanied by an abridged prospectus. It is also good that regional stock exchanges in Calcutta East, Guwahati, Bhubaneswar and Magadh are setting up an inter stock exchange committee to settle the disputes within the region. Of the same order of bringing some discipline in the Bombay Stock Exchange is the decision of the finance ministry, against the strong opposition of the stock brokers, to set up a National Stock Exchange in new Bombay. It will have 1000 members from all over the country with fully automated trading and settlement facilities. Once the finance minister clears the proposal, it should be set up.

Narasimhan committee

The implementation of the Narasimhan committee recommendation on rural banking will involve floating 25 to 30 rural banking subsidiaries, according to the finance ministry. This will change the Indian banking scenario completely and make the local banking structure a little like that of the US in having geographically restrictive banking companies. The Narasimhan committee has also recommended that the government and RBI move slowly in the continuing drive towards deregulating interest rates in the economy, while recommending the medium term goal of moving towards market determined interest rates and that the approach to total deregulation should be cautious. In any case it points out that the current interest rates of government and banks are on the high side and cannot go much higher. The union government has instructed public sector banks to compile their balance sheets and profit and loss accounts for 1991-92 according to a new format which will give them the much needed transparency.

Economy

The pointers on the economy in January include five major issues. First, the UNDP - Indira Gandhi Centre for Economic Development Symposium in Bombay recommends the need for greater social action, to prevent relief to the poor whom the structural adjustment programme will hit severely, and aggravate poverty. Social expenditures in India currently at 2.5 per cent of GDP should be speedily raised, taking note of the fact a laisse faire economy like the US is spending 15 per cent of GDP on poverty reduction. Hence India and the Third world are called to give up productive sectors in the economy and accentuate on social priorities in the wake of the vast deregulation taking place in India and the developing world. Second, in relation to the Indian government's decision to import 1 million tonnes of wheat and 3 lakh tonnes of edible oil referred to earlier. attention is called to the fact that India which had started to export foodgrains, now finds its food security system over stretched less than 3 weeks after the ministry of agriculture announced its Plan to export 8 lakh tonnes of wheat and even double that amount if necessary. This is poor planning. Government now advises that wheat stock are falling fast, as it is 2.5 million tonnes less than the buffer stocking norm of 7 5 million tonnes at this time of the year. Is the decision to import particularly edible oils a panic reaction to safeguard the vote bank? The periodic changes on procurement of wheat and rice and support prices on other agricultural commodities show an attempt to ensure a reasonable return to growers and at the same time to contain the increase of food subsidies, to stay within the magic ceiling for the fiscal deficit of 6.5 per cent of GDP. This has resulted in the increase in issue prices which will save the government Rs. 1300 crores. The coal price hike belongs to the same genre. Altogether the overall foodgrain, edible oil position and prices related to them seem to be in some confusion in view of the different choices

confronting the government. Third, the world debt tables 1991 and the external debt statistics released by the World Bank and OECD show that India has become the third largest debtor among developing countries at $ 70 billion in 1990 and against $ 51 billion in 1987. This means that the country's debt servicing alone uses up 30 per cent of GDP and is two and a half times the current level of exports. This is some indication that India is caught in a debt trap as it involves not only very heavy toll on our export income plus and decreased, almost nil release on internal resources. Fourth, against this rather grim scenario the plan to recast the tax system on the basis of the Rajah Chelliah committee recommendations referred to in the last issue and proposal to build the fiscal deficit in 1992-93 to Rs. 32,500 crores may be noted. Incidentally this insistence by IMF of relating our performance to the fiscal deficit makes no sense in relation to the inflation which is the major problem, and which can be tackled only by bringing down the budget and particularly the revenue deficit. Another suggestion of the National Institute of Public Finance and Policy is that a reduction of the interest rate of the government owing to RBI from the existing 5.42 per cent to 1 per cent will save in 1992-93 Rs. 3000 crores, and if budget support to public sector enterprises is included, increases the savings from Rs. 6000 to Rs. 8000 crores should be carefully examined, particularly the second suggestion. Fifth, there are a number of factors which have been recorded in December. Studies by IDBI, Economic Times and a research body shows that in 1990-91 the economy grew at 5 per cent in real terms, agriculture by 4 per cent and industry by 8.4 per cent, with the fiscal and external payments status continuing to be difficult. For 1991-92 GDP growth may not reach the target of 3.4 per cent. But a retrograde step is the agreement of the government to the Asian Development banks' (ADBs) condition that the $267 million loan for the development of Gandahar oil field will be granted if ADB is consulted before revising oil prices. ADB has now got into the conditionalities game and the question of not using its small loan should be seriously considered. RBI reports that its credit to government in mid January was Rs. 14700 crores against the ceiling agreed with IMF of Rs. 8700 crores on March 31. Finally a World Watch report states that India is destroying 2.7 per cent of its forest cover every year and this has to be stopped to save the country's environment and all that depends on it. This stopping of the natural and other resources depletion calls for an environmental revolution in all developing countries who like India are fast destroying their forest cover and other resources. Thus the December pointers on the economy are disturbing and call for urgent remedial action. The government states that it has under consideration extending the Indian Development Bond Scheme and the Immunity Scheme that permits the remittance of foreign funds to any citizen without any question, when both schemes expire on January 31 to March 31. The Indian Development Bond scheme has by January 31 raised $700 million. The government says that the NRIs are presenting it to extend the deadline. As at January 31, the country's foreign exchange reserve has risen to $3.9 billion-without including the receipt from the above 2 schemes.

Industry

The Department of Industrial Development in its study of 155 select industries has found that despite the economic reform measures, 62 selected industries in all the major areas of the economy had recorded a negative growth rate in the first 3 quarters of the year 1991-92, April to December 1991. This recessionary trend covers basic industries, fertilisers, heavy chemicals, basic metal industries, cement, electricity, capital goods and consumer durables and non durables. In November a series of decisions were taken on disinvestment by the union government in some units of the public sector. In Indian Airlines and Air India there is to be a 20 per cent disinvestment of the paid up capital. It has collected Rs. 1300 crores in selling 5 per cent of the targeted 20 per cent disinvestment, so that it will be able to raise the targeted Rs. 2500 crores now raised to Rs. 3500 crores from these sales. It proposes to divert Rs. 1000 crores out of the total equity sales to the National Renewal Fund for providing a safety net for the protection of workers who would be hit by decisions to close sick units which will have to be implemented with great care taking the trade unions along with the actions. RBI issued on January 2 the principle and procedures for grant of foreign equity holding upto 51 per cent in trade companies previously employed in export activity. There are related developments in the RBI setting norms for disinvestment by foreigners. Foreigners who raise their equity in Indian joint ventures to 51 per cent by paying 6 months average market prices of the stock, will be allowed the same pricing norms when they plan to disinvest. This makes a great difference to them. One castrol share for instance is presently quoted at Rs. 670 whereas the face value is only Rs. 10 only. The government announced it will shortly be reviving FERA to sort out problems faced by foreign enterprises in the domestic market, similar to the easing the conditions of their entry. Again the secretariat for Industrial Approvals states that it has approved 762 foreign collaboration proposals including 248 involving foreign investment of Rs. 391.87 crores in 1991. RBI announces that it has approved 195 proposals for foreign financial or technical collaboration involving a foreign equity of $54.82 million. The government also on Monday stated that it has cleared 7 further proposals to foreign collaborators with a total equity of Rs. 1000 crores for manufacturing and exporting fuel efficient cars, soft drinks, equipment for power plants and agro processing, home appliances and expansion of Maruti Udyog. To improve further the climate for foreign investment RBI announced in late January that foreign companies have been freed from all FERA restrictions so that they will have level playing fields with Indian companies. Under this relaxation, FERA companies will be allowed to open branches, permit their trade marks to be used freely, carry on in India any activity of a trading, commercial or industrial nature. They are also now free to borrow money, accept deposits in India, deal with immovable property provided the purchase is made in foreign exchange. The government reports that in 1991 foreign investment in India rose to $210 million. The government also reports that it is considering breaking up the Indian Tourism Development Agency into 3 or 4 units to be sold to the private sector, including foreign investors. Finally in January the Banks are facing the problem of losing out on their share of deposits which are being attracted by non banking financial institutions, particularly through the mutual funds. Hence the banks have developed long term deposits to attract back their share of savings from the public. The

Central Bank of India announces a scheme under which a small deposit of Rs. 1900 will swell to Rs. 3.7 lakhs in 40 years. On individual industries, the new drug policy which is now really in draft form provides the following: there is to be no restriction on foreign investment upto 51 per cent in a company, except for 63 bulk drugs, the others are exempt from licensing except in the case of IV fluids and those based on imported bulk drugs, ratio parameters are being dropped, new broad banding permits manufacture of any item in any unit on par with Indian companies, a rate of 18 per cent on net worth and 20 per cent on capital employed for basic stage negative is allowed, there is to be an annual review of the list of drugs under licensing. Once the cabinet approves the draft, it will go into operation. In the electronics industry, major changes are under way induced by the devaluation of the rupee, the rise in interest rates and the anti-inflation measures. In entertainment electronics area, players are either opting out or diversifying into manufacturing activities in related sectors. This against 150 players in 1991, there are now about half that number at 75. Second, TV manufacturers have closed down or are switching to components manufacture. Finally the union textiles ministry announces that import of 5 lakh bales of cotton under OGL is permitted to tide over the shortfall in supply during lean months. The paint industry reports a negative growth in 1991 and forecasts a similar declining trend in 1992.

Public Sector units

Earlier, government disinvestment from public sector units were dealt with. With regard to the National Renewal Fund, government announced that it will be confined to finance retrenchments benefits to the workers of 58 chronically sick public sector units until the end of 1992-93. The government also on January 20 offered to hand over sick public sector units to workers cooperatives after writing off their liabilities, which has not been accepted by the Trade unions which are asking for workers being given a chance to revive the sick units. The trade unions do not, however, want to take on the public sector sick units even after their liabilities are written off because of the heavy liability which will accrue in their functioning. The government has really come to a dead end on the future of these loss making public sector units. Their future being referred to BIFR in accordance with the Act just passed by Parliament is being held up as the Act has not been signed by the President as yet, and even after it becomes law, BIFR says that after the units are referred to them, it will take atleast a year for it to draw up a plan for their revival. Some of the strategies being launched by the government apart from its refund of the sick units to BIFR, include disinvestment of these units and using the money so raised to finance upgradation of viable units, and opening the areas reserved for the public sector to the private sector.

National Production Front

Steel

The major development in steel in January was the decision on January 16 to decontrol steel prices from that day. Distribution controls have been partially retained to safeguard the interests of the primary sectors. The freight equalisation scheme has been abolished. Customs duties on all steel items have been reduced to balance the immediate impact of price decontrol. The customs reduction is from 55 per cent to 35 per cent for pig iron, from 65 per cent to 45 per cent for mild steel pellets, from 35 per cent to 10 per cent for scrap and from 65 per cent to 45 per cent for hot rolled coil. The immediate effect has been the sharp rise in stock market prices as noted earlier, with TISCO shares rising sharply. The first reaction is that this decontrol which was over due is a good measure. The temptation of primary producers to raise prices has been curbed by the decision to reduce import duties, which will lower their import costs. The SAIL plants and TISCO which have been the main sufferers under the control system are now free to raise their prices to meet the escalation in their costs - the most recent being the rise in coal prices. There are however a few aspects which need clarification. How the new arrangements will work out - less selling prices for the primary producers and secondary producers and mini steel plants who were not subject to price control all these days - that if primary producers wins, the effect on productivity and profitability will be known in the coming months. Similarly the nature of the preference in distribution control for the priority sector needs to be known, the preference should be in supply and not in prices. Further now that the steel plants are freed from price control, they should be treated like any other corporate unit as far as resources that they need for expansion and modernisation are concerned. Why is the Steel Development Fund still retained. Finally the effects of the abolition of the freight equalisation fund in relation to distant users needs review. For the present the very distant and deficit year users are still being compensated by the integrated plants. This limits the decontrol effect. SAIL also reports in January resuming its exports - 2 lakh iron ores fines to china, 10,000 tonnes of plates to the former USSR, as well as hot rolled coils to some markets. This is good, and the export to the former soviet republic have to be renegotiated.

Crude

The January news on the crude front is disturbing. The only positive point is the ONGC report of striking oil and gas at a new well in East Godavari district in AP. There is also the announcement by the government that country's refining capacity is to be increased by 17 million tonnes in the VIII Plan, partly by expanding the capacity of existing refineries and partly through setting up 2 new refineries of 3 and 6 million tonnes respectively. But the worrisome news is that crude production in 1992-93 will fall again by 1 million tonnes at 30.5 million tonnes against the 1991-92 production target of 31.5 million tonnes, which was a lowering of the original target of 33.5 million tonnes. This is attributed to the work on improving the Bombay High reservoirs which will continue also in 1992-93 and so reduce further the crude production. One immediate effect of this is to increase crude imports and send up the import bill. Already in the 7 months April - October 1991 oil imports have cost Rs. 6528 23 crores, which form 25 per cent of our total imports. For 1991-92 the total crude import bill is estimated at Rs. 13,100 crores. During this period there was no export of crude and only Rs. 456.02 crores of petroleum products exports. There is need both to speed up the work on the reservoirs to increase supply and also push further on conservation of crude consumption. The government also reports a large deficit of over Rs. 6000 crores by the end of the year in the oil industry pool account

because of the steep rise in royalty ratio found with retrospective effect. This deficit will worsen the commitment to IMF and Asian Development Bank to revise crude prices is followed.

Coal

Coal output in the first 3 quarter April-December 1991 rose by 10.7 per cent to 136.03 million tonnes but was lower than the target by over 2 million tonnes. This was due to the heavy monsoon in Eastern India, delays in land acquisition and local law and order problems according to CIL. For 1992-93 Coal India's production target is been fixed at 210 million tonnes. It is hoped that there will be more coal from underground production. The government has deferred the cash and carry scheme of marketing coal until the scheme has been discussed with all the users. Government reports that 900 million tonnes of coal reserves have been found during 1991. In addition to the hike in coal ministry authority to raise prices in the future on the basis of a formula to be worked out by the Bureau of Industrial Costs and Prices. The periodicity of the hike-whether annual or otherwise will be decided after the formula is worked out.

Non Ferrous

The December news on the non ferrous metal front is mixed. The Orissa government announces that it is considering a fresh proposal from BALCO for opening the controversial Gandhamardan bauxite mines. This new BALCO proposal is for 100 per cent export oriented alumina project near the site, while adopting mining technique which will ensure environmental safety. This sounds promising. NALCO reports that it will increase its export of aluminium ingots and cathodes, with a target of 50,000 tonnes for 1991-92. NALCO has already emerged as a major foreign exchange concern. Against this positive development, the working group on non ferrous metals for the VIII Plan forecasts a massive shortfall of aluminium, calling for imports. By 1996 it forecasts a demand excess over supply of 2 lakh tonnes. This means the days of self sufficiency and plenty are over and the government needs to support the industry and encourage consumption. Hindusthan Copper is using Eximp scrips to import cathodes for conversion into continuous cast wire rods at its Taloja plant. This import programme is linked to the wire rod requirements of Hindusthan Cables.

Agriculture Production

In place of the rather loose generalisation of a high level of foodgrain production for 4 successive years and the buffer stock totalling 23.73 million tonnes in 1990-91, including 12.87 million tonnes of rice, the agricultural ministry estimates that during the current kharif there will be a shortfall of 8 million tonnes in the output of foodgrains, the production being 95 million tonnes against the targeted 103.15 million tonnes for kharif 1991-92. This is also confirmed by RBIs 3 months commodity review. This means a shortfall of 5 million tonnes over the kharif production of 99.83 million tonnes in 1990-91. The shortfall for current kharif will be 4 million tonnes in the case of paddy whose target was 68.5 million tones, 3 5 million tonnes in coarse cereals whose target was 28.5 million tonnes and 6 lakh tonnes in pulses whose target was 6.1 million tonnes. To compensate in part for this decline, the rabi foodgrain target has been increased from 79 35 million tonnes to 82 million tonnes However FAO forecasts paddy output for 1991 at 111 million tonnes, which is below the level achieved in 1900, due to the expected shortfall in kharif output which normally accounts for 90 per cent of the total rice output in the country. FAO forecasts that despite the fall in production, India will continue to have a large export availability On the buffer stock position, the wheat stock which has been set at 7.7 million tonnes has declined to 5.27 million tonnes as 2.5 million tonnes have been urged up, and this means that there is a shortfall of 4 million tonnes over last year's stock at that time. Overall the total foodgrain stock as of 1 January 1992 is 15.27 million tonnes when it should be 15.4 million tonnes, with the large shortfall in wheat as noted above. That is why there is now a government to government negotiation with Canada, US & to negotiate wheat imports and to avoid sending up prices if there were open market purchases, where it is now ruling at $ 150 per tonne. EC and Canada have indicated that they would provide wheat at lower price.

Foreign Trade and the Dunkel Draft

The export prospects for 1991-92 are dismal. Exports continued to register a negative growth rate of 5.04 per cent in dollar terms during the first 8 months, April to November, 1991-92. falling from $ 14531.42 million in the first 8 months of 1990-91 to $ 10,950.40 million during the first 8 months of 1991-92. In the first 7 months the decline had been 5.8 per cent. However exports to the general currency area recorded an increase of 5.82 per cent from $9302.45 million in the first 8 months of 1990 91 to $9843.62 millions during that period in 1991-92. The ministry also reports that India's foreign trade gap declined by over 50 per cent in the first 8 months of 1991-92 compared to that period in 1990-91 from Rs. 7260.48 crores to Rs 3397.94 crores while in dollars terms, exports have declined as noted earlier, in rupee terms exports increased from Rs. 20,324.70 crores to Rs. 26,012.44 crores, while imports rose more slowly from Rs. 27,584.34 crores to Rs.29410.78 crores during the 8 month period. One of the problem facing the country is that the loss of Rupee Payment Area, due to the disintegration of the USSR, resulting in the recording of minus 52 per cent has not led the commerce ministry to make alternative plans in the way of identifying other markets, or the country's surpluses which are available for exports. The changed foreign trade format referred to earlier does not really reveal the nature of the malaise as the cumulative data projected have to be broken up month wise to evaluate the effect of devaluation and other trade policies. There is also delay in release of the data by over a month. The month wise analysis show a continuing decline in exports from $ 488 25 million in April 1991 to $1288 75 million in May and further to $1226.73 million in June. The format shows 17 per cent import compression in dollar terms and 10 per cent in rupee terms but does not show how this was achieved. The Rupee Rouble rate is in a mess and on this atleast the government should stand firm and insist on a realistic rate with the new Russian government autnority. The finance minister projects an exceptional financing gap of not less than $3 billion next year, despite the usual flow of multilateral aid and an export growth of 15 per cent during the year During the 1991-92 even though the current account deficit was lower by more than $3 billion an exceptional financing gap of over $3 billion has to be met which led to the resort to IMF and the World Bank.

Havala operations are increasing fast with exporters making use of it in a large way to launder black money as well as earn foreign exchange for the country Already because of this there is a big increase in the inward flow of foreign exchange on trade account in which now both big companies and small operators are involved. This is done through over invoicing which should be stopped. A new body, Indian Trade Promotion Organisation (ITPS) was formed early in January with the merger of Trade Development Authority (TDA) and the Trade Fair Authority of India (TFAI). This will end the over lapping between the 2 bodies so that there will be more effective trade promotion and coordination. In January the ministry of Commerce distributed Star Trading House Certificate to 5 companies which have high foreign exchange earnings. Century textiles, Hindustan lever, ITC, New Bharat and NALCO. The total number of Star Trading Houses has now increased to 9. India can earn consultancy exports of Rs 3000 crores in foreign exchange in place of the current Rs 200 crores, according to the Consultancy Development Centre set up by CSIR which will correct the weaknesses of a weak merchant base, information gap, inadequate operational infrastructure, paucity of training, limited market contracts now hampering consultancy operations. The Finance ministry announced in early January a series of item specified concessions including full exemptions from basic and additional customs duty for 4 years for equipment and instruments needed for some 10 industries. On individual items, leather exports are forecast to touch Rs. 3500 crores in 1991-92, Rs. 3300 crores of foreign exchange are expected from tourism during the year. Engineering exports have recorded a 41 per cent increase at Rs. 2337 crores during the first 8 months of the current financial year April-November 1991 with the projections of the year's exports reaching Rs. 5000 crores. Handloom exports will earn Rs. 1700 crores this year India has offered Russia Rs 3200 credit for 2 years. Some of the Soviet regulations have proposed an escrow trading arrangement, which is a kind of barter arrangement under which it would provide India with crude, petroleum products in return for food products and edible oils, thus involving some saving in scarce foreign exchange for the country. This should be pursued. India has been notified in the US, federal system under special 301, which calls for public comments in the US about Indian trade policies, particularly Intellectual Property Rights. Further in view of deadlock in the world trade negotiation between the US on the one hand and the European community on the other centering around agricultural subsidies and other issues. Arthur Dunkel the Director General of GATT has taken matters into his hands and has prepared a 500 paper document setting forth a draft agreement on all issues, called the Dunkel Draft which he has presented to the 108 negotiating countries asking them to respond to it by January 13, which is a totally unrealistic date. The government of India like other governments has asked for more time to react to the draft. The government has set up a cabinet subcommittee to study the proposals and the committee has asked 29 individuals and groups for their views. The Apex industrial and commercial association, FICCI and Assocham and FIEO, have accepted the draft and are urging the government to support it, mainly because they feel that India should not be left out of the world agreement, and because they see no alternatives to it, and state that its provision on textiles etc are less harsh, than that of the industrial countries. On the other hand, there is opposition to the proposals on Trade Related Intellectual Property (TRIPS) and TRIMS and other rules to have a more open global trading system which is the position of the individual countries. The national working group on Patent laws states that the draft aims at increasing the monopoly control of the industrial countries and their multinational corporation over the global economy.

Aid and Loans

January marked a series of loans from the World Bank. A loan of Rs. 326 crores from the World Bank is being made available for the development of infrastructural facilities in the tribal sub plan area. The Bank has offered $85 million to tackle AIDS. The Bank is disbursing $1 billion credit given to the all India financial institutions to the union government under the structural adjustment programme funding. The World Bank is making a loan of $265 million to improve the efficiency of the Power Financing Corporation. The World Bank has agreed to consider India's request for exploring new modalities to meet the needs for rupee funding to accelerate the pace of credit utilisation. It is also considering the need for rupee funds for implementing the Narasimhan Committee report and the interaction of the Exit Policy in sick companies. It is considering joint UNDP and some US government agencies in fighting the 100 years old underground fire in the Jharia Coal fields of Bihar. The World Bank and the Asian Development Bank have decided to commit $600 million for a range of projects covering oil and gas production, forest conservation, fisheries and upgradation of polytechnics. The World Bank's share of $410 million ($200 million for polytechnics, $85 million for fisheries, $25 million for forest conservation) are to be routed through its soft bank affiliate, IDA. The World Bank's other affiliate, the International Finance Corporation (IFC) announces that it can take up 10 per cent of the equity of its Arvind Mills. It also announces that it is making $1.04 million equity investment in SPIC fine chemicals for the manufacture of reolite based detergents and more quality detergents. Asian Development Bank's $250 million loan is for the development of oil and gas production. The Asian Development Bank is also making 2 loans totalling $257 million for development of railways, and power. The UK is extending Rs. 579 crores as aid for oil and railway development. Japan has opened 66 billion yen as aid to 5 Indian development projects - the Gandhar gas based power project, National Highway improvement project' urban city water supply project, Ajanta-Elora conservation and tourism project and the afforestation project in Aravalli. The World Bank has indicated a changed approach for funding along with the condition suggested by the Banks seems somewhat like completely controlling those sectors, instead of aiding them. The US has budgeted $127 million as aid to India-$34 million as development assistance, $77.741 in these under PL480 title II which is for emergency humanitarian assistance and the ongoing nutrition programme, $25 million under title III - the government programme. The Italian government announces that it is providing $400 million credit to India.

International

World Economy

The World Economy which has slowed down in 1991 will recover moderately in 1992, with broadening of the world economy, increasing output and trade and reducing the average rate of inflation in the world, including in developing countries, according to the IMF survey. Based on the performance in the first 3 quarters of 1991 and trends for 1992, it projects a rise of 2.75 per cent in world output and 5 per cent in world trade The Middle East will record the highest rate - 11.2 per cent, in developing countries economic growth will be 4.75 1992, which is double that of 1991. The other regions, Africa, Asia and the Western hemisphere - have also contributed to the recovery. The industrial countries will also show a pick up with recession in the US and UK receding. The IMF survey expects 'large changes' in its current account balance of industrial and developing countries during both 1991 and 1992. The combined deficit of the industrial countries is projected to narrow by $665 billion in 1991, half being war related transfer from countries in the Middle East to US. Assuming an increase in commodity prices and unchanged real exchange rate, the combined current account deficit is projected to return in 1992 to the $100 billion level of 1990. The combined external deficit of developing countries will quadruple to $100 billion in 1991, declining to $65 billion in 1991, declining to $65 billion in 1992. It is to be hoped that this optimistic projection for 1992 will come true.

* * *

GATT

The 108 nation trade negotiating countries of GATT sped in January to focus their discussion on the Dunkel Draft. The Draft aims at a compromise between the US and EC on the size of the subsidy cut backs. This falls short of the cut that the US is seeking but is higher than what EC is willing to agree to. The delegates from US to EC and Japan- says the draft needs revision. The key part of Dunkel draft is a call for a 20 per cent cut in domestic supports, a 36 per cent cut in border protection hikes, a 24 per cent cut in the scheme of subsidies on farm exports and a 36 per cent cut in the amount of having used subsidies for exports phased over 6 years, starting in 1993. For the developing countries like India the proposals regarding TRIPS and TRIMS are identical with those of the industrial countries and do not take account of the developing countries position in proposing complete freedom for foreign investment in the country. Textile exporting developing countries are not sure that the Dunkel draft proposal to integrate MFA into its GATT framework would take place by the envisaged 1 January 2000, given the track record of MFA.

* * *

II. Agriculture Development in Tamil Nadu

Paddy and other crops

Paddy farmers are having a good year because of the copious rains and the storage in Mettur. After many years, the farms are able to enjoy a happy pongal because of the good crop Particularly the Thanjavur farmers were able to receive adequate water from the Mettur dam right from the date of its opening and it was followed by plentiful rains, with no outbreak of pests and diseases to worry the farmers. There is agreement with PWD authorities that the Mettur reservoir be closed on January 20-27 because the standing paddy crop has had all the water it needs. At the time of its closure, Mettur had 103 feet as against the full level of 120 feet and a storage of 76,856 mcft against its capacity of 93,470 mcft. The closure of Mettur on January 20-27 will enable its being opened on time on June 12 to provide water for the next kuruvai season. Farmers have cultivated 21 lakh hectares under paddy - kuruvai and samba and as the navarai crop prospects are bright, the total area could be extended to 25 lakh to 26 lakh hectares. Farmers are planting Navarai paddy which could increase from the normal 3 lakh hectares to 5 lakh hectares because of the good water position. In this connection, it should be noted that the agricultural directorate is planning under its project 100 to cover 30 lakh hectares this year to produce 72 lakh tonnes of paddy. Even if the full target of 30 lakh hectares is not reached there could be a coverage of 25.26 lakh hectares. The government also reports that procurement of paddy in the current samba season in the cauvery delta region of Thanjavur and Quaide Milleth districts by the Tamil Nadu Civil Supplies Corporation has already crossed 50,000 tonnes. Farmers are bringing over 500 tonnes daily to the corporation purchase centres and so the corporation has opend 465 purchase centres in the 2 districts with a view to purchasing 10 lakh tonnes of paddy this season. Farmers report that they have obtained an average 5175 kg of paddy per hectare this year. In addition, on the advice of TNAU experts, the farmers have decided to grow oil palms in the delta track and are asking the government to help them on this.

Research results

In the 48 research reports recorded in January, a group of 5 reports are of particular interest as their recommendations can be applied immediately by the farmer in his field. First, in the cereals field, the rice research station, Ambasamudram reports that it has developed a blast resistant paddy variety ASD-18 which can be sown by the farmer in all 13 seasons - kuruvai, samba and navarai. Agricultural research station, Bhavanisagar reports that its tests at TNAU, Madurai shows that bio fertilisation - plant based *Azospirilium innoculate boosts sorghum* yield and saves Rs. 125 on nitrogenous fertiliser. Second, in the area of vegetables, the potato research institute Simla reports developing simple package that will increase the farmer's crop yield significantly. The package includes ploughing upto a depth of 23 cms, yearly rotations with legumes and following the optimum planting time for the Nilgiris. Yercaud and Kodai hills being March/April to August/September and from August/September to December/January. The Krishi Bhavan, Pusa reports a new

technique to keep potato tuber moth at bay which the potato farmer can follow, using the simple sticky trap that has been developed for trapping the male organisms. TNAU reports that the brinjal growing farmer can control little leaf disease by 3 steps including spraying 2 rounds of dimenthoate. The university also reports that the spotted wilt virus pest which is serious for tomatoes can be countered by following the 4 steps it recommends including spraying in the nursery cow dung extract. A third piece of research by the university on chilli plants suggest that the farmer should regulate its irrigation as from schedule on 9 days to increase the pods by 36 per cent. The regional research station, Paiyer on the basis of its experiment recommends that fruit rot in hybrid tomatoes can be controlled by applying lime to the soil along with farm yard manure and spraying the plants with anhydrous calcium chloride. Third, 3 reports on groundnuts cultivation can be of use to the oil seed growing farmer. One is the loss suffered from hardy and permicious weeds can be eliminated by combining mechanical and cultural methods. Here manually operated star weeders and push hoes are ideal aids are recommended along with blade narrowing in dry and loose soils: a second report from the All India Coordinated project on oil seeds recommends rhizobium innoculation is a cheap but effective agronomic practise that increases the yield of groundnuts and improves the quality through the nitrogen fixing bacteria. In particular, the rhizobium strain NC92 is recommended for varieties kadir 3 and JC 24: third NARP, ARS, Bidar states that its study on Bud Necrosis which is rampant in sown areas shows that it can be controlled by following the 4 cultural and chemical methods it recommends, along with host plant resistance and biological control. Fourth, 4 research studies on sugarcane research station TNAU which has resulted in the recommendation for sequential inter-cropping for the sugarcane farm comprising soyabean, blackgram and bengalgram during its formative, ground growth and maturity phase which not only enhances cane and pulses output but also boosts cropping in family and improves soil fertility. two, the regional research station, Anakapalle reports on the results of its work on ratoon cane management and as a result recommends the use of cane varieties like 84 A 125, 106907, 7219 and 7706 that yield more and 9 management practices from use of sharp knives to cut the crop stalks to the ground to harvesting the cane slightly early as means of increasing ratoon crop yields. Third, the sugar cane research centre, Cuddalore reports on its study of 3 methods of fertiliser application to obtain increased sugar cane yield and recommends the packet methods, that is placing the nitrogenous fertiliser in the packet along the plant rows as yeilding the maximum. Fourth, the agricultural research station, Bhavanisagar recommends on the basis of its experiments inter-cropping of sugar cane with pulses as a means of reducing the growth of weeds. Finally, four reports on the studies in animal husbandry can be used by the cattle farmer. First, the Madras Veterinary College identified the heat signs in dairy animals: heifer attain full reproductive capacity 6 months after attaining puberty between September to February, the oestrus cycle in cows lasts 12-18 hours, and the ideal period for insemination is mid head: buffaloes reach home early in the morning and should be inseminated in the evening. Second, the Krishi Vigyan Kendra, Kattupakkam has worked on rid water fever in cattle which is manufactured in their urine and body temperature, and recommends a 3 step treatment with tupan blue injection, Acarpin and Beramid injections to cure the fever which otherwise results in death. The sheds must be sprayed with 5 per cent DDT. Third, IVRI Izzatnagar sets forth a vaccination schedule as an important aspect of dairy calf health management, based on its studies. This will prevent the calves contracting diseases like foot and mouth rinderpest, brucellasir and black queen which they contact from the herd or locality.

Sugarcane

Towards the end of January, the state government announced Rs. 300 per tonne as the minimum support price of sugarcane for 1991-92 with 8.5 per cent recovery. This is 20 per tonne higher than last year 1990-91. For higher recovery, there will be Rs.35 for every 1 per cent increase.

Tea

The Indian Tea Association reports that the high 1991 tea production target of 73.5 million kg is likely to be realised as by November 700 million kg had been produced. The production between April and November represented a 33 million kg increase over the period in 1990. The combined efforts of the tea gardens in the north and south have produced this effect which might exceed the above target of 735 million kg for this year. This also supports the hope that by 2000 AD the target of 1000 million kg will be reached. One of the puzzling features of the current tea scene, is that despite the bumper tea crop production just referred to and the virtual stoppage of exports to our major buyer USSR at 120 million kg, tea prices have not come down but are as buoyant as ever. One tea broker says that this is due to money brokers calculated hoarding to ensure that prices do not fall as a result of the above two factors.

Coffee

In January, the news on the coffee front is bright. Export in the first seven months of 1991-92, April-October, have risen to 55,345 tonnes valued at Rs. 183.19 crores. This included the value added instant coffee export of 5661.60 tonnes. At home, coffee consumption increased to 63,000 tonnes during the current financial year, according to the commerce ministry. This breaks the stagnant domestic consumption of 50,000-53,000 tonnes for several past years. The country will be achieving a production of 2 lakh tonnes against which 1.10 lakh tonnes valued at Rs. 400 crores were targeted to be exported in 1991-92. Coffee Board has initiated various schemes like training personnel in coffee culture, and in expanding the target of 4000 hectares in a non traditional area, Orissa. The future does seem somewhat promising.

Rubber

The government decision in January to permit export of 14,000 tonnes of rubber is not only a break with the past but it raises a host of problems. Its economics is in doubt, presently the domestic price is Rs. 21.45 a kg against Rs. 18.50 in the international market, which means that the government will have to subsidise the exports. Further the surplus of 30,000 tonnes is due to STC stocking 2 months instead of 3 months requirement and so the export surplus will disappear if STC reverts back

to normal needs. Also because of the credit squeeze and the recession in the automobile industry, tyre companies are stocking 1 month's instead of the usual 3 months' stock. There is also the problem of the quality of the rubber that is exported. The off grade rubber will not attract buyers overseas. As India is a new entrant in the rubber export field, it must attempt to cultivate buyers by meeting their demand for price and quality. To the extent therefore that the export policy encourages rubber growers to exercise cost and quality control, users at home will also benefit. It is necessary for the government to watch the supply/demand situation for rubber and stop exports when the demand exceeds the available supply. The consumption of rubber during April-October 1991 had gone up by 3.2 per cent to the level of 2 14 lakh tonnes. Taking into consideration the growth in the remaining months, the consumption is projected at 3 80 lakh tonnes and the overall rubber stocks assessed at 4.65 lakh tonnes including the carry over of 86,000 tonnes. So the estimated surplus stock at the end of the year will be 21,000 tonnes. The price of RMV has fallen to Rs. 20,000 a tonne and so STCs intervention is buying it at Rs. 20,500 per tonne has raised it to Rs. 20,400. So too RMV price has fallen to 21,450 and STC is intervening here. The fall in price is due to extreme sluggishness in the rubber market, and so the limited quantity of export is justified. The situation should be carefully watched.

* * * * * *

III. Industrial Development of Tamil Nadu

January recorded a number — some positive and some negative development in the process of industrialisation of the state.

On the positive side, *First*, the most important development was the *announcement of a major package for entrepreneurs* to accelerate the industrial growth of the state which in part extended the previous programme and in part introduced some new ones. The policy includes." : a) a Tamil Nadu Industrial Guidance and Export Promotion Bureau for identifying prospective entrepreneurs and providing them with full escort services from start to finish is to be set up, and to support the bureau, various sub agencies are to be constituted within TIDCO, SIPCOT and SIDCO to cater separately to large, medium and small industries. To help big projects for example there will be a Mega Industrial Guidance Agency (MIGA) and to promote the electronics industry, a special cell is to function within ELCOT. State government participation in this escort project is to be limited to 1 per cent of equity : b) shifting from the previous policy of collaborating with well established industrial houses for projects in the joint sector, the state government will now take on "primarily first time entrepreneurs", c) to impart greater momentum to industrial development two new forces the State Advisory Committee (SAC) meeting once a quarter and the

Policy Planning Group (PPG)—as often as necessary with the Chief Minister as chairperson of both organisations: d) the much published Tamil Nadu Corporation for Industrial Infrastructure Development (TACID) is set up and will establish now 3 new growth centres and also have a window for soft infrastructure like hospitals, schools etc in locations chosen for industrialisation. Off site infrastructure facilities like the one in Nagapattinam Quaid-e-Milleth district to cover other industrial areas and TACID is to be funded from Municipal Urban Development Fund and Town and Country Planning Development: e) leather, textiles, hosiery, electronics, software, autoparts, drugs and pharmaceuticals, petro chemicals, industrial alcohol based organic chemicals, chemicals, agro based and food processing, gems and jewellery, salt and marine based industries, engineering goods, sea food and export oriented units are identified as thrust areas, which will be given a higher rate of capital subsidy with thrust industries getting 15 per cent subsidy upto Rs. 15 lakhs per unit, new units employing over 30 per cent women will get an additional 5 per cent subsidy upto Rs. 5 lakhs. Electronic units will get 20 per cent capital subsidy upto Rs. 20 lakhs: f) the State Industrial Investment Corporation will constitute a venture capital fund to promote new technologies in the small scale industries as a technology development fund for production of the sector. State capital subsidy to small scale industries to be released stage by stage without waiting for the project's completion, to help entrepereneurs bring down capital costs and a monitoring system for early payment by public to the small scale sector for purchases made: g) a graded sales tax is to be implemented, for units with investment from Rs. 50 crores to Rs. 100 crores. ST to be waived for 5 years or deferred for 10 years upto full value of investments, for units with investment from Rs. 100 to Rs. 300 crores the ST waiver will be for 6 years and deferral 12 years, for units with investment over Rs. 300 crores, the ST waiver will be 7 years and deferral 14 years, stamp duty will be fully exempted for land purchases to set up units in industrial estates and new units will be exempted from electricity consumption tax for 3 years, captive power generation are to be exempted from electricity duty and a ST reform committee will be constituted to evolve long term tax policy : h) the government will take steps to get new union sector, defence and telecommunication projects besides obtaining approval of the centre for the aromatics project., southern gas grid, expansion of Madras Refineries, a satellite port at Ennore, a third mine at Neyveli and offshore oil and gas exploration : i) a package of concessions for the tourism industry, comprising 10 per cent capital subsidy to new tourism projects with an investment of Rs. 1 crore upto Rs. 10 crores, sales tax deferral on restaurant rates for 5 years, loan to develop infrastructure by TIIC at 14 per cent interest, SIPCOT to give nominal low rate, tariff concessions for non ferrous metals on par with new industries, waiver of 50 per cent luxury tax on room for 5 years and capital subsidy of 15 per cent for purchase of generators : j) to help modernising and restructuring industry employers are allowed freedom to deploy their work force, all disturbances are to be firmly put down and a labour rehabilitation fund is to be started for the benefit of displaced workers from sick units. This is a comprehensive set of policy announcements covering all of industry including tourism which has been declared on industry. The implementation of the policy will need careful monitoring. The industrial relations sector which is sector (J) above is a novelty : is never been a part of industrial policy. Now the government must take the workers and trade unions into confidence and discuss each section with the workers and accept changes which may result. *Second*, unlike past forecasts (see Vol XXI p360) the revival of the *Madras Aluminium Company* (*MALCO*) is now very much on the cards. The government has offered to charge a low power tariff of Rs. 1 for the company against the current Rs. 1.50 and along with the provision of the new industrial policy its perspectives have emphasised. *Third, SPIC Fine Chemicals* promoted by Tamil Nadu Petro Products is going onstream selling "environment friendly" detergents within the next 2 months. The Rs 58.50 crores plant has the collaboration of Henkel of Germany. The World Bank affiliates ITCs $1.04 million equity investment in it was earlier referred to. *Fourth, SPIC Electronics and Systems* Ltd announces that it is planning a 100 per cent export oriented unit for fabrication of silicon wafers. This is another Rs. 50 crore project which is looking for WB/Japan collaboration *Fifth, Tamil Nadu Newsprint and Papers Ltd* announces that it is investing Rs. 450 crores through the World Bank, IDBI and allied FIs to double its capacity from 90,000 tonnes to 1,80,000 tonnes. This is one of the few state government's projects which is working viably and making a profit. *Sixth*, the Tamil Nadu government is transferring *its chemical testing laboratories* to the private sector, which is in accordance with the state's industrial policy. It has consulted some association of industries and the small scale sector in order to involve the private sector is what till now has been a state run enterprise. *Seventh, CLRI* is now to concentrate on meeting the needs of small tanners in improving their efficiency on the one hand and even more urgent to their effluent problems. This involves emphasis on micro process controls for the small tanneries in 1992. *Eight, Neyveli (NLC) reports* that it has achieved its integrated production of power and lignite for the 9 month period April to December 1991. The first and second thermal plants had generated 3636.37 mu against a target of 3621 mu. The first and second mines had produced 90.12 lakh tonnes of lignite against a target of 88.70 lakh tonnes. *Ninth, King Limited* announces its near completion of a Rs. 17 crores acetic acid plant at Vadareni in Thanjavur district. It will also manufacture acet alhyde, acetic anhyde and ethyl acetic using industrial alcohol as the base. It has entered the capital market with a public issue of 38 lakh shares of Rs. 10 each with 3.8 lakh shares set aside for preferential allotment to workers and employers of the company. *Tenth*, the state government has isssed orders for opening a *cooperative spinning mill at Bargur* at a cost of Rs. 27 crores. The project is a political pledge of the Chief Minister in her constitutency and goes against the general policy of the state government not funding or operating projects. It needs watching. *Eleventh*, the *S & S Industries and Enterprises* referred to in a previous issue has established a 100 per cent EOU in acqua culture in 1700 acres in the Sirkazhi region in the Thanjavur district. The project with technical assistance from Taiwan has an outlay of Rs. 3.5 crore and is running a hatchery and a feed *meat*. *Twelfth*, the 10 MW gas based power station at Narimanam also referred to in several earlier issues with some limitation, has now become fully operational. The first 5 MW unit announced operation on January 14 and the second on January 18. *Thirteenth, a Tata-Kothari Combine* has set up a Rs. 50 crore unit for making pig iron in the state to meet the pressing demand of foundries

Fourteenth, the state government with possible private sector cooperation is reported to be considering a shore based integrated 1 million tonne steel plant at a cost of Rs. 2000 crores. This should not be done by the government but by a private sector firm. It will need coal from CIL or Singereni, iron ore from Bellary, Hospet. It would require a host of facilities on land and in the port. In view of the withdrawal of the foreign equalisation scheme and the many big and small units in the state depending on steel plants outside the state, there is a case for an integrated steel plant. The state should provide the infrastructure, ensuring the private sector to invest in the project, plan and operate it. *Fifteen, the Trade Fair Authority, the state government and lab leather industries* are planning to set up a 35 crore leather fair complex at Taramani soon.

On the negative side, *first the abolition of the freight equalisation scheme* with the decontrol of steel prices referred to under the steel sub sector earlier, will severely hit the small engineering units and small foundries in and around Coimbatore. Some of them will go out of production and others will reduce their operation and all this is accepted by the large and medium engineering units like Sundaram Fasteners, Ashok Leyland, Wheels India Ltd as part of the liberalisation process, freezing prices from control. *Second, the Karnataka disturbances and violences related to the cauvery water* dispute had hit several small units in Tamil Nadu. Several units located in the border areas had faced violence and had to close down. The undertaking over transplant has had also other units not involved in the area of dispute. TANASSIA states that these developments have totally disrupted the production schedule of the units already suffering from the credit squeeze. The limited working capital resources of the units are now held up in the form of raw materials and finished goods stranded enroute to their detination. *Third*, the fate of three chronically sick state owned enterprises *Tamil Nadu Cements Corporation (TANCEM) Tamil Nadu Industrial Explosives (TEL) and Southern Structurals (TEL)* is hanging fire awaiting the state government's decision of privatising them or retaining them in the state sector. Official reports on the 3 units recommend their total or partial privatisation and the lack of action by the government is contrary to the new industrial policy that it has formulated and has given rise to suspicions that political forces are at work. *Fourth*, despite the various package of incentives offered by the government upto the time of setting forth the new industrial policy *Tamil Nadu has remained low on the priority list of prospective investors* because of procedural bottlenecks. Whether the new policy will remove these bottlenecks is not certain because there is no reference to them in the new policy. What investors want is not only subsidies and incentives, but even more speedy action and removal of bottlenecks in the way of decision making. *Fifth, the chemical industry has not been enthusiastic about the government permission to 3 major sugar mills for the setting up of distilleries* for manufacture of industrial alcohol. The Sugar industry wants atleast 5 distillaries so that the stock piling of molasses which is 6.3 lakh tonnes of which 50,000 tonnes are spoiling due to non or under utilisation. Of the 6.3 lakh tonnes of molasses, 80, 000 tonnes are directly used for chemicals *and tobacco curing* and cattle feed and the remaining 5.5 lakh tonnes will yield 6.5 million litres of alcohol per annum; however at present the capacity of the distilleries in the state is only 93 million litres and the

3 new plants which have been permitted 33 million litres, can be produced, leaving a gap of 10 million litres. The South India Sugar Mills Association (Madras Region) on the other hand welcomes the state's new industrial policy under sugar mills in the private sector, and states that it can set up captive distilleries to use their molasses to manufacture alcohol. If this is so, it should be welcomed and the confusion created by the chemical industry would be cleared up. Thus these few negative features are overwhelmed by the many positive developments reported earlier. But each one of the negative feature can and should be attended to and remedied.

* * * * *

IV. Education, Science and Health

Educational Reforms

The Quinquennial review of the New Educational Policy (NPE) 1986 as provided in the Act was completed by the CABE committee on January 22, 1992. The Report on it was presented that evening to the Chairman of CABE who is also the Minister of Human Development. The main interest is now on the committee which has taken into account the views of experts and state governments on the Ramamurthy Committee report and its proposals to modify the NPE. When the report is presented to CABE, its provision will be known along with the decisions of CABE itself. On the whole the committee is satisfied with the pace of implementation of the 1986 policy and does not seem to be in the mood to make any major modifications in policy. The exception to this general satisfaction is operation black board for elementary schools where some 30 per cent of the 450 blocks which were to be covered have not been and the drop out rates which except for a few states like Kerala, Karnataka and Tamil Nadu is still high. The major proplem is lack of resources and so it is likely that in the VIII Plan, elementary education will receive a very large increase in financing. One source says there may be a 4 fold increase. The Computer Literacy And Studies in Schools (CLASS) project as it is being run in secondary and senior secondary government schools since 1964 is now being evaluated as it was being operated by the Department of Electronics, the Education Ministry, NCERI, CMC and 50 resource centres like IIT and regional engineering colleges with a budget of Rs. 45 crores for 1991-92. The alternatives are whether the project should be run in the present form or modified or the new unit to the private sector or scrapped. The involvement of so many government agencies in an intellectual and technical activity has led to some confusion and routine ways of operating the project and so there is a strong case for the project being taken over by the private sector (which is running the computer literacy programme very successfully in private schools), the government's involvement being mainly funding the project. Before the end of the financial year, when the VIII Plan is to begin this question should be resolved. At the university level, UGC announces that it has decided to decentralise its functioning and is to set up regional UGC centres. The commission is now looking into the possible locations for the centres and for this purpose to examining the various facilities that are available and are being offered. This decentralisation of the commission has been demanded for long and should set a model for other such decentralising programmes of the union government.

Adult education

1991 has been an adult literacy year with National Literacy Mission started in 1988 following the Total Literacy campaign of Kerala in April 1991, ensuring Total Literacy in Pondicherry, Dakshina Kannada in Karakila and Sincherdury in Maharashtra and the districts of Burdwan in West Bengal. 70 districts in the country have launched and are operating total literacy campaign, including 7 in Tamil Nadu. The fact that the literacy programme has become a push programme was sharply brought into focus when the transfer of a collector spearheading the Total Literacy campaign in Raigarh district in MP led 50 voluntary organisations and their membership to organise a demonstration against the government decision and even more a public interest litigation in the high court. The question being posed is whether the transfer of the literacy head, who is the collector is in the interest of the project of Raigarh. The target of making 3 lakh people literate in the district where over 50 per cent are tribals is being attained through some 50 jathas of 500 people training the 130 villages in district, followed by unemployed youth going into the interior villages and staying there for 6 months for spreading literacy. In MP the government (as in Kerala where the government dropped literacy and in some other places) sees the literacy campaign as a leftist movement. This needs to be publicly discussed and faced. Is there anything wrong in leftists or rightists or others participating and operating the campaign, as long as it is literacy which is being spread? This political allegation is a red herring and a canard which should be firmly set aside.

Science

In January the 79th session of the Indian Science Congress met at Baroda on the theme, 'Science, Population and Development.' The Congress was as usual opened by the Prime Minister who called on all scientists and technologists to make their work and findings relevant to poor, rural India, to the ordinary men in the village. Attention was invited to the research in contraception of not having helped development and not keeping pace with the exploding population rate. There was urgent need to develop reversible birth control methods which would be non steroid in nature and proposed using the Indian systems of medicine. There is need to use the vast scientific manpower and youth of the country for developing the right technologies which will spread development. There is also the need to close the gap between scientific and technological development and production in the country. Can this be done more effectively by the association of scientists and technologists rather than by government, as government has not succeeded in doing it. The crystal growth centre of Anna University reports in

January a break through in growing the high technology Indian phosphate crystal. This has attracted the attention of US and Chinese scientists who are helping to communicate the inventions. This is the second important scientific invention of Anna University the first being the bio industries in biotechnology which are now being talked about. Further two Indian scientists in the US are developing clean coal technologies, a technology which is even more urgently needed in India which is heavily dependent on coal for energy, coal which has high ash content. A symposium in January in Hotel Sheraton examined the technology, for clean coal and set forth a programme of research which should result in developing clean coal for the country and reduce its polluting effects.

* * *

Health

Tamil Nadu launched in January a massive health scheme aimed at delivering medicare at the door steps of 30 million people in the state. The project has a camp approach and emphasis to promote aspects of health delivery. 500 health camps are being held every Friday during 25 weeks in the blocks. In 12000 such camps, there will be usual health check up for detection and treatment of various diseases, and at the same time people are being made aware of hygiene and its practice and in prevention of diseases. In the first phase, the scheme will be run for 6 months to lay the foundation for providing total health care for all the people in the subsequent months.

* * *

V. Employment and Labour Relations

The labour committee on educated unemployed chaired by the deputy chairman of the Planning Commission, being the chairman and with Mr. Manmohan Singh, Mr. Arjun Singh, Mr. Sita Ram Kesari, Ms. Margaret Alwa, Ms. Sheila Kaul, Mr. P.A. Shanmugam and Mr. P.J. Kurien as members meeting in January set up a task force in the planning commission to identify areas having a high employment potential. It is required to submit its recommendations by January end 1992. At the request of the Planning Commission on this important committee, on its side has set up a committee of secretaries of concerned ministries to identify areas and activities with capacity for absorption of educated unemployed. The new member committee headed by the secretary of the commission will also deal with the kind of entrepreneurial sector and promotion of self employment in light of past experience. On the conditions of labour side, the ministry of labour reports that over 300 industrial disputes are pending with it at 1991-92. From the Madras region 524 industrial disputes were received in 1991, 25 was settled and 319 are pending. Also 2412 labour law inspections were carried out and 17,100 irregularities detected, 251 project proposals were submitted; the ministry also reports that it is studying the impact of the new industrial policy on labour. This is going to be a long drawn out affair.

* * *

VI. Other Items

Kumarappa Centenary

The 100th Anniversary of JC Kumarappa was celebrated on Saturday 4 January and followed on the next day. Recalling the life of Kumarappa and the sacrifices he made for the country's freedom and the manner in which he gave up all his plans and profession to help implement Gandhiji's ideas, the Anniversary was celebrated recalling 4 major contributions of Kumarappa · a) his outlook and work on the economy and for the poor and down trodden : b) his views of the charka and handlooms weaving : c) his views on agriculture and farming : and d) his views on putting into effect the Gandhian precepts of simple and honest living. To commemorate Kumarappa, an international symposium is being held for a Week starting January 4, 1992 on Sustainable Development and preserving national resources when all his followers and admirers from all over the world will meet in Delhi.

MMDA and BGVS

The MMDA organised a symposium on the Madras Metropolitan area in 2011. The basic document was an excellent 5 volume study by Times of India Foundation and MMDA setting forth an outline for a 20 year plan for the development of the Madras Metropolitan. There was broad agreement on the proposals for the Metropolitan economy, the metro and total Health and Welfare service, the Metropolitan urban planning and planning forum and the Metropolitan financing and research mobilisation set forth in the 4 volumes. The agreement of the seminar is to form the basis for the next 20 year plan and World Bank - UNDP assistance. There was a meeting of the regional state committee of the Bharat Gyan Vigyan Jatha when Mr. Venkateswar was elected as Chairman of the Jatha and plan made for the coverage of science population, following the trail of the literacy programme by the Bharath Gyan Vigyan Jatha.

MANAR

A meeting of the core group of MANAR was held in early January at which the preparation for holding a meeting of universities and colleges in Coimbatore at the end of the month were financed. The willingness of UGC to finance each college upto Rs. 35,000 for the literacy programme to be conducted this summer was discussed and agreed upon. The meeting of 21 colleges and 7 universities which are to undertake through their students and staff the literacy programme during the summer vacation was held at Coimbatore, presided over by the Vice Chancellor of Avinashilingam Institute of Education for women - deemed university. The programmes when finalised and the participating universities and colleges were invited to fill in the format to establish their financing, of which a part will be provided by the students and part by UGC.

SRC / TNBCE

The two monthly meeting of the Governing Body of the State Resource Centre was held in late January when the Total Literacy Programme operating in 3 districts and being launched in

4 other districts were reviewed. The leadership of the District Collector was noted with satisfaction and the association of the voluntary agencies in the district with programme was also being ensured in accordance with the decision of the last meeting of the Governing Body. It was decided to avoid the problem being faced by Kerala where for political reasons a gap between the literacy phase which has been completed and the post literacy phase has been created leading to some erosion and reversion to illiteracy. For this state it was decided to establish the programme in such a way that in the district there will be simultaneity with literacy and post literacy operation. This is to be discussed at a meeting of the collectors of the 7 districts with special secretary M Panda and Mr Bordia and Mr Misra sometime in February. The meeting of the executive committee of the Tamil Nadu Board of Continuing Education was held following the SRC meetings, when the finances of the new headquarter building were reviewed and the state government grant release was urgently requested. The building is being completed on schedule. The projects of the Madras Literacy Board have reached a stage when the post literacy phase is being taken up.

IIC

The India International Centre celebrated its Annual Day on January 22 with a cultural programme planned and operated by the members. The programme comprising poetry reading, song and music and dance was of a high order. It was followed by a subscription dinner in which members participated. On January 15, the Kamala Chattopadya Memorial lecture was delivered by K B Lal on the current state of India's economy and the way forward. On January 24 the monthly panel discussion on inflation - causes and remedies was held when in a very penetrating analysis by 3 scholars the causes were seen to cluster around the speculative expectation of prices rising and continuing to rise, and there was agreement that, while the demand side with restraint on money creation and the supply forces in the uninterrupted stream of goods and services need to be ensured, the major action to counter inflation was to be dampened in inflationary expectation and for which a massive programme of imports of wheat and edible oils would be necessary.

Gandhi Memorial Lecture

On December 30, the day when Gandhiji was martyred 3 years ago, the 21st Gandhi Memorial Lecture on Gandhiji and the Indian Economy Today was delivered at the Gandhi Peace Foundation, New Delhi. The main emphasis was on Gandhi's insistance on truth and non violence as the basis of individual and social, life, leading to a life of simplicity, work and service. The 5 major problems of the Indian Economy today were confronted against Gandhiji's basic percepts and life - the five being the Balance of Payment crises, Inflation, Unemployment, Poverty and inequality and the under ground economy. On each, the major features were set against the core of Gandhiji's teaching on the subject or one related to see if there was a way forward out of the crisis. The questions and discussion which followed showed broad agreement with the approach.

February Development Seminar

The paper for the February Seminar Containerisation and Multimodal transport' by C S Rangachari together with the summary of discussion on the seminar appears as the first article.

Second Article

Part I of an extract from a lecture on 'Structural Adjustments in the Indian Economy' appears as the second article.

Publication Abstracts

A list of selected writings of Professor A. Vaidyanathan appears in this section.

* * * * * *

M I D S News

Dr. K. Nagaraj gave a course on 'Urbanisation & Migration'' to the UNFPA Trainees at Centre for Development Studies, Trivandrum during January and February, 1992. Also gave two lectures for the M. Phil students.

* * * *

Mr. S. Guhan attended meetings of the Syndicate of the Gandhigram Rural University, the Editorial Committee of the National Institute for Rural Development, and the Expert Committee on Estimation of Poverty of the Union Planning Commission.

* * * * *

Dr. Nasir Tyabji attended the *Workshop on Export of Technology* organized by the Department of Scientific and Industrial Research and ITCOT, at Anna University on March 4, 1992.

* * * * *

Dr. S. Neelakantan was a discussant for the papers presented by Dr. S. Sivakumar at the Methodology Workshop for Applied Economic Research held at the Econometrics Department of University of Madras on 6th March, 1992.

* * * * *

Dr. Syed A. Samad, Coordinator, Asian and Pacific Development Centre, Kualalumpur, Malaysia visited the Institute on Friday, 21st February, 1992.

* * * * *

Dr. Amulya K. N. Reddy delivered a lecture on Thursday, 27th February, 1992 in our Institute on "The Dependus Approach to Energy Planning".

* * * *

February Development Seminar

Containerisation and Multimodal Transport

by

Mr C S Rangachari IAS

Former Director, National Institute of Port Management, Madras

Mr K C Raman

Vice-President Gokak Patel Volkart Limited, Madras

Introduction

The purpose of this paper is to present some issues relating to trade related transport with special reference to containerisation and multimodal transport. Transport can be discussed from the point of view of its users, its providers or government which regulates it. People do not desire transport for its own sake except perhaps in the case of extreme examples like a pleasure cruise—but they do so (in the case of freight transport) for what it will do to the 'time' and 'place' utility of the goods in question. Thus transport, by changing the location of goods alters their character in the same way manufacturing does and the service has to be paid for. In economic terms the demand for transport is said to be *derived* from the demand for the product being transported.

Transport and Development

While transport cannot always be proved necessarily to precede or cause economic development, it has been found to be an indispensable concomitant of economic activity. In the more specific context of trade related transport it is possible to take a position that transport cost plays a crucial role in the trading competitiveness of a country. Developing countries will, for both economic and extra-economic reasons, continue to give high priority to transport in their plans for economic growth.

The National Transport Policy Committee (1980) noted that the proportion of gross capital formation in transport to Gross Domestic Product ranged from 0.99% to 2.84% in the period 1951-52 to 1975-77. The Committee further found empirical evidence of a significant correlation between transport capacity and growth rate in India. Similar results, the Committee noted, had been reported in respect of other developing countries.

Plan outlay for transport which was as high as 28.9% in the Second Five Year Plan came down to 9% in the Seventh Plan. This trend accords with general experience. In most cases, transport does permit piecemeal investment and developing countries, which are capital scarce, try to take advantage of this fact by bringing up their transport investment to a level of viability consistent with the level of growth in the economy and keep on upgrading it as demand levels up.

Some definitions

It is useful to be clear about the meanings of some terms that are often used when discussing transport. These are the mode, the means and the equipment of transport. The following simple definitions may serve the purpose :

Mode of transport :

The method of transport used for the conveyance of goods or persons e.g. rail, road or sea.

Means of transport :

The vehicle used for transport of goods or passengers e.g. aircraft, ship, truck or train.

Equipments of transport :

Equipments, device or material used in the transport process e.g. pallets, containers and other unit load devices.

Transport cost and its economic importance

Transport imposes a direct cost on the product and, like any other element in the cost of production, has to be included in the product price and recovered. A product will move from location 'A' to a market in location 'B' as long as the cost of carriage is less than the difference in price of the products at the two locations.

Reduction in transport costs is valued by corporate management because of its "profit leverage". For example, assume that a company has a profit margin of 10% on sales turnover and the prices do not change. In this situation, a reduction of Rs 1 lakh in transport cost is equivalent to an increase of Rs. 1 lakh in sales turnover. Further, if transport costs are estimated at 20% of total cost, a 1% reduction of total transport costs would give a 2% increase in profits.

But let us consider transport cost at a rather more aggregated level. Its economic importance arises not from its proportional magnitude which is relatively small *when averaged over all goods* but from its impact on the trading competitiveness, especially of developing countries. This in turn arises from the nature of the goods they export (tradionally primary commodities) and import (usually capital goods). The elasticities of demand for and supply of these goods are such that developing countries bear the major part of the transport costs of both imports and exports. Since elasticities are less easily manipulated by national policy measures, it follows that a better bet would be to try and reduce the overall transport costs.

In the background of the theoretical discussion above the following facts would be of interest :

(i) As per UNCTAD Review of Maritime Transport 1990, the percentage of freight cost in c.i.f cost of imports is estimated at 5.27 (world total), 4.42 (for developed market economy countries) and 8.78 (for developing countries.)

(ii) While developing countries increased their share in world merchant fleet from 6% in 1970 to 21. 2% in 1990, their share in world trade declined during the same period from 40.4% to 36. 6% indicating a rather large and growing idle capacity in their shipping. During that period the developed countries *reduced* their merchant fleet from 86.5% to 67.4% while accounting for a slightly larger share of world trade (from 54.8% in 1970 to 56.6% in 1990).

(iii) During the same period India has increased its share in world merchant fleet by a greater proportion than the increase in its share of world trade.

(iv) While in shipping the balance of payments continues to show large deficits, the container freight rates from/to Indian ports are higher by about 10% to/from the same destinations than from/to some of our neighbouring countries. (Partly at least this may be associated with the poor state of the country's shipping and ports).

(v) A study of India's exports to U.S. (in 1974) covering 45 products worth $ 550 million showed that *ad valorem* transport charges on Indian exports were more than double the current tariff rates (13 8% Vs 5.9%). It also showed that the average *ad valorem* transport charges on India's exports were substantially higher than those for total US imports from all sources : thus Indian exports to US were at a sizeable cost disadvantage.

In more recent years (especially late eighties) the picture of international trade logistics has undergone a sea change which in essence has meant an increasing tendency to trade off higher transport costs against saving in inventory and warehousing costs. The shift to 'just-in-time' manufacturing depends crucially on meticulous logistics. Carriers of developed countries have taken advantage of 'demand side' developments to market 'value added' services and thus survive the recession/competition, a race abandoned by developing country carriers while developing country trade is at the receiving end of high transport cost.

In the ultimate analysis the consequences of all these are economic in nature. Here the following question seems worth considering. Should the maritime industry continue to be protected from the consequences of its acts of omission and commission even if such protection should have adverse consequences (both short and long term) for the economy?

Containerisation and Liner Shipping: Historical Development

Liner shipping was nurtured in Europe in the earlier half of the 19th century as the various empires of the day developed their links with the rest of the world. But it was an American shipping line (the Black Ball Line of the US) which in 1816 established a regular service between New York and Liverpool. This was followed shortly afterwards by scheduled sailings between Europe and the West and East Indies, India and Australia. The first Liner

'conference' was formed to regulate the tea trade between Britain and India.

While trading expansion played its role, technological advances had replaced sail with the more reliable steam. The opening of the Suez Canal in 1819, while shortening the route between Europe and the Far East, also hastened the sailing ship's demise. Steaming distances were further reduced in 1865 when the first vessel traversed the Panama Canal. Then came the change, in the mid-19th Century, from timber construction to iron and, by the beginning of this century, steel. The steam turbine engine has, in its turn, been replaced by diesel power.

During all these years and even upto the 1960s the liner shipping scene remained virtually unchanged. Right up until then, the typical cargo *liner* was about 10000 tonnes deadweight with 5 or 6 holds and a speed of 15-17 Knots. The problem with this was twofold, declining cargo handling productivity and depressed profit margins for the shipowner.

To cut a long story short, the new transport innovations were mainly spurred by high labour costs (combined with low labour productivity) and high proportion of port time in total voyage time of ships. Thus from the mid 1960s have been witnessed a series of attempts at 'unitisation' of cargo-to reduce the number of individual handlings of the cargo-through pre-slinging, palletisation and finally (as the acme of the evolution) containerisation.

Advantages of Containerisation

Containerisation brought to 'general' cargo trade the advantages of mechanisation and scale economies enjoyed by bulk cargo (both dry and liquid) trade. By consolidating mixed general cargo package into one standardised unit the cargo is handled faster (reducing ship's time in port), requires less labour and is stowed more efficiently whereas in the past, it would have taken 20 to 30 individual crane moves to load the equivalent amount of cargo between the quayside and the ship, a single lift now achieved the same results-and the goods are doubly protected by the container's outer skin. With the increased productivity which containerisation brought to the port installations, ship were turned round that much faster. Effectively therefore, the same European shipowner, who traditionally achieved 2.2. round voyages from his Australian trade vessel was now achieving 5.5 voyages from the containership with 3 or even 4 times the cargo capacity. Obviously. therefore, fewer ships could carry the same volume of cargo. Goods could now only be effectively loaded at the shipper's premises into a single container and transported, without rehandling, through to the overseas consignee's receiving warehouse many thousands of miles away, by ship, road, rail or even air. The 'through transport' intermodal production pipeline has been conceived, and successfully operated.

Effects of Containersation

In the wake of such a 'pipeline' system, many aspects of the transport business had to change, almost no aspect of the industry remained untouched.

Ships

became large, faster and gearless

Terminals

large open paved spaces to store and mechanically handle containers with sophisticated gantries replacing the traditional fleet of 5 ton cranes.

Road and rail —

Heavier tractor units and long wheel-based platform wagons to handle the heavy containers (20 to 30 tons)

Containers —

For every one on the move, two more were needed : owned or leased, they had to be built and controlled in large numbers.

Documentation and systems —

Had to be redesigned taking into account the needs of the 'pipeline' system.

Inevitably such a heavily capital-intensive technology was bound to have implications for labour absorption (in the form of quantitative reduction and qualitative upgrading or re-skilling). In the older ports around the world, success with the new transport technology has been directly proportional to the effectiveness with which the labour issue has been tackled.

The benefits from containerisation and the problems associated with containerisation, especially from the point of view of the developing countries, have been summarised as follows :

a) Advantages to ship-users and trade:

i) greater physical protection to the cargo from damage;

ii) less opportunities for pilferage ;

iii) savings in packing and insurance costs ;

iv) minimum required inventory resulting in lower costs because of lower transit time and, therefore, better inventory control;

v) reduction in Inland transport and handling costs;

vi) with the introduction of combined transport document and streamlining of documentation and Customs formalities, the shippers can achieve all-round economies in transport costs.

b) Advantages to the shipowners:

i) reduction in port time and in the costs themselves which is a major saving in today's conditions where standing charges are very high;

ii) greater utilization of capacity through quicker turnround;

iii) reduction in cargo claim liability.

c) Problems associated with containerisation

i) High capital investment and elaborate organisation;

ii) Need for ports with container handling facilities, deeper draught etc;

iii) For economies of scale, it requires acquisition of fully cellular and container oriented large vessels which need feeder services;

iv) Because container cargo from any one port is not adeqate;

v) Labour problems such as payments of share/premium on container displacement. This premium is being demanded and paid to labour in some Indian ports;

vi) Development of Inland leg of t ansportation does not always match with ocean transportation of containers;

vii) Coordination between various agencies is involved, and if procedures are not simplified or various authorities insist on their rights and privileges, economies of containersation do not follow;

viii) Freight differential—concept of what a commodity can bear may not be adhered, since the charge is for the box and not on what it carries;

ix) Possibility of low valued cargo being shut out;

x) Non-availability of railway flats and inadequate frequency of sailings;

xi) Inadequate infrastructure for groupage/consolidation of cargo;

xii) Customs control, railways, banking and other regulations imposed by different authorities often work at cross purposes.

The Indian experience

While a number of *ad hoc* assessments have been made in specific contexts, no large-scale attempt to evaluate the impact of containersation on the various interests and the economy has so far been made. As in many other developing countries, the progress has been halting, the costs high and results doubtful. An illustrative list of the problems faced is attached in (Annexure I).

Multimodal transport

The concept here must be understood to mean more than just transporting a given freight by more than one transpost modes. The UN definition of the term emphasises the following additional aspects : (i) the movement should be in the course of international trade and (ii) it must be undertaken by a *single* multimodal transport operator (MTO) under a *single* invoice and document, who then assumes responsibility for the entire movement from origin to destination. The MTO also guarantees the transit time of cargo.

Multimodal transport is thus the logical culmination of containerisation; it is required in order to derive maximum benefits from containerisation it requires, for successful working, not only the elaborate physical infrastructure which is a 'must' for 'pipeline' flow of goods, but a number of changes in the official, administrative and commercial systems. Physical infrastructure includes not just a container terminal and freight station at the port with an elaborate set of gantries and other complementary equipment but also inland infrastructure with all the attendant improvement in road and rail transport system as well as a chain of inland container depots/container freight stations.

A World Bank (1990) study estimates the infrastructural investment required to be of the order of $ 32 billion. But, even if required and feasible, all this investment would still not deliver the goods—speaking both figuratively and literally—in the absence of a whole new set of systems and procedures that may be summarised as 'trade facilitation' e.g. customs procedures reducing inspections to one stage in the chain permitting subsequent free movement of both loaded and empty containers whether by road or rail, regulations to license (or register) and monitor the actions of multimodal transport operations, appropriate changes in banking and insurance regulations and procedures etc. The business about single liability also relates to international convention. To make multimodal transport commercially feasible and attractive to shippers, adoption of international conventions (such as the Hamburg Rules and/or the UN Multimodal Transport Convention) is also a necessary step

Two critical areas

Two critical areas in the realisation of the full potential of the new transport technology may be discussed. One is the 'unproductive' time in transport. This could be due to hold-up of goods at 'switching' points due to inspections, port procedures and the like (for example) or delays in documentation. These add considerably to transport time of cargo and therefore cost, in a number of ways e.g. cost of locking-up capital for the period, risk of product damage and market-related uncertainties to the shipper. But delays or hold-ups in any pipeline have cumulative effects which are easily overlooked in looking at individual cases. This is an area crying out for concerted reform. The second critical area is labour productivity. The adoption of manning scales at ports for handling containers is based on equating the container with the ship's hatch, which has proved to be a monumental blunder as no attempt at improving efficiency in container handling can make headway without adoption of reasonable norms for container handling, both as to manning and productivity.

Conclusion

To sum up :

i) The trends in international trade logistics are such that, as a country seeking foothold in world trade, India may have no option but to adopt the new transport technology.

ii) Adopting a technology and making it work to the country's advantage are two different things, particularly given the resistance to change.

iii) Transport and trade policies have to be based on a recognition of their mutual, sometimes conflicting interests which in turn have to be subordinated to the overall goal of national welfare.

iv) Containersation and multimodal transport are nothing if not systems/concepts and can be successful only with effective integration, both horizontal and vertical.

v) The decade or so of experience with the new technology has not resulted in the expected advantages either to trade, national shipping, ports or the economy.

vi) The time to undertake major reforms —on the waterfront, at the inland nodes or to loosen the stranglehold of procedure and paperwork—may be now, as the country is seeking to make a major breakthrough on the trade front.

ANNEXURE I

INDIAN SITUATION

I. Problems of Infrastructure

Serious capacity constraints in ports, roads, railway net works and related rolling stock.

PORTS

Extremely low labour productivity;

Low availability of cargo handling equipment;

Critical shortages of personnel, equipment and storage space;

High port charges.

CONSEQUENCES

Long waiting time for ships and containers;

Container dwell time 25-30 days as against 6-7 days at foreign ports;

Cost of handlings 90% higher than in Japan/US;

Port charges higher for LCL shipments;

Additional cost on account of port handling inefficiencies estimated as $208 per TEU.

ROADS

Axle load limitations (only 7.5 tons on N.H);

Most bridges and culverts unsuitable for 35' or 40' containers.

Road vehicles (eg trucks) not of the right capacity for axle configuration).

RAILWAYS

Inadequate number of railway flats;

Charges too high for empty haulage;

Container volume make up less than 0.05% of freight traffic;

No regular fixed schedule for running of trains to LCDS;

Excessive Transit times.

Tariffs discriminate against containerised cargo.

LCDs & CFSs

Structures and available equipment inadequate;

Communication and administrative facilities lacking.

Customs service poor;

Unreliable rail haulage of containers between Ports & ICDs;

Road Transport not allowed between ports and ICDs;

Rail Tariff 60 - 90% higher than commercial railway tariffs for container loads;

Very high ground rents for empty containers at ICD;

Dwell time of containers at ICDs very high;

Shippers prefer road movement in breakbulk form. Not enough ICDs & CFSs to serve country's needs;

Foreign shippers do not favour movement to ICDs because of fear of delayed deliveries, demurrage, container dwelltime, post of repositioning etc. Hence prefer road movement in breakbulk form. ICDs not functioning as true dry ports - they serve as cargo consolidation and clearance;

Cost of cargo handling in CFS system in excessive;

Groupage facilities lacking for small shippers;

Less than 8% of containerised cargo traffic passing through Indian Ports goes through ICDs (it could be as high as 50%).

WAREHOUSING SYSTEM

Significant capacity constraints.

SHIPPING

National shipping lines not fully equipped in container trade to improve market share;

Inadequate marketing by shipping lines to use ICDs;

Tariffs heavily weighted against LCL shippers - often based on cubic metre or per ton basis-some shipping lines charge extra for container movement to ICD, towards repositioning cost of empties.

INDIAN SITUATION

II. Problems Connected With Systems and Procedures

It is estimated that about *10% of the value of traded commodities is spent on paper work and going through procedures.*

Documentation requirements are excessive

Import clearance requires 23 documents.

Export clearance requires } 118 documents / 258 signatures needed

Average time spent in preparing forms for each consignment	: 22 hours
To get import licence	: Time needed 6 weeks
Customs clearance	: Average 21 days needed

(1) Heavy outflow of foreign exchange on account of detention of containers.

(2) Very few import containers move beyond port parameters under bond.

House stuffing not permitted, defeating the purpose of door to door transport.

a) Customs inspect 10% not of all containers but 10% of the load of each container;

b) High security deposit per TEU of $ 3000 charged by customs on containers leaving the port;

c) Customs include cost of rail transport from port to ICD for calculation of duty;

d) Bonded containers can be moved without regulatory constraints by rail but not by road;

e) LCL cargoes have to be handled only in public warehouses;

f) Rivalry between different customs zones regarding colletion or duties with reference to targets.

(3) Communication systems obsolete and inefficient.

(4) Lack of commitment on the part of local freight forwarders to the concept of through transport.

(5) No officially endorsed concept of combined transport goods - no MTD or CTD - separate documents have to be issued for each mode carrying a container.

(6) No through cost and transport arrangements provided to shippers.

(7) Each mode of transport has different *liability* provisions.

(8) Insurance coverage by domestic carriers (especially railways) totally inadequate for today's trade.

(9) Legacy of piecemeal containerisation: Authorities like customs, ports, banking and insurance systems more concerned with the rulebook and less change-oriented.

[10] Shipper takes *shor-term* view of trade transaction : No concern for buyer's needs (while).

(11) Buyer is able to exploit competition in market for transport services-looks out for quick gains.

(12) Foreign port transhipment of Indian containers, caused by sabotage law, adds to freight cost/transit time.

Summary of Discussion

The Chairman elucidated the significance of shipping sector for India's foreign trade as 95 percent of goods were transported through sea by ships. The author mentioned that the scope of his paper confined to trade related transport with special reference to containerisation and multi modal transport Hence the whole question of transport has to be discussed from the point of its users, its providers or government who regulates them.

Transport imposed a direct cost on the product and had to be included in the product price and recovered. Its economic importance arose not from its proportional magnitude which is relatively small but from its impact on trading competitiveness particularly of developing countries (LDCs) which depends on the nature of goods exported. The elasticities of demand and supply of these goods are such that LDCs bear major part of the transport costs of both imports and exports.

The UNCTAD review of maritime transport 1990 estimates the percentage of freight cost in CIF imports at 4.42 for developed market economies (DMEs) world trade declined from 40.4 percent in 1970 to 36.6 per cent in 1990 indicating a rather large and growing idle capacity in their shipping even though its world merchant fleet share rose from 6.3 percent to 21.1 percent during the corresponding period.

The Shipping balance of payments also showed deficits and container freight rates from/to Indian Ports are higher by about 10 percent to/from the same destination than from/to some of our neighbouring countries. A study of India's exports to US in (1974) justify the above argument covering 45 products worth $ 550 million showed that *advalorem* transport charges on Indian exports were more than double the current tariff rates than those for total US imports from all sources which shows exports to US at a sizeable cost disadvantage.

Under the system of containerisation the mixed general cargo packages are standardised into one unit and handled faster with less labour and stored more efficiently. But trade advantages of mechanisation and scale economies according to the author was constrained by lack of fully cellular and container oriented large vessels linked to feeder

Multi model transport as per UN definition was movement of transport in the course of international trade and undertaken by a single multi-modal transport operator under a single invoice and document.

The 'critical areas' according to the author in the realisation of full potential of the new transport technology was related to 'unproductive' time in the course of transportation as in the case of hold-up of goods at switching points due to inspections, port procedures or delays in documentation and labour productivity.

The author used many interesting and informative transparencies to elucidate various facets of the structure of India's export trade. key target for export trade, container freight rates, preference of national fleet, average turn round time/ship, mindless paper chase pertaining to bureaucracy, dock labour board (DLB) and staff and the cost of handling of container in various Indian ports.

In the discussions that followed several interesting questions were raised. A basic question pertained to the very need and rationale to switch over to container trade and its justification by the author was its insistence by trading partners due to reasons based on efficiency and safety.

On the question of why Colombo port was preferred to move containers by feeder ships to be linked to trading routes than the Indian sub continent, it was pointed out by the author that this was due to the relative efficiency of the port, higher number of ships handled, capital intensive vessels in operation, number of gravity cranes and average turn round time/ship was 34 hours in Colombo compared to 47.80 hours at Madras, preberthing time/ship was 5.31 hours in Colombo against 12.01 hours at Madras and the number of TEUS/gravity crane was 61.328 in Colombo and 39.197 in Madras. Moreover the presence of cellular container ships in Colombo Port also helps it to reap economise of scale due to increased efficiency of container handling activities.

On the clarification of dock labour board (DLB) and the escalating cost of handling container at port it was pointed out that the labour unions were more powerful both at the port trust and dock. Privatisation was the feasible option to the transport sector as it was highly influenced by vested interests leading to gross underutilisation of capacity in the shipping sector. Since marginal cost was low and the need to prune variable costs was desirable, it was also advisable for foreign investors to take part in the intermodal intervention, as a sequel to which emergence of competition would also bring down the cost as India already possessed good transport infrastructure and the cargo mix was also good.

On a query on the question of international trade adhering to the rules of the game as being a disadvantage also meant the provision of subsidy by the government to the sector. The author was however critical of the role of government and saw the increasing role of private sector as the cost of labour was higher and inefficiencies existed in the ports since the labour productivity was low. The government also spends enormous amounts in the name of infrastructure development only to be underutilised as ware houses and open spaces already existed which remained unutilised.

Another question was the liberal policy pursued by the government and if firms tookover the trade would it necessarily raise efficiency? The author admitted that Indian ships did not have fully containerised vessels and there were axle load limitations, apart from regulation on local infrastructure. Transit time of container handling from Bangalore to Madras normally took 3 days but in practice it takes 11 days. So efficiency at local level is a prerequisite for improving shipping services.

On the question of nature and extent of transport cost in the context of its being a service to industry it was pointed out that inefficiencies did exist and involved both money costs and bank costs. The intangible cost also involved money paid for services of custom officials, middlemen, clearing and forwarding agents which would not be ignored, yet all accounted in computing total costs. The author clarified that transport was to be viewed as an Industry in its own right and as such they were not earning opportunity cost on return and the social cost involved the subsidy given to trade.

On the question of whether in the absence of government intervention and entry, private sector would have done better, the author mentioned that since initial capital costs were heavy, government intervention was crucial even for the induct of technology and to subsidise the whole operations. In the event of state control and existence of unions had only chocked the industry. The local infrastructure and port construction must be under government control and may be leased to private agencies for its efficient operation. He also suggested that the port authority as in Singapore ought to lease all the terminals and super structures to private trade operators which has resulted in efficiency of container handling beyond expectations. The cost of port operations however had not been hiked by private operators but was done as a policy by state intervensions. Yet the private enterprises survived all along due to their relative efficiency based on productivity leading to greater profitability and even catered to various vested interests in the business.

V. JACOB JOHN

Structural Adjustment in the Indian Economy - an assessment*

Now a days 'planning' has become something of a dirty word. Critics of Indian Planning have been blaming the modest performance of the Indian economy, its inefficiency and corruption, on excessive state involvement and interference in the functioning of the economy in the name of equity and self reliance. The dramatic collapse of the socialist regimes in east Europe and the USSR has added much grist to the proponents of "market driven" development against planning. One must note, however, that the choice is no longer posed in terms of market vs. state intervention. State intervention and guidance is now conceded as being desirable, even essential. The plea is that the state should play a "market friendly" role. Our own policies have been gradually veering, over the past decade or more, towards "liberalisation" in respect of trade and industry. The larger questions - such as the role of the state and public sector enterprises, the balance between the growth and equity, and the appropriateness of the pattern of development pursued- which have been debated in a rather desultory, fitful fashion so far have suddenly acquired a compelling immediacy in the context of our present economic crisis. A basic restructuring of the approach to planning and the role of the state now occupies centre stage.

It is worth recalling that during the first three decades of planning we experienced and weathered numerous "crises" military conflicts, food and foreign exchange shortages, and inflation without giving up the basic approach. During this period, the economy recorded steady though moderate, rate of growth in output. The widening and deepening of the industrial base was noticeable but employment problems persisted; and the pace of improvement in terms of average living standards and of reducing the incidence of unemployment and poverty has been slow. On the other hand, the macro economic management was guided by prudence - some might even say conservation - and succeeded in containing the domestic rate of inflation and the recourse to foreign borrowings within reasonable limits. In these two respects India's record compares very favourably with most other countries of the developing world.

*Part I of the Dr. John Mathai Memorial Lecture delivered by Prof. A. Vaidyanathan at the Department of Economics, Calicut University, Thrissoor, January 10, 1992.

India entered the eighties with a fairly comfortable position in terms of food and foreign exchange reserves - with food stocks around 20 million tonnes and foreign exchange reserves equivalent to five months imports. The rate of domestic savings was at a record level of 21 per cent of GDP; savings performance of the public sector had visibly improved in the late seventies with total public savings averaging an all time high of 4.5 per cent of GDP during 1975-79; and the inflation rate during the latter half of the seventies (hardly 4-5 per cent a year was the lowest in three decades).

The eighties witnessed a paradoxical situation: For reasons which are far from clear, the overall rate of growth was significantly higher than the average of the previous three decades even as both the balance of payment and the public sector finances deteriorated rapidly. On the external front the deficit on the current account of the balance of payment rose progressively from around 3 billion US dollars equivalent at the beginning of the decade to over 9 billion US dollars at the end. During the first half of the decade both exports and import grew rather slowly - the latter in large measure due to the rise in domestic crude oil output from Bombay High and a consequent reduction in POL imports. But a decline in remittances and a big increase in payments, consequent on a deliberate policy of encouraging NRI deposits and taking recourse to commercial borrowing, led to a widening of the current account deficit.

During the second half of the decade, partly due to the switch in exchange rate policy (reflected in the crawling devaluation of the rupee), there was an unprecedented increase in exports. But this was more than neutralised by the increase in payments for imports. The latter was contributed by two factors: an increase in normal imports and an even larger increase in the payments on account of credit purchases of defence, aircraft and other items which do not figure in the recorded trade statistics. continued increase in NRI deposits and commercial bank borrowings - outstandings under these heads nearly quadrupled between 1984-85 and 1989-90 - meant a further large rise in interest payments. There was no improvement in remittances. The current account deficit more than doubled in the course of the 7th plan. This was met part by higher borrowings and partly by a drawing on reserves, which fell by 2.7 billion US dollars in just three years. By the end of 1989-90, foreign exchange reserves were equivalent of 2 months imports.

On the domestic front, the comfortable food, foreign exchange and savings position along with the low rate of inflation encouraged the government to step up public investments rapidly, despite a progressive deterioration in the savings performance of the public sector. As a percentage of GDP, public investment which stood at around 8.5 per cent in 1980-81 averaged 10.5 per cent through the 1980's, while public sector savings declined from around 4 5 per cent in 1981-82 and 1982-83 to 1.2 per cent by the end of the decade. The government was not deterred by the steep rise in the fiscal deficit at a time when private savings rate was also lower and the interest rate on government securities had been increased in accordance with the Chakravarthy Committee recommendations. In the event the government's recourse to borrowing from the Reserve Bank also rose substantially from an average of 2.1 per cent in GDP between 1980-1981 to 2.4 per cent in subsequent quinquenium. Warnings about the dangers of allowing this situation to continue were countered by pointing to the relatively high growth rate in GDP and the fact that the policy did not generate extra inflationary pressures. The average increase in WPI during the latter of the eighties was in fact less than in the first half.

The dangers implicit in allowing the fiscal and BOP trends to continue unchecked were however obvious enough. This consideration weighed heavily with the Planning Commission in formulating the approach to the eighth five year plan early in 1990. While the document argued for many basic changes to make planning more sensitive to the needs of the poor and the unemployed, to encourage decentralisation of power and responsibility for local development and more attention to the content of development in terms of environments impact and sustainability, it also pointed out "with the fiscal system and the BOP b ing under such severe stress, the margin for monoeuvre in the coming few years is limited. This makes it all the more necessary to undertake a close scrutiny of existing expenditures to accommodate new commitments. Accordingly, the emphasis has to be more on restructuring both economic priorities and the pattern of spending as well as getting much more out of what is spent than on larger financial outlays."

The Commission resisted pressures to set a high growth target. Even the maintenance of growth rate achieved in the 80s did not seem feasible without determined action to tackle the fiscal and the BOP deficits. And the elements of the medium term policy package suggested in the Approach document were consciously designed to address these problems. This package included: decentralisation and integrated local planning were not only inhereently desirable but would also improve efficiency of public spending: vigorous conservation efforts to reduce the rate of growth in demand for capital/foreign exchange intensive inputs-notably energy and fertilisers; a thorough review of the rationale and incidence of explicit and implicit subsidies to help decide on how to trim them without affecting the poor; and measures to maintain and improve upon the export growth achieved in the latter half of the eighties. Following the Gulf war the elements of a medium term programme to cope with the situation were spelt out in some further detail.

But the debate on this document was never really joined. There was a great deal of shadow boxing on the question of quantification and on what the target growth rate should be. To some degree this may reflect a concern among influential segments in government and the media that the formulations of the approach document may threaten the efforts at liberalisation. The idea of opening the economy to external competition and dismantling the control system had gradually gained support in the government. Rajiv Gandhi was openly committed to it and V. P. Singh was quite persuaded that liberalisation was inevitable, necessary. The kind of agenda proposed in the Approach document—emphasising internal structural changes, the problems of the poor, the unemployed and traditional craftsmen, and sustainable development — was perhaps seen as retrogade; at any rate it might divert attention and blunt the momentum of liberalisation. Perhaps the opinion makers did not have much faith in the longevity of the JD government much less its capacity to implement any reform, not to speak of radical reform. Whatever the reason, the proposals of the planning commission did not get serious attention.

The Gulf war precipitated the BOP crisis earlier than might have happened in the normal course. In 1990-91 the import bill on account of POL is estimated to have increased by as much as 1.7 billion US dollars—largely on account of the steep rise in oil prices during the conflict and to some extent higher volume of imports necessitated by shortfall in indigenous production. Remittances fell in the wake of the conflict and there were substantial withdrawals in the NRI deposits. The weak policy response to these development; reflecting the fluid political situation at the centre, had an adverse effect on our international credit rating and further intensified the withdrawal of NRI deposits. Meanwhile reserves kept falling and by early 1991 dipped to barely 1 month's imports. The foreign exchange liquidity crisis became so acute as to raise the spectre of default. Even roll over of short term commercial credit was difficult. The new government was forced by these circumstances into a series of desparate measures (like pawning gold) to stave off the crisis. But eventually it had to apply for assistance from the IMF and the Bank. Under the circumstances there was hardly any other option.

It was well known that assistance from the Fund as well as the prospects of additional aid from other donors would be contingent on our taking effective steps to reduce the fiscal and the BOP deficits. It was also known that the Fund and the Bank expected the adjustment package to go well beyond the conventional prescriptions, namely, controlling growth of government expenditure geneally, trimming of subsidies, restricting the government dependence or borrowing and improvement in public enterprise operations on the fiscal side and exchange rate adjustments on the foreign trade side. These, in their view, would need to be accompanied by a substantial lowering of tariffs and permitting free import of goods, capital and knowhow; dismantling controls on investment, production and prices of domestic industry; creating conditions, including freedom to lay off workers and closedown non-viable units, in which enterprises could rationalise their operations; reorganizing the financial institutions by giving them autonomy and permitting them to function in a competitive environment; and generally restricting the area of public sector operations in the economy.

This package has provoked a great deal of concern and criticism partly on the ground that acceptance of the package as part of the conditionalities of assistance from IMF and other foreign donors implies surrender of national sovereignty, but also, and more importantly, on the ground that these changes were being rushed without thinking through its implications, with out paying sufficient attention to content and sequencing of various measures, and without sufficient political preparation.

To reject the reforms merely on the ground that they are conditions for getting foreign assistance would be inappropriate. The deterioration in the BOP and the fiscal situations has been going on for some time and nothing prevented us from working out a package of corrective measures to prevent them assuming crisis proportions. Many of the measures needed to reduce the fiscal and the BOP

deficits are as unexceptionable as they are obvious.

Thus, there can be hardly any disagreement that the tendency of government to depend increasingly on borrowings not only for investments but also for meeting current expenditures is fraught with grave danger; that a great deal is wrong in the way public enterprises work and that they must be made more efficient and generate substantially more surpluses for reinvestment if they are to serve the purposes they were meant to; and that the system of detailed, direct and discretionary controls on the private sector is ineffective if not counter productive. All these are by now widely accepted across practically the entire political spectrum. They have also been repeatedly emphasized in discussions within the government, in the NDC and in public debates on the economy. And, as mentioned earlier, the May 1990 document on the 8th plan had drawn pointed attention to these and outlined a programme to deal with them in a medium term framework.

If nevertheless no action was taken to prevent the crisis and attempt to correct the situation no outside agency can be blamed. It is lamentable that the government launched on such wide ranging policy changes only after the crisis occured and IMF and other donors had to be convinced not only about our willingness to address the problem but to negotiate a package acceptable to them. One cannot expect to have much room for manouevre when negotiating emergency assistance with barely 4-6 weeks of reserves. It must be noted however that a significant segment of domestic opinion, in and out of government, had also been working for quite some time to push through more or less a similar package.

Given the magnitude of the fiscal and the balance of payments, there can be no question about the need for structural adjustment; but there are questions about its content as well as viewing it primarily as a problem of liberalisation and opening of the economy. Much faster export growth, freer access to imports and allowing enterprises, private and public, greater freedom are all necessary. But questions concerning the wisdom of an open-door policy to multinationals, the action necessary to stimulate greater technological dynamism and innovation within the country, and the kinds of strategic intervention which the state should attempt in the long term interests of the society cannot be brushed aside lightly. These are not adjudicable in the market place.

Further the way the problem is posed reflects an excessive preoccupation with large industry : What about the impact of liberalisation on small industry (traditional and modern) which have been so assidiously fostered in the last 4 decades? And what relevance does liberalisation have for agriculture? Agricultural growth is not being impeded by excessive state intervention. It requires more effective intervention in strengthening institutions and by way of public investment. Improvements in infrastructure are again not mediated by markets but need restructuring the way they are organised and managed. And if adjustment involves adverse effects (even temporarily) on employment and incomes, both considerations of humanity and political compulsions of democracy make it necessary to ensure that costs are shared equitably. All these issues are germane to formulating an adjustment programme but we do not yet have an articulation of how precisely they will be handled. The Planning Commission's latest paper on the 8th

Plan, which provided an opportunity for addressing these issues, has chosen to confine itself to generalities. Moreover its quantitative projections seem quite out of line with the realities of adjustment It is not possible to deal with all these issues in this lecture. My subsequent comments are limited to the problem of reducing the BOP and the fiscal deficits to manageable proportions in a reasonable period of time.

The central case for devaluation and changes in foreign trade policies is that they will help promote a faster export growth and generate pressures for improvement in efficiency of domestic industry which will eventually be reflected in faster growth of inccme and employment. The crucial question is how long will these effects take to manifest?

On the export front, the immediate impact of the devaluation has not been at all striking : while the reported 6 per cent decline in dollar earnings during the first six months is almost entirely due to the steep fall (over (50 per cent) in exports to east Europe and USSR, the earnings from exports fo other hard currency countries rose by only 6 per cent. By comparison it is estimated that total exports should grow by about 15 per cent a year if the current account deficit is to be brought down to manageable levels in the course of the next 5 years.

This is more than double the rate achieved during the latter half of the 1980s when the domestic inflation rate was lower and periodic adjustments in the exchange rate. compensated for inflation. The current inflation rate being much higher, there is reason for apprehension that unless it is brought down quickly or we resume the policy of crawling adjustments in the exchange rate, the impact of devaluation on export growth would soon be blunted. In any case accelerared export growth is contingent not only on competitive prices but on a sustained effort to cultivate foreign markets, build a reputation for reliability in delivery schedules and quality, and domestic producers showing the resilience to adapt speedly in the light of changing conditions in overseas markets.

The past record of Indian business - especially the large corporations - in these respects is not particularly good. While a change of attitude is reported to be occuring as a result of the new policy initiatives, a doubling of the growth rate of overall export earnings beginning the next year can hardly be taken for granted. Hopes of diverting, to any substantial extent, earnings flowing through illegal channels are unlikely to be realized so long as the sources of demand for foreign exchange for smuggling (mainly gold) or for building foreign balances remain untouched.

Altogether it would be realistic to go on the assumption that the response is likely to be gradual. Meanwhile, government should take up, in collaboration with industry and trade, a concerted drive in selected products/markets to lay the basis for a sustained 15 per cent growth in exports atleast by mid 1990s. A 15 percent export growth must become a target of very high priority.

Imports have been substantially reduced during the current year despite considerable liberalisation of licensing and quota restrictions because of the substantial premium which the eximscrips command, the stringent conditions for opening letters of credit and high interest rates. But as these are relaxed and

the proposed tariff reduction is implemented-the government is apparently committed to both-there is bound to be a significant increase in the demand for imports and the rate of import growth relative to national income will also be much higher than in the past. No one quite knows by how much import demand will go up as a result of liberalisation. In the past imports have grown roughly at 5 per cent a year; some projections assume-they are no more than assumptions-a 10 per cent annual growth under the new regime.

Supposing, for argument sake, one accepts the latter figure and assume that it takes three to four years (rather than one or two) to attain the 15 per cent annual export growth. Under reasonable assumptions concering the growth of factor services (largely determined by the level and structure of debt already committed) and with no significant change in remittances, one should expect a substantial increase on a rough estimate by an average of 5 billion dollars a year)-in the current account deficit in the next 3-4 years. Reserves at the end of 1990 being still barely two months imports, do not permit drawing down. Any further increase in commerial borrowing and NRI deposit is undesirable- the levels are already too high, they are costly, and they have shown themselves to be volatile at times of difficulty. This means that the volume of multilateral and bilateral assistance needed to tide over the transitional phase of BOP adjustment will also be substantially more than appears to be visualised by external donor agencies.

If this extra assistance is not available and the inflow of foreign resources is limited to the magnitude of current account deficit projected on the basis of export growth rate reaching 15 per cent in 1992-93, the import capacity of the economy will be severely constrained in the coming three-four years. While this can be managed without reimposing import controls by allowing the eximscrips permium to increase, there is bound to be a severe recession in aggregate output with no means to regulate its incidence across sectors or regions.

Precisely because the BOP outcomes of the recent policy changes are uncertain and highly sensitive to the assumptions one makes about the economy's response to the regime change, and foreign exchange is a critical resource, it would be prudent to phase trade liberalisation and tariff reduction over a longer period, negotiate for larger assistance for the transition and also accept the possibility that the transition will involve a recession in the overall rate of growth. Acting on misplaced optimism is risky and almost certainly a recipe for a repetition of the crisis.

(The Second Part will appear in the next issue).

A List of Selected Writings of Prof. A. Vaidyanathan*

Sl. No.	Author	Title	Publications
1	with B.S. Minhas	Growth of Crop Output in India 1951-4 to 1958-61	In Pramit Chaudhuri (ed) Readings in Indian Agricultural Development, 1966
2	with B.S. Minhas	Water Requirements of Crops of Efficiency of Irrigation in India	1966
3	with T.E. Weisshopf	A Macro Model of Self-Reliant Economic Growth	Unpublished, Mimeo, Planning Commission, 1970
4	with T.N. Srinivasan	Agricultural Statistics and A Note on the Index of Industrial Production	C.R. Rao (ed) Data Base of the Indian Economy, 1972
5		Pitambar Pant: An Appreciation	*EPW*, Vol. 8 No. 17, 28th April 1973
6		Some Aspects of Inequalities in Living Standards in Rural India	Srinivasan and Bardhan (ed) Poverty and Income Distribution in India in Rural India, (Statistical Publishing Society, Calcutta, 1974).
7	with Srinivasan and Radhakrishnan	Data on Distribution of Consumption in India: An Evaluation	Srinivasan and Bardhan, op cit
8		On the New Economics of Poverty	Economic Theory and Planning, ed. Ashok Mitra, (1974)
9		Performance and Prospects of Crop Production in India	*EPW*, Special Number, Vol. 12, No. 33-34, August 1977

*Prof. A. Vaidyanathan graduated from Loyola College, Madras University, in 1951 and followed it up with a Masters Degree from University of Pittsburg and a Doctoral Degree from Cornell University. He served the NCAER, Planning Commission, FAO and IBRD before joining CDS, Trivandrum. He was a Visiting Fellow at the Institute of Developing Economies, Tokyo in 1982. He joined the MIDS in September 1984. He was a member of the Planning Commission in 1990 and returned to MIDS. On his retirement the Governing Council invited him to be Emeritus Professsor in the Institute.

He has a wide range of interests covering the areas of Macro Economic Planning and Policy, Agriculture and Rural Economy, Bovine Economy, Irrigation and Water Management, Income Distribution and problems relating to socio-economic data. He has supervised a number of M. Phil and Ph. D Scholars. He has been on the Governing Councils of several research institutes in the country and on the executive bodies of professional associations such as Indian Econometric Society and Indian Society of Agricultural Economics. He has served as a member of government committees including the Committee of Agricultural Taxation 1970, Committee on Data Improvement 1972, Committee on Fiscal Policy for employment, 1978. He was Conference President of the Indian Society of Agricultural Economics in 1987. He has rich experience in academics and policy making with many empirical studies to his credit.

The following list of publications of Prof. A. Vaidyanathan is not complete as a proper record has not been maintained. It is thus only a chronological rearrangement of available information.

Sl. No.	Author	Title	Publications
10		Constraints on Growth and Policy Options	*EPW*, Vol. 12, No. 38, 17th September 1977
11		Constraints on Growth and Policy Options (a reply to T.N. Srinivasan's comment)	*EPW*, Vol, 12 No. 51, 17th September 1977
12	with I.S. Gulati	On Rolling Plans	*EPW*, Vol. 12, No. 41, 8th October 1977
13		Review of the Indian Economy's Performance and Future Prospects	UN, ESCAP, 1977
14		Aspects of India's Bovine Economy: Some Preliminary Results	*IJAE*, Vol. 33, No. 1, January March 1978
15		HYV and fertilisers: Synergy of Substitution; (A comment on the Kirit Parikh article)	*EPW*, Vol. 13, No. 25, 24th June 1978
16		New Deal for the Poor?	*Seminar*, 228, August 1978
17	with Narayan Nair	Inter-State Differences in Milk Consumption in India, a Preliminary analysis	CDS Working Paper 62, 1978
18	with A.V. Jose	Absorption of Human Labour in Agriculture; A Comparative Study of Some Asian Countries	Alagh et al, Labour Absorption in Indian Agriculture, ILO, ARTEP, 1978
19		Labour Use in Indian Agriculture: An Analysis based on Farm Management Data	Alagh et al, Labour Absorption in Indian Agriculture, ILO, ARTEP, 1978
20		Rapporteur's Report on Identification, Appraisal and Evaluation of Agricultural Projects	*IJAE*, October-December 1978
21		Summaries of group discussions	*IJAE*, Vol. 34, No. 1, January-March 1979
22		On Analysing Agricultural growth	Rajendra Prasad Memorial Lecture, 1979
23		Report of Task Group of Experts on Development in South Asia in the 1980s	*ESCAP*, 1979

Sl. No.	Author	Title	Publications
24		The Role of Public Sector: Some Issues for Research and Their Data Requirements	*The Journal of Income and Wealth*, April 1979
25		Unemployment and Wages in an agrarian economy	CDS Working Paper 120, 1980
26	with K.N. Nair	A comment on Federick Simons Questions in the Sacred Cow Controversy	Current Anthropologist, 1980
27	with C Mukherjee	Growth and Fluctuations in Foodgrain Yields Per Hectare: A State-wise analysis	*IJAE*, Vol.35, No.2 April-June 1980
28		Influence of Weather on Crop Yields: A Review of Agro-Meterologists Research	*IJAE*, Vol. 35, No. 2 April-June 1980
29		A Critique of Studies regarding the distributive impact of Agricultural Growth in Selected countries	Prepared for FAO, 1980 (unpublished)
30		Milk Production in Tamil Nadu & Kerala: Contrasts & Implications	Bulletin, *Madras Development Seminar Series* 11(4) April 1981, pp. 233-42
31		Developments in the Post Independence Period	Cambridge Modern Economic History, 1981, Vol. 1
32	with K. N. Nair and Marvin Harris	Bovine Sex and Species Ratios in India	*Current Anthropology*, Vol.23, No. 4, August 1982
33		Vegetarianism and Animal Protein Consumption in India	Wenner-Gren Foundation for Anthropological Research, Symposium No. 94, October 1983
34	with Mirdul Eapen	Structure of employment in Indian Industry: Some findings from Census Data	CDS Working Paper 199, 1984
35		Organisation and Management of Water Control in China	Institute of Developing Economies, V.R.F. Series No. 113, September 1984

Sl. No.	Author	Title	Publications
36		Problems in Irrigation	Voluntary Action, 27 (9-10) March-April 1985, pp. 130-32
37		Food Consumption and Size of People: Some Indian Evidence	*EPW*, Vol. 20, No. 30, Review of Political Economy, July 27, 1985
38		Economic reform in China: Some Impressions	*Frontline*, January 26-February 8, 1985
39		China: reorienting industrial development	*Frontline*, February 9-22, 1985
40		Labour Use in India: A Study of Spatial Temporal Variations	*EPW* (supplementary) vol. 21, No. 52, 27th December 1986, A130 - A146
41		Science and Technology Policy : Rapporteur's report	*IJAE*, Vol. 41, No. 3, July-September 1986, pp. 405-412
42		On the validity of NSS consumption data	*EPW* 21 (3), 18 January 1986, 129, 37
43		On Validation of NSS Data	Symposium on Validation of NSS data of 75th Session, Indian Science Congress; Pune, 1986
44		Water Control Institutions and Agriculture: A Comparative Perspective	*Indian Economic Review*, Vol. XX No. 1, 1986
45	with Gita Sen	Growth and Social Justice: India's Experience and Prospects	People's Publishing House, Social Science Probings, Volume 3, Number 2, June 1986
46		Data Improvement and Policy Makers	in Guhan S., Shroff Manu (Ed.) Essays on Economic Progress and Welfare in honour of I G Patel, OUP, 1986
47		Agricultural Development in Eastern India: A Review article	*EPW* 22 (52), 26 December 1987, 2259-63
48		Economic reform in China : Some observation	*Social Scientist* 15 (11-12) Nov-Dec 1987, 28-33

Sl. No.	Author	Title	Publications
49		Agricultural Development and Rural Poverty in India	Papanak and Lucas (ed), Indian Economy, Lake View Press, 1987
50		Irrigation and Agricultural Growth	Presidential Address to the Indian Society of Agricultural Economics, Annual Conference, September, 1987
51		Irrigation and Water Management-Some Comparisons between India and China	in ICSSR, Economic Development of India and China: A Comparative Study; Lancer International, Delhi, 1988
52		Research on the Livestock Economy: An Overview	Keynote address delivered at the Seminar on the Livestock Economy of India, held at CDS, 26-28 March 1987 - Subsequently published in Livestock Economy of India, Oxford & IBH, 1989, New Delhi
53		Bovine Economy in India	Monograph - Oxford and IBH, New Delhi, 1988
54		India's Agricultural Development in a Regional Perspective	R.C. Dutt Memorial Lectures, Orient Longman, 1988
55		State and Economic Development in India	Address to the session on Political Economy of Asian Countries for the XIIth Indian Social Science Congress, New Delhi, November 1988
56	with Gopalakrishna Kumar	Morbidity in India, Some Problems of Measurement, Interpretation and Analysis	Unpublished, Paper presented to Sixth Annual Convention of the Indian Society for Medical Statistics, National Seminar on Statistics in Medicine, Health and Nutrition, October 1988, Hyderabad
57		Planning and Growth	*Seminar* 363, November 1989, 21-23
58		Macro and Micro Approaches to Studying Rural Economic Change: Some Pointers from Indian Experience	Pranab Bardhan (ed), Conversations between Economists and Anthropologists, Methodological Issues in Measuring Economic Change in Rural India, OUP, 1989, Delhi

Sl. No.	Author	Title	Publications
59		Planning, State and Development	*Mainstream* 28, (37), 7th July 1990, 15-19
60		Cottage and Small Industries in India, Policy and Performance	Sir Purshotamdas Thakurdas Memorial Lecture - The Indian Institute of Bankers, 1990
61		Eighth Plan Perspectives-Some Strategic Issues	in Malcolm S. Adiseshiah (Ed) Eighth Plan Perspectives, New Delhi 1990
62		Asset Holdings and Consumption of Rural Households in India : A Study of Spatial and Temporal Variations	in Dandekar (Ed) "Agricultural Development" Golden Jubilee Volume of ISAG, 1990
63		Economic Policies and Planning in India, Notes on Some Key Issues	Seminar on Economic Policies organised by the left parties, February 1991
64		Critical Issues Facing Indian Irrigation	in Ruth Mwinzem-Dick and Mark Svendsen (ed.) And Policy Issues, IFPRI, Washington, January 1991
65	with Chandan Mukherjee	State-wise Analysis of Agricultural Growth	In Prem Narain, O.P. Kathuria, V.K. Sharma Prajneshu (Ed) "Recent Advances in Agricultural Statistics Research", 1991, New Delhi
66		Integrated Watershed Development : Some Major issues	Society for Promotion of Wastelands Development, Supplement to Vol. VI No. 4, New Delhi, 1991
67		Agriculture and Economy Causes and Consequences of Slow Growth	C.T. Kurien, E.R. Prabhakar & S. Gopal (Eds), Economy, Society and Development, SAGE, 1991, New Delhi
68		Regional Variations in Agricultural Growth in India	MIDS, Prepared for FAO, 1986
69	with S. Janakarajan	Management of Irrigation and its effect on productivity under different environmental and technical conditions: a study of two surface irrigation systems in Tamil Nadu	MIDS, 1989

Published as required under Section 19D (b) of the P. R. B. Act read with Rule 8 of the Registration of Newspapers (Central) Rules, 1956.

[illegible]

FROM IV
(See Rule 8)

1. Place of Publication	:	MADRAS
2. Periodicity of its publication	:	MONTHLY.
3. Printer's Name (Whether citizen of India ?) Address	:	Mr. P. I. Peter Indian 9, Sardar Patel Road Adyar, Madras 600 020
4. Publisher's Name (Whether citizen of India ?) Address	:	Dr. S. Neelakantan Indian 79, Second Main Road, Gandhinagar Adyar, Madras 600 020
5. Editor's Name (Whether citizen of India ?) Address	:	Dr. Malcolm S. Adiseshiah Indian 79, Second Main Road, Gandhinagar Adyar, Madras 600 020
6. Name and addresses of individuals who own the newspaper and partners or shareholders holding more than one per cent of the total capital.	:	MADRAS INSTITUTE OF DEVELOPMENT STUDIES 79, Second Main Road, Gandhinagar Adyar, Madras 600 020.

I, Dr. S. Neelakantan hereby declare that particulars given above are true to the best of my knowledge and belief.

Dated : February 10, 199[illegible]

Sd/- S. NEELAKANTAN
Signature of Publisher

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.

2. **Cyclostyled Publications :** These consist of Working Papers, Digest Series, Data Series, Popular Series, Interns Reports and Offprint Series brought out since 1978. Detailed list available on request from the Programme Coordinator of MIDS.

3. **Occasional Publications of the Institute Include :**

a) *A Manual of Sources of Data on Tamil Nadu Economy* (1979) published by MIDS pp. 92, priced at Rs. 10/- per copy and Rs. 6.50/- for bonafide research scholars.

b) *Area Studies Bibilography Tamil Nadu* (1984) published by MIDS, pp. 226 Rs. 30/-for paper cover and 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/-

a), b) and c) obtainable from the Programme Coordinator of MIDS.

4. **Special Publications***

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/-

b) *Guide to Research in Economics*, edited by C.T Kurien (second edition) (1985) & Published for MIDS by M/s. Rainbow Publishers, Coimbatore, pp. 390 Rs. 100/-

c) *Some thoughts on the eventh 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.

Regd. No. M. T/MS(S) 485

MADRAS INSTITUTE OF DEVELOPMENT STUDIES (MIDS)

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

Editor : Dr. Malcolm S. Adiseshiah. Published by Dr S. Neelakantan for Madras Institute of Development Studies, 79, Second Main Road, Gandhinagar, Adyar, Madras 600 020, India.
printed at reliance printers, sardar patel road, madras-600 020.