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EDITORIAL—SOME HIGHLIGHTS

I General Economic Scene

State

Weather and Prices

September witnessed some rainfall in the southern parts of Tamil Nadu. In mid September, widespread to moderate rains were reported from most places in Cauvery delta (Musiri 54 *mm*, Tirumanur 64 *mm*, Papanasam 50 *mm*, Tiruvarur 66 *mm*, Needamangalam 72 *mm*). On the other hand the Mettur reservoir registered low storage in September. On September 12 the level was 41.05 feet against the full level of 120 feet, with an inflow of 5,000 *cusecs* against an outflow of 15,000 *cusecs*. On September 16, the level was 41 feet with an inflow of 9,196 *cusecs* against an outflow of 18,000 *cusecs*. On September 18, the level fell to 39.95 feet, with an inflow of 3,979 *cusecs* against an outflow of 7,000 *cusecs*. *In September again the barter* arrangement of power from this State in return for Cauvery waters from Karnataka was renewed. It is now clear that the State will have to live on this kind of *ad hoc* day to day arrangement to save its *Kuruvai* crop in the Thanjavur district, unless steps are taken to change the cropping pattern, as urged in earlier issues of the *Bulletin*. The price situation remained unchanged in the State. The Central Statistical Organisation's report for June shows that consumer price index remained at 299 in April which was 1 point above that for the first 3 months of 1977. Rural prices, on the other hand, fell by 6 points in general from 339 in March to 303 in April which was the February level, mainly due to the fall in the food prices. Even so, rural food prices in April were 12 points higher than in January. With regard to inter-urban prices, Madras prices were higher at 302 in April compared to Madurai at 284 and Tiruchirapalli at 299. The government repealed the Tamil Nadu Essential Commodities (Display of Stocks and Prices and Maintenance of Accounts) Act 1977 issued under the Defence of India Rules (see Vol VII p 363) and reintroduced the law under the Essential Commodities Act which now covers 38 items including foodgrains, pulses, edible oils, etc. and provides for the display of stocks held and a list showing cost price and sale price of each article in the premises of the dealer.

Power

The power situation in the State during September remained normal as in August. The Central Electricity Authority reported that it had cleared the setting up of the third unit with a capacity of 210 *mw* at the Tuticorin thermal station. Work on the third unit is to start this year so that it could be commissioned as soon as possible after the second unit is commissioned in June 1979. The main reason for the lower power output this year was the poor generation from Ennore with high frequency and forced outages. Ennore also faced the problem of lack of complete instrumentation and controls, which Instrumentation Limited (Kotah) is yet to supply. Also electric circuits in the first and second units need to be checked to avoid the recurrence of electric fires. Yet another problem is in the use of sea water for condenser cooling, where leakage in the boiler tubes causes difficulties, calling for water chemistry treatment and use of the expertise available in BARC (Bhabha Atomic Research Centre). One way to avoid power cuts this year is proper training of power station staff on care and maintenance which will itself ensure that power generation from the existing installed capacity is maximised. The inflow position into the *hydel* reservoirs is satisfactory and if there is no overdrawal of water from the reservoirs to make up for power shortages stemming from a larger number of outages at Ennore, there should be no serious power problem this year. There has been some delay in the commissioning of the third and fourth sets (50 *mw* and 60 *mw*) of the Kundah hydroelectric project due to the delay in the receipt of supplies for Canadian erectors. Hence instead of being commissioned in August and November, the third and fourth units are being commissioned in September 1977 and March 1978. The Tamil Nadu Electricity Board has called on consumers to avoid wastage of electricity to the maximum extent possible as yet another way of conserving the hydro storages into the summer moths of next year. For the year 1977–78, the State is facing a deficit of 2,372 million units which will be reduced as a result of the power purchased from Kerala minus the 1 million unit commitment made to Karnataka.

For the country as a whole, the power situation in September presented a mixed picture. A number of new schemes are being commissioned. DVC is adding 100 *mw* to its working capacity of 782 *mw* when its 120 *mw* unit begins functioning at September end. A 110 *mw* power station is being established in Kutch based on a fuel mix of lignite and coal. The commissioning of the first of 4 units of 165 *mw* each at the Dihar power plant in Himachal Pradesh will end the power shortages in that state. Also with the slight improvement in Rajasthan's supply situation due to resumption of the Sitapura thermal station, the power cut in the State has been reduced from 30 *percent* to 10 *per cent*, On the other hand, the Faridabad industrial complex was losing Rs. 1 crore a day during the month due to the power cut ranging from 50 *per cent* to 100 *percent*. More generally, the Punjab and Haryana faced a near crisis with a shortfall of 1.3 million *kw* in power generation and erratic supply from Bhakra. Moreover this shortage problem for the northern region is a long term one, the shortfall increasing to 3,390 *mw* by 1983–84. In the south, all the states, except Kerala, faced a shortage. Power generation in Andhra Pradesh declined in April–June due to poor performance of the thermal stations, Kothagudam generating very poorly and there being substantial slippages in the commissioning of new units. Karnataka, which was facing serious power shortage following poor rains in its catchment areas faced the possibility of imposing a 50 *per cent* power cut in the defence industries in the state. The State government was advised to plan adequate carryover of water at Sharavathy and to commission at least one unit in the Kalinadi project. In addition the Union government is being requested to approve a thermal power plant and the Kalinadi Stage II project. BHEL (Bharat Heavy Electricals Ltd.) and the ministry have jointly set up a multidisciplinary task force for project renovation of the ailing thermal and hydel power stations in the country, including 120 *mw* sets at 4 stations, 110 *mw* sets at 5 stations, 100 *mw* sets at 2 stations, 60 *mw* sets at 2 stations and 65 *mw* to 80 *mw* sets at 3 hydel stations. Instrumentations (Kotah) will be involved in this programme of renovation. The government also announced that if it was necessary to import 500 *mw* sets in order to speed power generation, it will import them. The major power problem faced by the country is that only 50 to 60 *per cent* of installed capacity results in generation where again 15 *per cent* is lost in transmission. The Union ministry reports that it has taken advance action to sanction 7,041 *mw* of new generating capacity with the aim of creating 21,000 *mw* of generating capacity within 5 years from 1979-80 at a total cost of Rs. 17,000 crores. In the area of rural electrification, the Reserve Bank of India has constituted an informal working group with Dr. B. Venkatappiah as Chairman to examine the scope for planned participation of commercial banks in rural electrification.

Madras Metropolitan Development Authority

The government announced that the World Bank aid of Rs. 15.09 lakhs will be available to improve 12.4 *km* of Anna Salai providing a 6 lane traffic and ensuring free flow of traffic. The first report of the WHO water supply study shows that only 15 *per cent* of the total drinking water from the Red Hills and Poondi reaches the public, 60 *per cent* being lost due to evaporation and 25 *per cent* lost through leaks in faulty pipelines. There is need for immediately upgrading the pipelines to prevent this criminal waste of water. The project for bringing Krishna waters to Madras city is not making speedy progress. Andhra Pradesh has clubbed the drinking water supply scheme to Madras with the irrigation supplies from Srisailam canal works to the Rayalaseema farmers, and for this combined project has asked the Union government for an allocation of Rs. 120 crores during 1979 – 1985. The State government has agreed to place adequate lands at the disposal of MMDA for the Rapid Transit System at a cost of Rs. 63 lakhs. The system's lines will take off from Beach, cross through a point at Anna Salai and Triplicane area along the Buckingham canal and from there on to Luz and Adyar. The first stage of the circular railway will be completed in 1978–79.

Madras Harbour

The port reported that for the first time in its history, its exports at Rs 3.78 lakh exceeded its imports at Rs. 3.76 lakh tonnes. Also through the port, 2.73 lakh tonnes of iron ore were handled in August, touching the highest tonnage in a day. In fact with the mechanised ore handling facility at the Bharathi Dock, 61,000 tonnes of iron ore were loaded in just 20 working hours spread over 2 days. The loading rate had reached 3,000 tonnes an hour against its capacity of 4,000 tonnes for the single stream, to which the second stream is to be added in November which will double the capacity to 8,000 tonnes. Iron ore export was 2.1 million tonnes in 1976-77 and a target of 3 million tonnes has been set for this year 1977–78.

Southern Food Zone

At a meeting in Delhi in late September of the food ministers from the southern states to discuss the procurement price of rice with the Union minister, there was also consideration of the suggestion of the ministers of Andhra Pradesh and Karnataka for the inclusion of Kerala, Maharashtra and Goa in the southern zone. Kerala expressed no interest in this suggestion for enlargement of the zone and its inclusion in the enlarged zone, as its demand is for parboiled rice which could not be met by the States in the zone. Tamil Nadu opposed the inclusion of Maharashtra and Goa in the zone on the ground that these two States belonged to a higher income group and would tend to attract the best quality rice grown in Tamil Nadu to them. The result was that the proposal for enlargement of the zone was dropped but the Southern Zone itself is no longer in existence, as will be noted later.

City Corporation and Film Finance

The State government constituted in early September a high level committee with Mr. A. N. Sattanathan as Chairman to make a comprehensive study of the administrative machinery of the Corporation of Madras and recommend the means of reorganising it. The Film Finance Corporation with headquarters at Bombay is decentralising its operations. A 30-member regional panel of the Corporation is to be set up at Madras which will help producers by scrutinising scripts locally which are the subject of financing requests. This decentralisation should also increase the number of producers that can be assisted during the year as against the average of 2 or 3 for the whole country.

Welfare Measures

The State government announced in mid September that all pensioners who retired on or after 1 June 1961 will receive an increase of Rs. 5 per month. In the case of those who retired before this date without getting the benefit of the revised scales of pay recommended by the Second Tamil Nadu Pay Commission, the increase will be Rs. 10 per month, because many of them had commuted a part of their pension which was lower any way. These measures will benefit 68,000 pensioners and cost the government Rs. 50 lakhs. Village officers and village servants are granted an *ad hoc* honorarium increase of Rs. 5 per month and a 20.1 *per cent* increase in the existing consolidated fixed travelling allowance. These will benefit 54,000 village officers and will cost the government Rs. 39 lakhs. The government has also decided to fix minimum rates of wages for employment of loadmen in markets, *shandies* and similar places under the Minimum Wages Act.

National

Rolling Plan

The Union Planning Commission at its meeting on Sèptember 10 decided on replacing the five-year plan frame by a rolling annual plan with a five year time horizon. 1978–79 will be the first year of the new rolling plan system. This decision to change the planning from five-year to one-year rolling plan is based on: (a) the criteria of realism which will allow for price changes and annual fluctuations in agricultural output as well as international economic developments to be taken into account in the plan;

(b) the criteria of flexibility which, by taking account of the savings and investment resources available, will adjust targets to actual performance and reduce the growing gap between targets and attainments; (c) the criteria of conforming to changing priorities, which for the present government include higher employment and alleviation of poverty, involving a sizeable shift of investment resources to agriculture, irrigation and small scale industry from other sectors, and price stability through the building up of stocks of essential commodities; and (d) the criteria of continuous appraisal of performance, whereby instead of the appraisal every 3 years there will be an annual appraisal of the working *and performance* of the economy with a resulting new accent on implementation of plan. There will be parts of the economy which will still be tied to the five year period, the most important of which will be the awards of the Finance Commission. Similarly public sector undertakings, universities and other corporate bodies will still be working to five year plans, with more emphasis on their annual performance. With the growing foreign exchange reserves which by the end of this financial year are likely to reach Rs. 6,000 crores, which are more than the equivalent of 12 months' imports. The perspective plan that is being worked out by the Planning Commission will aim at sharply reducing the vast array of import controls both to deal with the problems of high cost economy referred to in the *Bulletin's* earlier issues and to streamline and expand our exports. The new rolling plan system is to be discussed with the states and will be placed before the National Development Council for review and approval. The proposed system meets the need of the new government at the Centre for shifting the priorities for the year 1978–79 (which is the last year of the Fifth Plan) to agriculture, irrigation and small scale industries as a means of generating more employment and reducing the number of destitutes. As a long term system there are serious defects in the proposal that must be faced and dealt with. First, there is the problem of not having firm quantities—of *saving, investment, sectoral* output, *etc.* resulting in improved employment and incomes—against which annual performance can be judged. Second, the major elements in the economy can be developed and changed only over a period of time much longer than 12 months. There is a lurking danger of over emphasis on the short term *vis-a-vis* the medium term which provides the basis for development. Third, the basic problem of the economy is the skewed and unequal distribution of incomes and assets from which employment and income are derived. Mere shift in priorities—investing more in agriculture, for instance—under such a system will leave untouched the poor farmers and landless labourers who constitute the majority of the poor. Finally, there is the practical issue that it may not be possible to keep producing new rolling five year plans every year. The time available for producing the first rolling plan is 6 months, when a serious exercise of this kind will require approximately 18 to 24 months. There is likely to be a review of this first year experiment (after the political dust has settled) and a return to more normal and proven planning methodologies.

Prices and Anti-Inflation Measures

The August end wholesale price index at 188.6 points shows a monthly rise of 0.4 *per cent* and for the 12-month period 5.4 *per cent*. The major price rise items were pulses (4.8 *per cent*), sugar (5.7

per cent) and edible oils (2.2 *per cent*). Price declines were registered in fibres (–4.6 *per cent*) and cotton textiles (–1.1 *per cent*). On the other hand, the All India consumer price index for July rose sharply by 5 points to 325, taking the 12–month average to 310. At this rate, the August index which will become available in October might well show a 12–month average above 312 points, which is the stage at which Union government employees become eligible for a rise in Dearness Allowance. This means that from September 1, an additional DA instalment will become due, costing the Union government Rs. 52 crores for a full year and Rs. 30 crores for this year. This will contribute slightly to the push up of wage price spiral. The *Economic Times* retail price index for Greater Bombay, however, shows for the first time in the past 16 months a decline of 1.2 *per cent* for August (though there has been 5 to 6 *per cent* rise in retail prices over the 12–month period) which in turn was 7.4 *per cent* higher than August 1975 prices. In August 1977, edible oil prices fell by 11 *per cent*, cereal prices fell by 2 *per cent*, *pan* and tobacco prices by 10.4 per cent, while increase of prices affected pulses (3.9 *per cent*) meat, fish and eggs (8.2 *per cent*) and sugar (1 per cent). On the anti–inflation side, having promulgated the ordinance on September 3 to restore the payment of minimum bonus of 8.33 *per cent*, under which the banks and IRC are covered and marginal and sick units afforded some protection, the government issued National Development Bonds through post offices and public sector banks in denominations of Rs. 10, Rs. 100 and Rs. 500, encashable after 5 years in order to induce workers to invest their second DA cash payment (see last issue p 580) and bonus in these bonds. Also the Union government has asked the states to slash distribution costs, so that the retail price of wheat supplied through the fair price shops can be reduced. The Union cabinet also decided against an increase in the price of coal, though there was justification for it, in order to keep inflationary pressures down. The government has also under consideration the question of discontinuing the dual price policy for sugar. The Reserve Bank of India refers to a marked deceleration in money supply during the present financial year, being 4 *per cent* between April and August 1977 compared to 6.9 *per cent* in the period of April–August 1976. This is due to its tight monetary policy which resulted in a slower rate of price rise which was 3.3 *per cent* during this period compared to 9.7 *per cent* price increase in April–August 1976. There is some question as to whether, when the net bank credit to government is taken into account, there is a sharp decline in money supply or not. Also the link between money supply and prices is somewhat tenuous, because the slower rise in food prices is due to a good monsoon more than to monetary factors and the lowering of the prices of edible oil and cotton is due to the massive release of funds by the RBI for their import. The slowing down of money expansion is less than what the RBI statement indicates and its causative relation to the slow rate of price increase is not a simple and linear one. A further inflationary element shows up in large overdrafts and budget deficits of the state governments. A number of northern states as a result of election eve reliefs and concessions started the year with a total deficit of Rs. 400 crores. The state governments opening deficits for the current year 1977-78 were Rs. 370 crores and are now nearly Rs. 490 crores. West Bengal has an overdraft of Rs. 40 crores, Kerala Rs. 6 crores, Bihar Rs. 19 crores. The state governments have been urged to raise additional resources. The Union government will be raising Rs. 117 crores this year. On top of their deficits, if prohibition were introduced, it would cost another Rs. 600 crores in revenue to the states and the country.

Central Loans

On September 15, the Union government announced the second phase of its market borrowing in 1977–78 with 3 loans aggregating Rs. 450 crores, which after repayment of maturing loans would yield a net Rs. 374 crores. To take advantage of the banks' liquidity, the government has advanced its borrowing programme by a fortnight. The 3 loans announced are: (a) 6 *per cent* 1993 loan, (b) 6¼ *per cent* 1998 loan and (c) 6½ *per cent* 2005 loan. Properly managed, this can also become an anti-inflation weapon.

Economy

The review of the economy by the Reserve Bank of India in its annual report for 1976-77 highlights the setbacks—the lower rate of growth at 2 *per cent*, a higher level of monetary expansion at 16.1 *per cent*, and a resurgence of price inflation at 5 to 7 *per cent*—and points to the positive factors—the favourable position on external payments increasing by Rs 1,831 crores to Rs. 3,582 crores at 30 June 1977 and improved food stocks at 20 million tonnes which can lead to higher levels of investments with stable prices. The ratio of domestic savings to national income improved marginally to 15. 7 *per cent* from 15.5 *per cent*, due mainly to the improved savings of the household sector in respect of currency and deposits, whose share in net financial assets rose from 64.9 *per cent* in 1975–76 to 81.2 *per cent* in 1976–77. This increase did not result in an increase in aggregate investment which as a proportion of NNP (Net National Product) actually declined to 14.3 *per cent* from the previous year's 16.1 *per cent*, because of the 1.4 *per cent* net outflow of resources of NNP compared to the previous year's 0.6 *per cent*. Agricultural production declined by 5 to 6 *per cent*, compared to the previous year's record rise of 15.6 *per cent*, due to the decline in the output of foodgrains, oil seeds and cotton, offset to some extent by the increase in jute, tea and coffee production. Industrial production increased by 10 *per cent* (against the plan target of 7 *per cent*.) due to improved inputs of supplies and power and transport availabilities. Public sector industries such as power, coal, steel and fertilisers recorded impressive gains with better use of existing capacity. For the immediate future, the report recognises the economy's reliance on weather and here the need for a larger reserves cushion is stressed, beyond which the reserves should be used to push forward the economy. The future growth prospects depend on raising investment levels and obtaining adequate returns from existing investment. The reserves of foreign exchange and foodgrains can be used for increased investment and for increased supplies of mass consumption goods. Import policies can be so administered as to check price rises and to promote growth. In this context a closer integration of financial and physical planning needs urgent consideration because in some sectors of the economy, costly equipment is working well below capacity, *e.g*, power and fertilisers. The report points out that growth in investment and output involves additional domestic credit creation either through the budget or through banks, with external credit providing some offset to such domestic credit creation. Thus to contain inflation, overall monetary expansion, and not just domestic credit creation, should be regulated. There is need to create additional assets in agriculture and the rural areas to accelerate their development and for this purpose the report proposed that, the present food-grain stocks should be used as a wages fund to put to work our large unutilised labour resources in the countryside to produce also mass consumption articles such as cotton, vegetable oils, pulses and coarse grains. This calls for realistic price support policies and planned use of the command areas to produce these goods. Underlining that there should be no conflicting emphasis on agriculture and industry because they are interlinked, the report recognises that with our low income levels, there will be need for foreign assistance and for this draft on foreign savings, there must be a planned trade deficit. The economy should be so organised that foreign savings are used to raise the rate of investment and increase output through the use of goods and services for investment. But this in turn demands an ever ready shelf of projects. If investment is not to sag or be diverted to non-priority and non-essential areas, there must always be a shelf of projects ready to use investment resources. The report concludes with a call for the integrated use of our food and exchange reserves in forging and executing our development strategy. As part of this strategy of rural development the Union government has asked state governments to avail themselves of the financial assistance from the People's Action for Development—India (PADI) set up by the government to promote voluntary action in rural and agricultural development. So far 61 projects costing Rs. 4.7 crores have been submitted by 14 states to PADI, of which this state has submitted five. There is need here again for a shelf of projects in the areas of backward regions, tribal, hilly, arid and semi-arid regions as well as in drought and flood prone areas. It is not resources which are lacking but well planned projects with identified target groups of rural poor and unemployed. In this review of the economy, note is taken of the positive appraisal by the World Bank which estimates that for 1977 the Gross Domestic Product will rise by 2 *per cent* over the 8.8 *per cent* rise in 1976, industrial production growth by 10 *per cent* in 1977, export growth by 10 *per cent*, with declining imports of food, fertilisers and fuel, making for a favourable trade balance so that even the fear of inflation could be brought under control with our food and exchange resources. It also notes that for 1955-1974, the Population Council (New York) estimates a 17 *per cent* reduction in the country's crude birth rate. The residual but major task is to relieve the economy from its dependence on the monsoon, as it does at present. In the rural economy, an RBI study shows that the inequality among all rural households has widened during the decade from 1960–61 to 1970–71. True in some states, as in Kerala, there is a comparatively equitable asset distribution of cultivator households, but with the large proportion of non cultivator households, particularly farm labour with no assets and uncertain employment, the disparity widens. Due to land reforms and the *bhoodan* movement, there was an increase in land owning cultivation in Kerala, Bihar, Punjab, Tamil Nadu and West Bengal. Assesed land value also increased due to inputs like irrigation, HYV, fertilisers, *etc.* and the spread of banks and co-operatives led to increased savings and investment by cultivators. Cultivators' share of rural assets increased from 63.2 *per cent* in 1961 to 68.6 *per cent* in 1971, but poor rural households also increased from 64 lakhs to 271 lakhs. The study proposed as solution an integrated village development plan to bridge the gap between cultivators and non-cultivators, along with improving land productivity, diversification of the rural economy through agro-based industries, machinery workshops, house building activity and village road construction.

Industry :

The RBI has advised industries to reduce their inventories and their bank borrowings. Some industries are holding inventories 10 *per cent* higher than that recommended by the Tandon Committee and the ratio of finished goods to total inventories declined due to considerations of profitability, safety, etc. This use of bank borrowing for inventory holding diverts resources from long term use to working capital funding and exerts an inflationary pressure. Hence industries are advised to use scientific management techniques of inventory holding so that the right amount is held and capital is not ungainfully employed. The study also recommends a prudent dividend policy, refusal to divert internally generated funds through intercorporate investments, and the undertaking of efficient inventory management as a means of industries becoming self-reliant, securing a better status in terms of liquidity and capital formation rates. The Union government estimates that industrial growth will be 8 *per cent* this year against last year's 10 *per cent* due to power constraints. Growth in the engineering sector during the period April-August was 9 *per cent* and the overall industrial growth rate was 5 *per cent*. Also a concrete programme of speedy development of small and village industries is being drawn up as a result of the 4 days of regional conferences with the state ministers of industry. To promote the merger of a sick unit with a sound one provided for in the Budget (see Vol VII p 434), the Union government set up an inter-ministerial committee with the Secretary, industrial development department as Chairman to approve of such mergers.

National Production Front

Steel :

Total output of steel of the 6 integrated plants (Bhilai, Bokaro, Burnpur, Durgapur, Jamshedpur and Rourkela) during 1976-77 was a record 6.922 million tonnes, exceeding the 1975-76 output by 19.8 *per cent* and the year's target by 4.57 lakh tonnes. Steel Authority of India Limited (SAIL) reports that for 1976-77, it made a record profit of Rs. 73.26 crores and plans to increase production for this year by 6.5 *per cent* over that of last year. The saleable steel production target for the industry has been fixed at 7.3737 million tonnes for the current year. The profit target for 1977-78 for the SAIL plants has been set at Rs. 80 crores. It has been decided to restructure SAIL so that, while policy making is centralised, the administrative and operational functions of a plant are in the hands of the local manager. The Indo-Soviet agreement provides for a time bound programme starting next year which would enable the incorporation of some of the technological innovations of the last 15 years and the additional output resulting from such updating of technology to be achieved with 50 *per cent* of the cost involved in setting up new plants. Bokaro reports that during August, it produced 49,675.6 tonnes of cold pig iron (which was 131 *per cent* of the target), hot rolled plates and sheets 21,467 tonnes (106 per cent of the target), gross coke 166.525 tonnes, sinter 139.322 tonnes, hot metal 140.261 tonnes, ingot steel 81,230 tonnes, slabs 62,356 tonnes. The total quantity of saleable steel produced was 74,785 tonnes, with despatches of 38,416 tonnes of pig iron, 5,637 tonnes of steel ingots, 5,754 tonnes of slabs, etc., totalling 74,129 tonnes of saleable steel despatches. In the first five months April–August, pig iron production was 2,63,360 tonnes and saleable steel 3,86,516 tonnes. In September a slag granulation plant was inaugurated at Rourkela to use the huge rising slag deposits from the blast furnace which till now had been treated as waste material. The plant will be producing 6 lakh tonnes a year by 1979–80 of slag granules for use by cement factories for the production of quality cement. Indian Iron and Steel commpany reports that it will be able to reduce its cost of producing hot metal by installing a sinter plant at its Burnpur works, involving a capital outlay of Rs. 30 crores. SAIL also reports that for the first time in recent years, the domestic consumption of steel has outdistanced domestic production. From April to July, consumption was 1.72 million tonnes whereas production by SAIL units was 1.57 million tonnes. This increased offtake during the first 4 months (23 *per cent* or 151,000 tonnes) reduced accumulated stocks of SAIL from 1.31 million tonnes on 1 April 1977 to 1.16 million tonnes on 1 August 1977. As SAIL wishes to maintain an operational stock of 500,000 to 700,000 tonnes, the accumulated stock is now around 4 to 6 lakh tonnes. The main reason for this pick up is not renewed construction activity, which has not started, but the expanding engineering industry, particularly its export sales. When the present Urban Land Ceiling Act is repealed and building activity is resumed, there will be a real basis for increased steel sales for construction purposes.

Crude :

The government estimates that crude consumption will be 24 million tonnes this year, including 14 million tonnes imports, and the consuption for next year 1978–79 will be 26 million tonnes. However as Bombay High which is producing 2.5 million tonnes this year will be producing 4 million tonnes next year and with the additional availability from onshore fields, imports may be less by 1 million tonnes in 1978–79 at an estimated 13 million tonnes. Due to the price rise, the import bill is on the rise from Rs. 1,450 crores in 1976–77 to Rs. 1,500 crores for this year, with a further increase for next year. The Oil and Natural Gas Commission will be replacing Reading and Bates for offshore drilling in the Kutch basin, starting exploratory drilling in the Andamans following the seismic survey, replacing Asmera in the Cauvery offshore drilling and Carlsberg in the Bay of Bengal, and beginning exploratory drilling in the Tapati area. The Oil India Limited (OIL) is planning offshore and onshore oil exploration in the Mahanadi delta, completing work on the first well by the end of 1978 and drilling two more offshore wells in 1979 and 1980 at a total cost of Rs. 17 crores. The ONGC has selected the US company, Brown and Root, to handle the $ 75 million pipe laying project at Bombay High. The oil and gas available for commercial use from Bombay High will thus reach the city in May 1978, oil production itself being 80,000 tonnes by December of this year. A short term loan of $ 50 million from the Euro-dollar market, repayable in 7 to 8 years at an interest of 7.5 per cent has been contracted by the government for developing the Bombay High oil fields. It is not clear why the government has gone in for this high cost loan when it has substantial foreign exchange reserves and has obtained a World Bank loan of $ 150 million (see Vol VII p 505). Negotiations for the takeover of Assam Oil by the government were initiated in September, with a compensation payment estimated at Rs. 5 to 7 crores. The take-over will also include transfer of the Digboi Refinery.

Coal :

The coal industry faces several problems. One is with regard to price : as noted earlier, the government decided against a rise. As an alternative, a government subsidy to cover the difference between the cost of production and the price per tonne which now amounts to Rs. 9 per tonne could be considered. At the annual production of 100 million tonnes, this would mean Rs. 90 crores per annum. There is also the problem of reducing costs, 75 *per cent* of which is labour cost, so that improved labour productivity with the output per man-shift going up from 0.55 to 0.87 has economies of Rs. 100 crores. Also Rs. 30 to 50 crores have been saved on other items so that the cost per tonne has fallen from Rs. 78.43 in 1973-74 to Rs. 71.52 in 1976-77. Another problem is expansion of production. Western coal fields will be increasing their output from 21.8 million tonnes to 33.40 million tonnes at a cost of Rs. 100 crores during 1979-85. Its priority is to supply coal to thermal plants and the expansion plans of 4,300 *mw* of power plants means that the company has to produce an additional 10.62 millon tonnes of coal by 1983-84. CIL in its turn is planning to increase by 300 *per cent* its open cast mining in the next 10 years, which will increase the annual output per mine from 0.25 million tonnes to 0.48 millon tonnes and the output per man-shift from 0.67 to 1.1. Against a demand forecast of 125 million tonnes in 1978-79, 179 million tonnes in 1983-84 and 203 million tonnes in 1985-86, CIL (Coal India Ltd.) will produce 113 million tonnes, 162 million tonnes and 183 million tonnes, with the corresponding capacity of 132 million, tonnes, 190 million tonnes and 210 million tonnes, involving a total outlay of Rs. 3,600 crores. CIL is about doubling its Chinakuri coal production from 340,000 to 600,000 tonnes, with an outlay of Rs. 8.42 crores and with another Rs. 15.2 crores will additionally be mining 300,000 tonnes from Chinakuri pits and double the output of grade 1 *barchak* coal (from 150,000 tonnes to 360,000 tonnes) by 1981-82.

Cement and Cotton :

Cement production in August attained a record 15.73 lakh tonnes (14.06 lakh tonnes in August 1976). This means if there are no power cuts or labour trouble, cement production for the year will reach 19 million tonnes. Capacity use in August was 88 *per cent*. In order to promote investement in cement industry, the Union government revised in late August its decision on ex-works cement price, which for new units will be on the basis of a net post-tax return of 12 *per cent* on the net worth of a company, the net worth being limited to a figure of Rs. 230 per tonne of installed capacity. This will ensure a better return on investment in new units and should act as a spur. The Union ministry has fixed a production target of 70 lakh bales of cotton for the current financial year. To achieve the target the allocation to the ICDP (Intensive

Cotton Development Programme) is increased from Rs. 3.90 crores to Rs. 5.12 crores. The area under cotton in the country is 75 to 78 lakh *ha* (hectares) of which 59 to 60 lakh *ha* are rainfed. It employs several lakh farmers and provides gainful employment to 9 lakh workers in the organised sector and 100 lakh workers in the handloom sector. The National Textile Corporation, which has been exempted from producing controlled cloth has piled up 2 months production (Rs. 60 crores) of medium and super medium cloth and yarn. There is need for developing a marketing policy and for implementing it as a means of avoiding the heavy burden of carrying these stocks.

Agricultural Production :

September was mainly concerned with *kharif* issues. First, widespread rains during the month have raised hopes of a good *kharif* crop. In some areas the crops were damaged by floods and excessive rains. In addition to the flood damage reported in the last issue (p 585), the government in Assam estimates that the adverse weather and floods have damaged Rs. 20 crores worth of crops. The *Anu* and *Bau* crops and *jute* crop over 2 lakh *ha.* are badly damaged. But the increased yield in all other areas point to the possibility of a *kharif* crop exceeding 74 million tonnes. Last year the food output was 111.5 million tonnes. This year's target is 118 million tonnes. The other issue is the procurement price for paddy on which APC recommends an increase of Rs. 3 per quintal, from Rs. 74 to Rs. 77 which is the coarse variety price, with corresponding increases for other varieties. It also recommends that the procurement price of *jowar, bajra, maize* and *ragi* should be kept at Rs. 74 per quintal. It further recommends selective enlargement of rice zones, a five million tonne target for rice procurement and dropping the bonus scheme for state governments who exceed the target. This means in terms of prices, the procurement price for rice is increased by Rs. 3, as wheat prices have, but the retail price need not be increased. Without the bonus scheme, a small subsidy would be enough to keep down the retail price. The greater part of the second half of September was taken up by the Union agriculture minister for consultations with the state ministers on the question of procurement price of paddy. Bihar and West Bengal agree to Rs. 77 per quintal, Orissa wants Rs. 85, Rajasthan 86 and most of the other states including Tamil Nadu and other southern states want a price of Rs. 90 and the bonus scheme to continue. On the basis of these consultations, the Union government decided at the end of September that for the 1977–78 season (a) the procurement price for coarse varieties of paddy would be increased from Rs. 74 to Rs. 77 per quintal; (b) the issue price through the public distribution system would continue without change at Rs. 135 per quintal for coarse and Rs. 150 for medium varieties; (c) the premium price of Rs. 5 per quintal for processing paddy into parboiled rice would continue this year and for 2 more years as an incentive to mills to instal additional capacity for making this conversion; (d) the movement of rice and paddy throughout the country would be free from October 1, when all zones and zonal restrictions would be abolished; (e) there should be no procurement targets for this season and so there would be no incentive bonus payments; (f) the procurement price for coarse grains—*jowar, bajra, maize and ragi*—would remain at Rs. 74 per quintal and their issue price unchanged at Rs. 86 per quintal; and (g) to meet the shortage of pulses, the support price of gram was raised from last year's Rs. 95 per quintal to Rs. 125 per quintal as an incentive to increase production of pulses which would begin to be sown during early October. The country has begun exporting foodgrains. It exported 1,000 tonnes of *sorghum* to Yemen in mid-September, agreed to export 1.5 lakh tonnes of wheat to Vietnam and 1.5 million tonnes of wheat as the loan repayment to the Soviet Union. In September the current stock with the Food Corporation of India and other bodies was 21 million tonnes, comprising 14.6 million tonnes of wheat, 5.6 million tonnes of rice and 0.5 million tonnes coarse grains. There is still no firm decision of the government on the food buffer. The Taneja Committee recommended a buffer stock of 12 million tonnes and an operational stock of 6 million tonnes, the Union Minister of agriculture has spoken of a 12 million tonne buffer and an 8 million tonne operational stock. In the meanwhile it looks as if there will be 4 million tonnes of offtake this season. According to official estimates storage losses, which were 52,000 tonnes (Rs. 5 crores) in 1972–73, increased to 63,000 tonnes in 1976–77 (Rs. 9.07 crores). At the end of July 1977, out of 16.25 million tonnes of foodgrains with the FCI, only 10.5 million tonnes are in covered accommodation and the balance 5.75 million tonnes are under cap storage. During the period from June 1976 to May 1977, foodgrains under cap declared unfit for human consumption was 0.74 *per cent*. Another problem under study is the reducing of operational costs of the FCI. Government pays the FCI a subsidy which is the difference between the economic cost of grains (procurement or purchase price, procurement incidentals for Indian grain, ocean freight and landing charges for imported grains, movement, storage, handling and miscellaneous) and their issue price. In the 1977–78 budget, Rs. 460 crores were so provided as economic costs — Rs. 149.14 crores for wheat, Rs. 235.37 crores for imported rice, Rs. 154.46 crores for indigenous rice, Rs. 142.50 crores for *sorghum* and Rs. 99.39 crores for coarse grains. In addition, of course, the FCI has been granted bank credit starting with Rs. 1,800 crores, increasing to Rs. 2,045 crores and standing in September at Rs. 2,095 crores. The World Bank and the International Development Association (IDA) are expected to sanction credits for expanding the country's storage capacity. The whole scheme including bulk railway transport will cost Rs. 21 crores. Of the 3.5 million tonnes of additional storage capacity being built, 2.5 million tonnes is of the conventional type, 1 million tonnes in the shape of flat bulk storage with modern machinery and two port silos-Haldia (50,000 tonnes) and Madras (25,000 tonnes). To boost farm production, fertiliser prices were reduced in September by Rs. 100 per tonne. The price reduction was due to increased capacity use in the Kandla plant. The current price reduction will give cultivators an overall benefit of Rs. 5 crores for the year. One of the interesting estimates of the country's capacity for wheat production made by the expert from the Mexican Centre is that if all known production techniques are used, India's annual wheat production can be increased from the current 28 million tonnes to 50 million tonnes. The Union government has notified the state governments that the issue price of wheat this year should be Rs. 133 per quintal. The Union government, in September, called the attention of the state governments to the fact that 2.16 lakh cases concerning implementation of land ceiling law await disposal. Hence the Union agriculture minister proposed a monthwise target for disposal of land ceiling cases to ensure that all pending cases are cleared by the year end. Also the need to provide protection against eviction of new allottees and improved performance in taking over and distributing lands was stressed. Of 15.5 lakh *ha* declared surplus, only 8.2 lakh *ha* have been taken possession of and this poor record must be quickly improved.

Exports :

Export growth during the current financial year is continuing, through at a slower pace. As noted in the last issue (p 587) the rate of export growth during the first three months, April to June, was 10.5 *per cent* (April–June 1976 at 44 *per cent*). The export target for the year is Rs. 6,000 crores, which is 17.9 *per cent* above last year's actual Rs. 5,089 crores. With no import of wheat and decline in fertiliser imports, and with increased exports of jute goods, textiles, engineering goods, leather products, marine products and chemicals, India may have for the first time since 1972–73 a favourable trade balance with the United States. India's imports have been dropping from Rs. 1,269.91 crores in 1975–76 to Rs. 1,051.08 crores in 1976–77. Exports have been increasing from Rs. 520 crores in 1975–76 to Rs. 550 crores in 1976–77, with a good chance of exceeding the modest target of Rs. 600 crores this year. The US and other overseas markets for Indian readymade garments are reviving, the EEC quota being 50 million pieces for 1978, with similar increases in the US and Australia. For jute goods an export target of 5.2 lakh tonnes worth Rs. 210 crores has been set (compared to 4.4 lakh tonnes in 1976–77). In this area, the government subsidy is not leading to increased exports which declined in terms of world jute trade from 63.1 *per cent* to 50.9 *per cent*. What is needed is cost reduction and better sales promotion. During April–July, 2.26 lakh tonnes of export orders for jute goods were secured. Exports of chemicals and pharmaceuticals are doing well. In the four months, April to July, these exports earned Rs. 37.9 crores compared to Rs. 29.4 crores in the four months of 1976–77. Gems and jewellery exports soared to Rs. 87.23 crores in April–June (last year Rs. 26.17 crores) and carpet exports earned Rs. 22.5 crores in January-June 1977. Cotton handlooms however are performing badly, falling during the 6 months January to June to Rs. 28 crores compared to last year's 6–month earnings of Rs. 49.97 crores. Due mainly to disturbed industrial conditions, engineering exports also are down to Rs. 35 crores in May compared to Rs. 51 crores in April. The Oil and Natural Gas Commission announced in September the export of micro–crystalline wax to the US (20 tonnes at Rs. 1 lakh). Another growing export item is chromite. Out of the 500,000 tonnes produced per annum, the country can use only 80,000 tonnes. The reserves of chromite in the country are estimated at 17 million tonnes. An interesting international division of labour that might develop is the consideration being given by West Germany to shifting its "non-prosperous" industries like textiles, leather and wood to India which has a comparative advantage in them. But this shift must also be for promoting internal consumption and not solely for export as otherwise it will be another form of exploitation. In order to further boost foreign trade, the government has under consideration dropping the canalisation of export and import of some items through the State Trading Corporation of India. Also the government announced in August end a reduction in customs duty on imported fishing hooks (from 120 to 40 *per cent*), in engineering plastics (from 208 to 145 *per cent*) and duty free import of electrical machinery. The foreign exchange reserves of the country have reached Rs. 4,000 crores by September, and may result in total reserves of Rs. 6,000 crores by 31 March 1978. The main reasons for this embarassing build up of reserves are: (a) increased remittances from abroad which are now running at Rs. 145 crores a month compared to last year's Rs. 125 crores; (b) the improved foreign trade performance, referred to earlier along with the decline in the under-invoicing of exports and over-invoicing of imports seen in Indian exports in 1976-77, increasing by 23.2 *per cent* compared to world export growth of 15 *per cent*, and India's share of world exports crawling up from 0.50 *per cent* in 1974-75 to 0.53 *per cent* in 1975-76 and 0.57 *per cent* in 1976-77; (c) the change in the value of the Rupee and its link with a basket of currencies also helped this development; (d) the fall in the quantum and value of imports, which accounts in the main for the favourable trade balance, is due not only to the decline in imports of food, fertilisers and fuel but also to the low level of imports which has been achieved "partly at the cost of investment for growth" as the annual *Economic Survey* states; (e) also foreign aid flows added to the reserves. The net aid was Rs. 154 crores in 1972-73, Rs. 404 crores in 1973-74, Rs. 711 crores, in 1974-75 and Rs. 1,153 crores in 1975-76. In 1976-77 it is estimated at Rs. 986 crores, and in 1977-78 at Rs. 891 crores. But these reserves unless invested are not a resource and schemes to invest them in rupee resources have either to be mobilised or created by the government and the RBI.

Aid :

The World Bank reports that, for the year ending June 1977, it made available $ 750 million to India, including $ 150 million bank credit to Bombay High as noted earlier, $ 150 million as IDA credit for the first phase of the 2,000 *mw* Singrauli super thermal project, $ 200 million IDA credit for farm development through the Agricultural Refinance and Development Corporation, $ 23 million IDA credit for rehabilitation, extension and modernisation of irrigation in Tamil Nadu, $ 49 million from the World Bank and IDA for development of Madras and Bombay and $ 80 million World Bank credit for telecommunications development. It refers to the 328 rural development projects it has been and is helping in the last 2 years and from which it draws two conclusions. First, the projects can help the rural poor to increase their incomes and expand production. Second, it is not an easy programme. It lays special emphasis on small scale enterprises, whether in the modern manufacturing or non-manufacturing (construction, services, etc.) or informal sub-sectors, where more jobs per unit of investment are created, more unskilled jobs are created and where they nurture local entrepreneurship, generate savings, and reduce inequality of income distribution in the region. The World Bank announced in September an IDA loan of $ 58 million for developing irrigation in Orissa. The United Kingdom has offered a grant of Rs. 16.5 crores for setting up 2 newsprint plants at Bhadravati

(Karnataka) and Veloor (Kerala). The government is also negotiating with the World Bank a loan of $ 1 billion a year for 3 years to speed up the country's agricultural development programmes.

International :

Bangla Desh :

In September, delegations from Bangla Desh and India met in New Delhi to work out an agreement on the Farakka issue. As a result of a week's review and discussion, agreement was emerging with regard to the sharing of the quantum of Ganga waters during the lean months from March to May. There was continuing discussion over the long term project—that of linking Brahmaputra to the Ganga and or that of constructing dams and storage tanks on the upper reaches of the Ganga. The agreement which will be reported in the next issue has reached a stage now when the heads of the two governments need to meet to ratify the agreement and ensure a faithful follow up within a time bound schedule.

Pakistan :

Pakistan and India agreed in September to resume air trade as part of the normalisation efforts as a result of discussions between the officials of Indian Airlines and Pakistan International Airlines in Bombay and New Delhi. The first consignment of refrigerators and spare parts of air conditioners fabricated in India arrived in Pakistan in September. Also, Indian goods in transit through Pakistan were routed by air through that country.

World Monetary Reform :

The annual meeting of the International Monetary Fund (and that of the World Bank) starting on September 26 will provide a further occasion to survey the world monetary system and discuss the possibility of moving to a reformed one. On the agenda is the subject of increased quotas from the Fund's 131 members. On this the developing countries want a doubling of the quotas and the European Economic Community wants a 50 per cent increase, along with keeping the borrowing limit without sacrifice less than that amount. The US wants the IMF to be a watchdog over the world monetary system. In this connection the Witteveen facility of $ 10 billion which is to help countries with serious balance of payment problems is being favoured. The US Congress has been asked by president Carter to approve the US contribution of $ 1.7 billion. Saudi Arabia's contribution will be $ 2.5 billion. In September, Sri Lanka devalued its Rupee against major hard currencies, lifting the US Dollar parity rate from 7.78 to 8.61 Sri Lanka Rupees.

World Economy :

The IMF annual report for 1977 refers to improved economic and financial conditions in many parts of the world. By past standards there are many gaps: growth rates are sub-normal, unemployment is high, there is excess plant capacity and lagging investment. The real Gross Domestic product (GDP) growth of industrialised countries was 5 *Per cent* and this helped to dampen inflation from the peak of 13.5 *per cent* in 1974 to 6.5 to 7 *per cent* in 1977. High unemployment rates are due to the constraints of demand management imposed by inflation. The countries are placing primary emphasis on medium term objectives to fight inflation, reduce unemployment and strengthen their external payments position. In this regard, their resort to protection is not a real solution (a point made also in GATT's annual report) and could have harmful effects on world trade and prosperity. Trade volume is growing at 7 *per cent*, with import expansion at 11.5 *per cent*. Foreign trade prices rose a little faster in the first half of 1977 because of the upsurge of primary commodity prices in 1976 but after April 1977 began to decline. On balance of payments, oil producing countries had surplus, while the industrial countries' surplus disappeared and the non-oil producing countries had about the same rescaled current account deficit as in the past 5 years at $ 26 billion. The oil exporting countries followed generally higher demand policies by curtailing growth in the government sector. In the non-oil sectors, economic activity was buoyant with a higher growth rate. The non-oil producing developing countries continue to lag behind the industrialised countries with a growth rate of 3.5 *per cent* in 1975 which improved to 5 *per cent* in 1976. The report also states that apart from the cyclical shortfall in the growth of real output, these countries have lost international purchasing power through a cumulative deterioration of their terms of trade during the seventies.

New International Economic Order :

The three day session of the General Assembly of the United Nations which met in mid September before the 32nd session of the General Assembly reviewed the limited progress reached in the North-South dialogue at the Paris Conference on the New International Economic Order. The review left the industrialised and the developing countries wide apart in their positions. While the former countries wanted an expression of appreciation for the progress made at Paris concerning the $ 1 billion fund and the follow up on the creation of the Common Fund for commodities (see Vol VII pp 380 and 444–445), the developing countries felt that these meagre results were not a cause for appreciation and that the coming General Assembly session should be used to move forward more purposively to attain the goals of the New International Economic Order.

World Debts:

The UNCTAD (United Nations Conference on Trade and Development) meeting in September to prepare for the January 1978 meeting of ministers on the growing indebtedness of third world nations, noted on the basis of the UNCTAD Secretary General's report that the current account deficit of developing countries which was $ 12 billion in 1970, will be $ 36 billion in 1977 and $ 39 billion in 1978. (These figures are different from the IMF estimates referred to earlier.) The report also estimated that the outstanding and disbursed debts of developing countries without oil resources will increase from $ 179 billion in 1976 to $ 253 billion in 1978. A solution to this impossible burden must be found.

UN Desertification Conference:

This first United Nations Conference on Desertification met from August 31 to September 11 in Nairobi. It adopted an integrated plan of action to halt the spread of man-made deserts by the turn of the century. It also adopted a proposal for a joint consultative group to generate resources to implement the plan. The plan sets forth short and long range measures to be taken at the national, regional and international level to arrest the desertification process which affects 30 *per cent* of the globe and 700 million people. For the successful implementation of the plan, appropriate technology, necessary resource back-up and public policies which will create the social and administrative infrastructure to translate plans into field achievements are necessary. The conference also noted the successful use of satellites to monitor desert movement. The South West Asia Satellite Monitoring System will cover Afghanistan, India, Iran and Pakistan where 50 *per cent* of the region is desert. A similar satellite monitoring system has been proposed for South America where 60 *per cent* of Argentina and Chile and 25 *per cent* of Peru is subject to desertification.

World Wheat:

The 1977-78 forecast of world wheat and coarse grains production is 1,086 million tonnes. Unfavourable weather conditions in the USSR and other major grain exporting areas have reduced crop prospects. World wheat stocks for 1976 – 77 are placed at 100 million tonnes, with 30 million tonnes in the US and 13 million tonnes in Canada—that is, 43 *per cent* of world stocks are in North America. The USSR holds 13 million tonnes, European Common Market 6.8 million tonnes, Australia 2.5 million tonnes and Argentina 1 million tonnes.

World Sugar and World Coal:

World sugar production for 1977-78 is estimated at 89 million tonnes, with sugar prices under pressure. In September in Geneva, 6 sugar producing countries agreed on sharing 70 *per cent* of the world's free trade in sugar —Cuba was assigned 2.5 million tonnes, Australia 2.4 million tonnes, Brazil 2.1 million tonnes, Philippines 1.5 million tonnes, Thailand 1.2 million tonnes and the Dominican Republic 1.1 million tonnes. The minimum price of 13 US cents and the maximum of 23 US cents were established. The World Energy Conference meeting from mid September in Istambul estimates a doubling of coal production to 4,000 million tonnes by 2000 AD. Against the 1976 production of 2,384 million tonnes, production in 1985 will be 3,596 million tonnes. India will be the fifth largest producer of coal at 185 million tonnes in 1985.

Regional Mineral Resources Development Centre:

A Regional Mineral Resources Development Centre to accelerate the exploration and development of natural resources in Asia and the Pacific regions was established at a meeting called by ESCAP (Economic and Social Commission for Asia and the Pacific) in September. For the fuller utilisation of existing national institutes and facilities, the Centre will develop a network of regional laboratory services in selected specialised areas. The headquarters of the Centre will be Bandung. India is contributing 3 experts and Rs. 17,000 a year to the Centre.

Asian Animal Husbandry:

The Animal Production and Health Commission for Asia, the Far East and the South West Pacific (APHCA), an Asian technical body with 11 member countries from Pakistan and India to Australia, was established by the Food and Agricultural Organisation to deal with buffalo development, tree fodder development, feeds and feeding of livestock and poultry, co-operative dairies at small farms, training and research on livestock diseases, etc. APHCA is now running 12 projects at a cost of $ 4.69 million. Its funding comes from the National Currency Funds Scheme under which each country contributes to its projects in local currency and the rest in dollar contributions made to it by funding agencies through the FAO. It has decided to concentrate on buffaloes, goats and ducks which are of particular importance to the rural sector and small farms in Asia.

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II Agricultural Development

Kuruvai Paddy:

September was the start of the *kuruvai* paddy harvesting season. In Thanjavur district the area under *kuruvai* was between 3.5 lakh to 3.75 lakh acres and not 4.51 lakh acres as estimated earlier (see Vol VII p 512). The question of compensating this shortfall under *samba* sowings will depend on the north-east monsoon. Till the end of August *kuruvai* transplantation was completed in 3 lakh acres, *kuruvai* nurseries in 20,000 acres, *samba* area planted till early September was 1,000 acres and nursery raised over 50,000 acres. From Septmber 7, the turn system was introduced with 10,300 *cusecs* in the Cauvery and 2,500 in the Grand Anicut for five days when no water was let in in Vennar. From September, water at the rate of 8,500 *cusecs* was let in in Vennar and 1,500 *cusecs* in the Grand Anicut canal and so on. The farmers in the district, particularly in the tail end areas as also some in Kumbakonam, Needamangalam and Madukur complained, as a consequence, of inadequate water. The introduction of the turn system, which usually starts in October, has been introduced in September this year due to the low level at Mettur referred to earlier and this might make available water also for the *samba* crop. With regard to harvesting, farmers in the tail end areas of Mayuram, Kumbakonam and Sirkazhi have harvested their *kuruvai* paddy, mainly with the help of pumpsets. This has sent their costs up and so they are looking forward to *kuruvai* prices to be announced by the government. The yield is satisfactory. In Mayuram division, ADT–31 has given a maximum of 2,200 *kg* per acre and a minimum of 1,650 *kg* per acre. In the case of IET 1.722, the maximum yield was 2,100 *kg* and the minimum 1,900 *kg* per acre. So the average yield has been between 1,925 *kg* to 2,000 *kg* per acre. The farmers want a wide scatter of purchase centres so that they are not forced to make distress sales or to face transport difficulties or to suffer in the absence of any purchasing machinery near their villages. In areas like Pattukottai and Mannargudi, the farmers prefer to raise a long duration paddy crop, followed by a commercial crop like groundnut. In view of the rising price of groundnuts, the farmers want paddy prices to be raised to lure them into using a further 50,000 acres for growing paddy and forestall a switchover of paddy lands to groundnuts.

Nilgiris Development:

Canara Bank has set apart Rs. 17.24 crores for the agricultural development of the Nilgiris. The total land area of the district is 6,28,798 acres, the total cultivable area being 2,06,948, with 22.9 *per cent* constituting the net sown area. Small farmers owning less than 1 *ha* (hectare) are 55.14 *per cent* of the farming population, and those who own between 1 and 2 *ha* are another 25.13 *per cent*. Paddy, *maize* and *ragi* are the main crops, with only 8,538 acres out of 1,43,760 acres sown. These are the crops which must be pushed forward along with tea and coffee plantations and forest resources.

Forestry:

The State government proposes to spend in 1977–78 Rs. 0.5 crores on a crash afforestation programme under which 6,210 *ha* would be covered under the village forestry scheme at a cost of Rs. 30 lakhs and 3,100 *ha* under extension forestry at a cost of Rs. 23.15 lakhs. Under a pilot scheme, 1,000 *ha* were planted in the districts of South Arcot, North Arcot and Chingleput. The areas taken up were tank beds where *acacia* was grown—to be used for fuel, fodder, manure, paper and pulp. In addition, trees and bamboos are being grown on field bunds around habitations and vacant lands at a cost of Rs. 41.71 lakhs for this year.

Research Results:

The use of seed drills to optimise seed drilling is demonstrated by the test carried out by the Orissa Agricultural University. The recommended rate of seeds per *ha* is 75 *kg*, but farmers using the broadcasting method use 100 *kg*. The multi-row drill obtains the optimum number of plants of 70 per m^2 (square metre). Using the drill, the yield increase was between 14 to 20 quintals per *ha* in the non-irrigated areas, as against 6 quintals under the broadcasting system. The Central Tuber Research Institute in Trivandrum has improved 2 high yielding *tapioca* varieties with better tuber qualities. One variety, Sri Vishaka, yields upto 45 tonnes per *ha*. The second variety, Sahyadri, also yields upto 42 tonnes per *ha* and both are now being used in the *miniket* all over the state. The Institute has developed four other varieties ranging in yield from 20 to 22 tonnes per *ha*. All these *tapioca* varieties can be intercropped with green gram and groundnut. *Tapioca* itself, in addition to being a staple food in Kerala, is the raw material in Tamil Nadu for *sago* and is used for production of starch, glucose, dextrose, paper and cardboard.

In the matter of fertilisers, the green layer which covers the water surface of temple tanks and ponds has been developed into a good green manure for paddy and other foodcrops. The use of this freely growing fertiliser, known as *azolla*, opens up new dimensions in food grain output. The Bangalore Dairy Research Station has developed a simple method to make paddy straw, *ragi* straw, maize stems or *jowar* stems to be used as palatable feed materials for cattle with nutritive value, by treating them with urea and molasses. Thus even locally available poor quality feed or crop residues can be made good and rich cattle feed by mixing them with bran, urea, molasses, small quantities of legumes, tree leaves, grass and salt. The Bangalore Veterinary College has developed biological control of the parasite which afflicts cattle in this and other southern states. The college has also developed means of overcoming handicaps faced in extending artificial insemination techniques through a new room temperature extender. The breeding trials in the college also show that Tharparker–Jersey–Holstein cross breeds are better than other pure breeds and cross breeds in regard to qualities of growth rate, early maturity, disease resistance and milk production. The Tamil Nadu Agricultural University has developed a mobile biogas unit which is used for processing small lots of organic wastes and can be moved to different locations. The unit has a 7.5 m^3 (cubic metre) capacity with a twin compartmental tank. Gas produced is stored at the top and is delivered through an outlet at the crown of the unit with a regulating valve. The unit costs Rs. 2,000 and its operating cost as cooking fuel is 35 paise per hour compared to LPG's (Liquified Petroleum Gas) 50 paise per hour. The NEERI (National Environmental Engineering Research Institute) points out that 50 million gallons of sewage which is let out into the sea at Madras city could be treated and recycled. Treatment plants could be connected to ponds for growing fish, and effluents from the fish ponds could be used for growing vegetables. Solid wastes in the city could be converted into organic manure through composting plants. Tamil Nadu which is lagging in the use of industrial effluents as crop nutrients should make up for this time lag by setting up a special office in this area. For preventing adulteration and wrongful introduction of organic aud inorganic matter, the state has used research findings to prescribe standards for 28 essential articles including paddy, rice, wheat, groundnut, *cholam, cumbu, ragi, maize, varagu,* pulses, *coriander, etc.*

Fish Farming:

The Tamil Nadu Fisheries Development Corporation is readying itself to enter the export market in prawns from January 1978. The Corporation has acquired deep sea trawlers from Mexico at a cost of Rs. 90 lakhs each. Export of prawns through Madras port last year was valued at Rs. 27 crores, the major destinations being Japan and the US. The Corporation is planning to purchase more trawlers to enter the tuna market, for which there is a growing world demand. In view of of its importance the Corporation has established a deep sea fishing section to function under a joint director. As an adjunct to its export operations, the Corporation is locating a series of large processing plants of 250 to 500 tonnes capacity at Madras, Tuticorin, Mallipatnam and Kodikarai to start with. For the present, in addition to the plants at Tuticorin and Ennore, the Corporation has taken over the 50-tonne capacity cold storage plant at Mandapam from a private firm to process export products.

Tea :

The 84th Annual Conference of UPASI (United Planters' Association of South India) was an occasion for recalling the importance of tea and other plantations in the economy of Tamil Nadu. Its 75,438 *ha* (hectares) of plantations comprise 35,370 *ha* under tea, 23,737 *ha* under coffee, 10,015 *ha* under rubber and 6,316 *ha* under cardamom, constituting 34 *per cent* of the total plantation area in the south and 20 *per cent* in the country. The question of fixing informal quotas for tea exports is now important because of the increase in world tea production—particularly in Africa. World tea output during January–June 1977 was 410 million *kg*, against 330 million *kg* in the six months in 1975 and 1976. The Indian production for the 6 months is 197.6 million *kg*, compared to 149 million *kg* in 1975 and 1976, so that the year's production will be well above last year's 512 million *kg*. Tea prices have begun falling from the high levels reached earlier this year. North Indian tea prices have fallen from Rs. 16.00–23.50 to Rs. 14.40–18.50. South Indian tea prices this year have fallen from Rs. 20.78 to Rs. 15.98 for leaf and Rs. 16.78 to Rs. 13.60 for dust. If India is not to lose its share of the increasing export market and is to maintain export earnings at a time of falling tea prices, the move should be to raise the ceiling on export, which was imposed to ensure adequate supplies at low prices for the domestic consumer, and thus enlarge and expand the exports of Indian tea. That also will bring down international prices in the long run which is one means of ensuring low tea prices within the country.

Coffee :

Coffee exports in 1976–77 earned Rs. 151.32 crores. Coffee business showed a 33 1/3 *per cent* increase in exports and 21.5 *per cent* increase in production compared to 1975–76. As a result of the increased production which was 1,02,000 tonnes and increased income, in 1976–77 Rs. 149.91 lakhs have been disbursed as loans to growers and for this year, Rs. 10 crores are to be given as development loans. The target for 1977–78 is 10,000 tonnes more of production over that of 1976-77. The perspective plan for expansion in the traditional and non-traditional areas (see Vol VI pp 654-655 and Vol VII p 237) established on the basis of the report of the National Commission on Agriculture and further developed by the National Council of Applied Economic Research, is under study by the state governments. During the current season, the total turnover of coffee operations amounted to Rs. 185 crores compared to last season's Rs. 115 crores. Proposals for development of backward regions and small holdings and an employment oriented promotion policy are under execution. From September 13, the Union government increased the coffee export duty from Rs. 1,100 to Rs. 1,300 per quintal, thus raising Union and state revenues from export, excise, sales and agricultural income tax. The coffee industry this year with a sound and expanding production programme, modernised marketing operations, progressive re-organisation of its administrative structure, increased development assistance and a general orientation towards discharging its socio-economic obligations is in sound shape.

Rubber :

Rubber seed cake available in plenty in the plantation areas is emerging as a good feed for cattle. This can to some extent make up for the deficiency of copper and cobalt which leads to poor performance of the large numbers of the Madhavaram cattle. On the question of rubber prices as noted in the last issue (p 595), it is hoped that this season will see a production increase. The Rubber Board plans to implement a scheme for organised processing and marketing of rubber, produced by smallholders, by the co-operative rubber marketing societies with aid from the IDA of the World Bank. Under this scheme crump rubber factories, each with a capacity of 10 tonnes per day, would be set up in the co-operative sector under the scheme.

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III Industrial Development

Salem Steel :

The Union minister of steel announced in late September that it has been decided to double the planned capacity of the Salem steel plant from 32,000 tonnes to 64,000 tonnes. This would add only Rs. 24 crores to the original estimate of Rs. 116 crores. Durgapur Alloy Steel is also being expanded to produce 90,000 tonnes extra stainless steel flats which will be rolled into hot bands at Rourkela. These bands would be sent to Salem for manufacture of the finished product. A meeting of the heads of steel plants at Rourkela in late September arrived at these decisions along with streamlining of procedures to cut down wastage of time in plan implementation from over 2 years to 2 months.

Neyveli :

In addition to the expansion of lignite production from 4.5 million tonnes to 6.5 million tonnes now under way and to be completed by 1980-81, the Union ministers of finance and energy are in favour of the second mine cut which will produce an additional 6 to 7 million tonnes of lignite. With the current expansion, an additional 210 *mw* generating set can be installed and fed. With the second mine cut, it is proposed to add two further 210 *mw* sets, so that the new generating capacity will be 630 *mw*. The second mine cut will cost Rs. 150 crores and 3 additional generating sets will cost Rs. 200 crores. The total foreign exchange needed for this Rs. 350 crore project will be Rs. 100 crores (Rs. 60 crores for the second mine cut and Rs. 40 crores for power generation). The finance ministry would like to invite West German collaboration for the second mine cut because of its long association with Neyveli. The Central Electricity Authority has given its technical clearance to the installation of the additional 630 *mw* plant. The NLC (Neyveli Lignite Corporation) is examining the possibility of using BHEL (Bharat Heavy Electricals Limited) for manufacturing the generating sets and for this BHEL, which has the technology for the production of hydel and thermal sets, will have to work in collaboration with German Democratic Republic or Poland to develop the lignite based sets. The Union Planning Commission has still questions on the economics of lignite based power generation because of the poor combustion qualities of lignite compared to coal. But the Union government is convinced of the need to step up power generation rapidly in the power starved state and the second mine cut is the way forward in this regard.

BHEL :

BHEL reports that it has technical capability and manufacturing competence to produce higher capacity sets and has a 15 year agreement with KWU of West Germany to manufacture turbo generators from 200 *mw* to 1000 *mw* capacity. In collaboration with Combustion Engineering (US) it can manufacture matching boilers for these generators. Tatas have placed order for the 500 *mw* set with BHEL which may import it, if it does not win the tender. With the Union government's power plans for 1979–85, BHEL will be manufacturing 4,000 *mw* sets in the next five years. A multidisciplinary group comprising specialists from BHEL, ministry of Energy and state electricity boards has been set up to renovate 18 power stations, aimed at putting back the units to operate at rated capacity. Work along these lines has been undertaken at Ennore and Kothagudam as noted earlier.

Hindustan Photo Films and Bharat Ophthalmic Glass :

The Hindustan Photo Films reports agreement with two firms in GDR (East Germany), one for the technical knowhow for the production of black and white amateur negative camera roll films and the other for knowhow in manufacturing colour films. The HPF has started manufacturing black and white roll films at its factory at Ootacamund and will soon do the same with colour films. Also discussions with GDR are underway to give Bharat Ophthalmic Glass the technology for producing ophthalmic glass required for spectacles. The BOG is now producing 140 tonnes of ophthalmic glass a year against the estimated requirement of 700 tonnes for the country.

Madras Fertilisers :

Madras Fertilisers reports that in July, its NPK (Nitrogen—Phosphate—Potash) monthly production was over 50,000 tonnes and its June sales 100,590 tonnes. To make fertilisers available on the spot or as near the spot as possible to the farmers, it has established 175 warehouses. It has taken up 40 villages under the village adoption programme to help the farmers with improved agricultural practices and fertilisers use. It has also chosen 7 areas with relatively low fertiliser consumption but with a high growth potential in terms of agricultural productivity and fertiliser use. They involve 69 villages and 28,334 farming families.

Madras Refineries :

Madras Refineries has under consideration its expansion to produce an additional 3 million tonnes of petroleum products. This would meet the petroleum products demand of the south and the improved Madras port facilities would make the expansion an economical proposition. Further, the plant has a good record of keeping to its construction schedule and its cost estimates. Manali is a good area for the petro-chemical complex to develop. Its feedstock is naphtha based and additional naphtha and the needed infrastructure are available for the expansion, including the further expansion of the port facilities and the ground water plans in the area. The financing could be ensured one third through equity and the rest through long term loans, and the expansion project could be completed within 30 months after approval.

Cement :

In September, the seven cement factories in the state were producing at 96 *per cent* of their installed capacity of 3.02 lakh tonnes per month. This level of production has been sustained through the financial year and would have been even higher if 3 factories had not closed down for some internal maintenance reasons. Despite this good output record, the allocations by the State governments for sale to the public have caused a certain degree of artificial scarcity. In Tamil Nadu, the quarterly requirement is 2.7 lakh tonnes but the government allocation for the period is less than 2 lakh tonnes. This situation must be immediately corrected as otherwise producers will be left with stocks and consumers facing shortages will be forced into black market operations.

Handloom :

In the area of handloom, September saw four developments. First, at a meeting of the industries ministers of the southern region in New Delhi, the state Chief ministers proposed that the production of *saris* and *dhotis* should in their entirety be reserved for the handloom sector. Second, as a result of the agreement between weaving factory owners and handloom weavers at Karur brought about by the Chief Minister, weavers will receive double the quantity of yarn they received previously, items or fabrics reserved for handloom will not be produced by power looms, and the directorate of handlooms will be vested with powers to enforce the agreement. Third, during the fortnight September 3 to 17, Co-optex gave a special 10 *per cent* rebate on the sale of all handloom fabrics, as a result of which Rs. 1 crore out of its 13 crores worth of stocks were cleared. Co-optex, which had reached an annual turnover of Rs. 20 crores, has set for 1977-78 a target of Rs. 24 crores. Against last year's export of Rs. 50 lakhs worth of piece goods, it is planning exports worth Rs. 2 crores this year. It is opening 150 showrooms outside the state. Finally, the Union commerce ministry reports that there will be a shortfall of 300 million *m* (metres) in handloom production against a target of 3,000 million metres, due mainly to stagnant levels of production during the first 2 years of the Fifth Plan.

Leather :

Leather exports for the five months April to August show a decline of 21 *per cent*, from Rs. 132.71 crores in April–August 1976 to Rs. 103.89 crores. At this rate, even last year's export earnings of Rs. 330 crores may not be attained during this year. Leather footwear exports which had been rising declined by 32 *per cent*, ET tanned hides and skins by 28 *per cent*, wet blues by 18 *per cent* and leather goods by 9 *per cent*. Goat hair exports fell by 61 *per cent*. Only footwear exports rose by 262 *per cent* and industrial leather by 227 *per cent*. The main reason for the decline in exports is recession and inflation in foreign markets, and the competition from Brazil and Argentina There is need for a special effort at sales by LEPC (Leather Export Promotion Council). The Central Leather Research Institute announced in September the setting up of an International Trading Centre at a cost of Rs. 80 lakhs to train management and technical personnel for the leather trade.

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IV Education, Science and Health

Unrest in Educational Institutions :

September recorded agitations, unrest and in some cases violence in five university centre—Madras saw a stoppage of school and college work for a week because of the strike by the employees of the Pallavan Transport Corporation and some violence in the university premises by a group of students protesting against the new form of learning—semesterisation—which goes against one of the constant themes of the *Bulletin*—that one answer to educational unrest is educational reform. The other centres of unrest were Madurai, Patna, Allahabad and Delhi. In the case of Madurai also, there were overtones concerning the semester system. In Patna, Delhi, and Allahabad, there was some recourse to police action as the student behaviour became a law and order problem.

Educational Reform :

A special meeting of the Conference of Boards of Secondary Education in late September in Madras recommended (a) the highest priority to the universalisation of elementary education at the age-group 6–14, (b) introducing multiple entry into schools to tackle the problem of drop-outs, (c) automatic promotion upto standard VII with internal and continuous assessment, (d) two alternative courses in standards IX and X in science and mathematics—ordinary and higher, (e) reducing the curriculum load along lines suggested by the Iswarbhai Patel Committee, (f) incorporating socially useful and productive work in the curriculum, (g) making available guidance and counselling services in schools through training of teachers for this purpose, (h) orienting of teachers to develop programmes of self-learning, and (i) diversifying vocational courses for the plus 2 classes. Four higher secondary schools are being selected on an average in each of 20 specially chosen districts for imparting vocational courses under a scheme of central assistance. These 20 are among 50, from the total of 350 of the country's districts, where socio-economic surveys have been completed as a transition to the new pattern. There are 32 agricultural, 17 paramedical and 16 commercial courses totalling 65. Every school will offer 4 vocational courses. The National Council of Educational Research and Training wants to gear primary education to the socio-economic needs of the people. Programmes should entail all round development of the community through non-formal education and community involvement. In the state, the government announced in early September that it would be introducing the system of panel inspection in high schools: the District Education Officer and two or three heads of schools, who specialised in subjects other than the one in which the DEO specialised, will form the team to inspect each school in order to bring about real improvement in the academic atmosphere. This would raise the quality of education which is the need of the hour. With the approval of the university, the National Cadet Corps in Pachaiyappa's College (Madras) is running a special coaching school for the children of the RN Nagar slum. The Tamil Nadu State Council of Educational Research and Training organised a 14-day orientation course in science for matriculation school teachers, which also assured them that matriculation schools will maintain their identity. The government organised at Technical Teachers Training Institute (Guindy) a fortnight's training course in use of television in schools. The NCERT facilities were used in this modernisation programme. At the university level, the policy of opening new universities is being considered and clarified by the Union government and the University Grants Commission. The UGC has proposed surveys for the co-ordinated development of colleges, so that 4,500 colleges can be developed more fully and adequately during 1979-85. The UGC has created travelling fellowships, special visiting professorships and associateships for creative artists and writers to enable them to work at university centres for 3 months to one year. About 30 such fellowships and professorships and 20 associateships are to be made available to academicians and artists in universities.

Technical Education :

The State government has announced that teaching hospitals and district hospitals will each have a medical record department with a view to putting their resources to the maximum use. The creation of such medical record departments would be conducive to better medical management. Till microfilm possibilities are worked out, alternative methods of Preservation of records should be developed. The case for starting a degree course in medical records science in the university is strong because of its importance in health administration.

Science :

The Union government announced in early September the merger of the posts of Secretary, Department of Science and Technology and the Director General, Council of Scientific and Industrial Research. Towards the end of the month, *the CSIR Governing Body met to examine* the government proposal to transfer 28 laboratories to the user ministries (see last *issue pp* 601–602). *The Governing Body* welcomed the intention of the government in proposing the reorganisation and recommended that it *should* be done within the framework of the CSIR. 8 out of 10 members who are scientists, expressed themselves against the proposed transfer of the laboratories. It is now for the government to decide on further action.

Health :

A government aided project is launching Operation Barefoot Doctors in Kulu in Himachal Pradesh to help the rural population in regard to problems of *malnutrition, common infections, tubercu*losis, venereal diseases, blindness etc. Himachal Pradesh Medical College will train the barefoot doctors from among the local people numbering over 10,000. The project will use both Ayurvedic and Allopathic systems of medicine as well as the *yoga* system and will provide vitamin enriched foods to children. It will run for 5 years as a pilot project. The need for improving medical education and services *in the country is seen from the fact that* not even 10 colleges have training facilities in plastic surgery which is essential with our increasing industrial accidents and diseases and congenital malformations resulting from population growth.

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V Employment

The Indian Medical Association reports rising unemployment among doctors in several states, particularly Tamil Nadu. A medical graduate in 1976 from this state will have to wait till 1980 and beyond to get a job with the government. While 1,200 medical graduates are coming out annually from 10 medical colleges, the state government can absorb only 350 and the municipal, missionary and private hospitals another 200 each year. There will however be no medical unemployment, if the rural Primary Health Centres are graded to 30 bed hospitals which was the plan. A survey of school leavers with Secondary School Leaving Certificate in the state shows that only 3 *per cent* of them wanted to learn typing, shorthand *etc.* and 6 *per cent* each opted for sports and the defence services. An interesting finding was that free education for the Pre-University Course has not acted as an incentive to low income groups to join colleges, while there was general awareness among young persons that they could take to higher education any time in their lives. Industrial unrest continued in September. The most serious was the 10-day strike by the Pallavan Transport Corporation personnel which was settled after some hard bargaining and decisive action by the Chief Minister. The factories of Lucas TVS and Sundaram Clayton were also closed, with serious consequences to the automobile industry throughout the country, and it was only at the end of September that they were reopened again. A token one day strike was observed by 70,000 textile workers organised jointly by trade unions demanding government takeover of 8 closed mills and 7 sick mills. Fortunately at the last moment a threatened all India strike by cement workers was averted by the intervention of the Prime Minister and some patient work by the Union minister of labour. The bank and insurance employees and Indian Airlines personnel also went on token strikes in September. At the Union level, in September a committee of employers and trade unions worked under the chairmanship of the Union ministers of labour to develop a comprehensive law on industrial relations. Due to the wide difference between management and labour representatives on who would be the bargaining agent on the labour side, the committee could not reach viable conclusions. Further, in September the Union government set up an 18-member committee with the Union minister of labour as chairman to work out a scheme for workers' participation in management and in equity capital. The earlier scheme for workers' participation, *vide* Vol VI p 518 and Vol VII pp 167-168, it is reported, had only marginal effects and so was given up, and a new scheme to make workers' participation from the shop floor upto the board level meaningful is to be formulated by the committee by December. Also, the committee will examine and make proposals on the extent and manner in which workers can participate in the equity holdings of the industrial establishments. The committee will further suggest if there should be a special machinery for ensuring implementation of the scheme at the Union state level and for evaluating its working. Yet another high power committee is being planned to formulate an integrated social security scheme for both industrial and rural labour, which will integrate the existing employees' state insurance, contributory health, provident fund and gratuity schemes which cover over 20 per cent of the existing work force.

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VI Other Items

WUS and TNBCE :

In September, the General Body meeting of the World University Service was held, its report for 1976-77 was received and the programme activities and the budget for 1977–78 were adopted. The election of the student officers and members of the executive committee was held, but later there were some resignations and protests about the new constitution. With the continued agitations about the functioning of the WUS centre and the conduct of elections, an emergency was proclaimed to clear up the issues. Matters are now before the court whose decision is awaited before normal activities can be resumed. Meetings of the Governing Board of the Resource Centre and the Executive Committee and Council of the Tamil Nadu Board of Continuing Education were held in early September at which the programme of the Resource Centre was reviewed and plans to support the state's participation in the Union government sponsored Adult Education / Literacy Programme finalised. The Executive Committee and Council reviewed the plans of action for the current year, approved the holding of a conference/seminar for voluntary agencies to participate in the Adult Literacy Plan, and finalised the composition of the delegation to the annual conference of the Indian Adult Education Association.

IAEA and National Plan :

The Executive Committee of the Indian Adult Education Association met in mid September and finalised arrangements for its annual conference at Udaipur, followed by the meeting of the International Council of Adult Education and the ICAE-ILO seminar on integrated rural development. It also reviewed the 3-day seminar of 12 voluntary agencies and the conclusions of the seminar as an input into the National Plan for Adult Literacy. On the same day there was a meeting of the working party chaired by the Secretary to the Union ministry of education to draw up the preparatory phases for launching the National Plan for Adult Literacy which aims at making literate 10 crores of illiterates in the age-group 15-35 during the ten years 1978–89.

Jerome D'Souza and Tamil Nadu Tamil Teachers :

Fr. Jerome D'Souza, educator, statesman, international leader and religious personality, died in early September. In a memorial meeting his unique qualities and educational abilities were referred to as witnessed in St. Joseph's, Loyola and the Institute of Social Work which he helped found or develop. His qualities as a statesman were responsible for reconciling the calls of Christianity with that of Indian citizenship. He was a respected figure at the UN Assembly meetings. But above all, his religious life was an exempla. to all who knew him. On the same day, the Tamil Nadu Tamil Teachers' Association met and reviewed the problems of status, salary conditions and security faced by Tamil teachers and made recommendations to the government to resolve them. The importance of education in the mother tongue was another major emphasis of the meeting.

Indo-French Seminar and AIR and TV :

A first meeting of the two co-chairmen of the Indo-French Seminar on Educational Policy Issues of the two countries was held in the beginning of September in Madras. It was agreed to hold the seminar in May in Paris and concentrate on the problems of educational planning, employment and educational policies, and adult and continuing education. The second meeting of the committee set up by the government to develop All India

Radio and Door Darshan into autonomous bodies met in New Delhi in early September and received evidence from the senior personnel of broadcasting and television services. In the first discussion in the committee it was felt that there was much more scope for the development of AIR as an educational communicational medium than the black and white TV with its heavy cost and small impact on the illiterate rural audience. Also the importance of decentralised local production of programmes was stressed.

MUTA and YMCA :

A meeting of the Madras University Teachers Association in mid September entertained the state minister of education and raised with him the question of the salary scales of the teaching staff. It was pointed out that there was a long delay in making the decision which had been promised a year ago and there was also an issue of fairness as to the date from which the new scales could become effective. The Union government had provided for its their becoming effective from 1 January 1973, the University Syndicate decided from 1 April 1974 and the state government intending from 1 January 1977 when monetary benefits would accrue. A meeting of the Young *Women's Christian* Association was organised to discuss the nature and implications of the new pattern of education *10+2+3*. It was agreed that this way of organising the system would deal with the real problems of the school and university education and place more emphasis on learning process, updating curriculum, re-orienting the teacher, changing the examination system, introducing work experience, vocationalising the +*2* stage *etc.*

College Days and Research Institute :

A series of Silver Jubilee functions and College Days were celebrated in September. VOC College (Tuticorin) organised a 3-day celebration of its silver jubilee, concentrating on ways and means of improving education offered through the complex of educational institutions developed by the VOC educational trust. The Mar Thoma College (Tiruvalla) celebrated its Silver Jubilee with a seminar on renovation of higher education, with emphasis on moving to a semester system and its accompanying internal assessment. The Vimala College (Trichur) had its student union and other associations inaugurated in mid September with emphasis on further expansion of the excellent community service performed by the college students. The Institute of Regional Research Studies (Kottayam) organised a seminar on the new approach to planning, where *in addition* to the 7 steps to planning, the new dimensions to planning added by the new Union government were reviewed, namely, emphasis on agriculture, irrigation and small scale industries, the decision to base planning at the *taluk* level and the new concept of the rolling plan.

Society of Biological Chemistry and Seminar on Scientific Writing :

The 32nd annual conference of the Society of Biological Chemistry was held in Madras in the University, attended by 600 scientists from all over India. Special attention was given in symposia to Biomembranes, Environmental Biology and Radio Biology—all subjects of immediate national urgency. As part of the Silver Jubilee celebration of the Department of Physical Chemistry, the department in collaboration with the CLRI organised a 2-day symposium on scientific and thesis writing and agreed on the need for training Ph.D. students in methodology and hypothesis formulation and testing.

UNESCO Seminar and COBSE :

The UNESCO has chosen Madras University as one of the 6 universities in the world to review its programmes from the point of view of education for international understanding, peace, co-operation, human rights and fundamental freedoms. Some university departments and some colleges in the Thanjavur district held a seminar at the end of September to plan and prepare for this assignment. The seminar recommended a series of research activities to examine how for the UNESCO principles enter into the teaching and research programmes in the university departments and in the Thanjavur colleges. As noted earlier, the Conference of Boards of Secondary Education was held in Madras at the end of September, at which the ways and means of following up the decision on the new pattern of education and solving in particular the problems arising at the +2 stage were considered. The Union minister of education inaugurated the seminar and the vice-chancellors of the southern universities participated in it.

Tata McGraw-Hill and TISS :

At September end, there was the quarterly meeting in Bombay of the Tata McGraw-Hill Board of Directors, where the review of operations showed an encouraging rise in the number of books written by Indian scientists as well as in the number of reprints. There was also the review and approval of a 3-year plan to attain an annual operating level of about Rs. 1 crore *per annum*. Also the meetings of the Finance Committee and the Governing Board of the Tata Institute of Social Sciences were held in Bombay at which the functioning of the Institute in 1976–77 and the programme and budget for 1977–78 were approved.

Madras University Events

The final meeting of the Undergraduate Review Commission was held in September, where the draft scheme for the new first degree course was finalised for the approval of the university authorities. The University/UGC Committee on autonomous colleges met also in September and considered the application of three colleges for autonomy. The annual convocation was held on September 21 when 21,000 candidates received degrees *in absentia* and some 400 prize winners and Ph. D. scholars received the awards in person. Ashok Mitra delivered the convocation address. The third meeting of the Council of Industry and Trade was held at the end of September which recommended 4 post-graduate professional courses to be conducted by the University. The monthly meeting of the Syndicate decided on the new first degree course and the recommendations of the Board of Studies, and took note with satisfaction of the completion of legislative action by the state Legislative Assembly and Legislative Council amending the Madras and Madurai Universities Acts to allow autonomy for colleges.

October Development Seminar:

The paper presented at the October Seminar on "Employment Perspectives" by Dr. B. Krishna Rao together with a summary of the discussion of the paper at the seminar held on Thursday, October 27th under the chairmanship of Mr. T. V. Natarajan appears as the first article.

Second Article:

A paper on the Mid Year Review of the Economy appears as the second article.

EMPLOYMENT PERSPECTIVES

By

B. KRISHNA RAO

Madras.

I

In India planning for agricultural and industrial expansion and credit planning have already received attention by 1970.[1] Employment planning is very recently emphasised to a much greater extent than in the earlier plan periods. An economic study of the short term and the long term, based on an analysis of the action programmes and their theoretical framework, in keeping with the present emphasis on the employment objectives of planning, is an important task.

A plan design for improved employment levels would embrace both agriculture and industry, private and public sectors, and range over monetary, fiscal and labour market policies. It would be necessary to delve into the problems of the educational system and regulate the job recruitment policies as well. The new context of planning places a premium on inter-state co-operation for resource development. Changes in the socio-economic organisation of rural and urban areas in terms of an income policy and a taxation policy are also called for. Mention must be made of the fact that increased international economic co-operation is also important to promote employment objectives. The economy of Tamil Nadu has to reckon with all these factors.

II

The solutions to the employment problem form part of the endeavour to achieve social and economic ideals promoting the uses of time productivity with a sense of direction in the society. Though the current available analysis of the economic aspects of the uses of time has not furnished many tools ready for application, the subject has been gaining more and more attention. A technological advance is needed for speeding up the processes of development in hitherto underdeveloped areas. The employment of the right men at the right places produces innovations over periods of diligent work and inquiry for which investments are necessary. When innovations are put into practice, they transform the spatial, temporal and institutional characteristics and inter-relationships prevailing in the society. Indeed, historically the employment problem has shown

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1 Presented at the MIDS Seminar on 27 October 1977.

its strong relationships with the spatial and temporal movements in the economy and its organisation. An improvement in social, political and educational spheres is a desirable but a difficult step to be taken for finding solutions to employment problems in regional and national structures.

The old time economists thought of real wage flexibility in one given labour market for the economy, and an equilibrium at full employment level, while the economy generated income corresponding to the rate of capital accumulation. The neo-classical theory of production with constant returns has led to the view that a long run economic equilibrium would ensure equality between the growth rate of the labour force, the growth rate of capital and the growth rate of production (income).

The Keynesian model viewed national income as dependent upon the employment level; the supply of labour being governed under a money-illusion, by a wage level that is rigid in its downward movement while the demand for labour would be regulated by the marginal productivities of wage paid labour. The model emphasised an income-expenditure study of the economy, and dealt with the aggregate demand and supply position which could equilibrate the labour market at even less than full employment levels. The employment levels responded to changes in savings / investment in Keynesian models.

Theories of economic growth emphasised the key role played by investment and the productivity of capital in the economy. This has to be sustained by the rate of savings for high rates of growth. The Harrod Domar theory linked the expansion of labour supply to the warranted rate growth of the economy. The gamut of problems arising as in developing economic systems related to the absorption of the labour force was yet unexplored as to its details.

A household sector, supplying labour inputs and consuming final outputs, was a characteristic of the Leontief input-output scheme. Leontief's scheme afforded a basis for programming models of various kinds including one for minimising the use of labour. Leontief's approach, with its array of production co-efficients, helped in drawing up commodity-and-materials-balances while building up planning models and also revealed the nature and significance of the autonomous and independent sectors.

III

Pravin Visaria referred to the various facets of the Indian census data, the National Sample Survey data, and the methodology utilised in various studies of employment, and pointed out the gaps in the present state of knowledge of the labour force. A reduction in the numbers of "at least the male workers" in agriculture where a surplus of manpower is often referred to as a crucial question becomes infeasible when the under-employment problem is pressing in the non-agricultural sector. The problem of unemployment among the educated has also arisen in recent years in India and is much discussed, with reference to graduates of arts and commerce and more particularly engineers. "There is a need for intensive research into factors that determine the demand for persons with different qualifications or levels of training", Visaria pointed out. It appears that over several decades in the present century there has been a shift towards *higher capital* intensity in Indian manufacturing. Moreover the labour force released from *branches* of manufacturing with predominantly household industry does not appear *to have been absorbed in* other sectors.

(In developing countries such as India, *an analysis* of *a capital goods* sector and a consumer goods sector is being attempted in plan models. It is held that the *former* has a *special* significance for high income growth and the expansion of consumer goods sectors over a period of time. The approach of Mahalanobis—the models of Mahalanobis *are* sometimes called supply models—pointed to the importance of labour co-efficients of various sectors, and laid emphasis on the growth of capital goods to achieve a high growth rate of per capita incomes. A criticism of these models is that the expansion of the capital sector while increasing the rate of income generation, may tend to be inflationary when the *consumer goods sector is slow to catch* up. This seems to be especially the case in developing countries. In many of *them, the larger proportion* of expenditure occurs on consumer goods which are provided by agriculture. Because the reliance on heavy industry might be indispensable while planning for *rural* improvement (in terms of power, for example) it is held that investment on the capital goods or heavy industries should not be levelled down. That ancillaries utilising labour need to be developed has been however one of the corollaries of the planning theory advocated by those who rely on supply models.)

In recent years there have been notable changes in methods of production in agriculture and industry. There is a school of thought maintaining that "we *can* only *artificially* and often misleadingly unscramble" the impact of technological changes. With regard to the agricultural sector, the new seed-water-fertiliser combinations resulting in higher *agricultural* outputs were on the whole favourable to employment growth. *Tractorisation on the other hand had* been dubious in its effects; but its negative effects on *productivity or on* employment have not yet become definitive.

C. R. Frank put forward the view that as income growth rates accelerate from *moderate to* high levels, employment growth rates accelerate even more. Rapid labour *absorption could be thus* secured by accelerating the income growth rate. This hypothesis is of a short term nature only since the stocks of capital and the capacity created in the economy are assumed to be given for the validity of the hypothesis. It was used for explaining labour absorp*tion in Singapore*. The hypothesis was in fact derived from a production function and tested against the statistics of mining in three African countries and railways in two African countries where the existing capital stock and capacity was built up over a long time.

The use of production functions for different types of activity or for the domestic product as a whole leads to various measures of labour requirements. However, the production functions require a specification which is peculiar to their use in projections. Neither the demand nor the supply side of the labour market is in fact explained adequately *by* the functions, which however facilitate the measurement of marginal *products. It is* a comparatively static framework within which the functions find their application. In solving the problems of a developing economy the assumptions on which the functions are based need to be realistic for their use in extrapolating the past or current experience into the future. In this approach it is not easy to identify the impact of inputs that go along with labour. The amount of fixed capital, its uses, its various forms, the various components of working capital and the socalled non-conventional inputs — all need to be considered. Besides these, in agriculture particularly, there are crop-shifts, price-shifts, regional changes, multiple crop patterns and improvements in the quality of labour that might presumably be thrown into the residuals of the estimated functions.

It is worthy of note that the economics of labour absorption in a growing economy is a problem yet to be explored by economists by testing empirical and theoretical hypotheses. Advances made along this line help in employment planning by various regions and nations.

IV

According to the Committee on Unemployment (1970) the labour force in India would reach a magnitude of 244.9 million in rural areas and 50.3 million in urban areas or a total 275.2 million by 1980. According to projections, employment growth would then occur to the extent of 30 million more comprising 9 million in organised industry, 11 million in small scale and cottage industry and 10 million in tertiary occupations. This was said to reveal a shortage of 25 million jobs.

The Indian Planning Commission has now laid emphasis on local planning for developing guidelines to promote higher levels of employment to be achieved according to a time bound programme. Development programmes based on action-research could include proposals for improving labour skills to match the demands of the production complex in "block areas". The Pilot Intensive Rural Employment Projects implemented since November 1972, under Prof. M.L. Dantwala, conducted (unemployment) surveys in which the unemployment estimates ranged widely from 2,731 persons in one block to 41,000 in another totalling in all to 287,946. The funds required for providing employment to all of them worked out to Rs. 25.57 crores against Rs. 11.60 crores actually provided by the Union Ministry of Agriculture for these schemes. The PIREP had to take note of the wages which were too high in some cases involving the danger of siphoning off labour from farm production and too low in other cases which caused failure to attract labour in some blocks. Whereas the programmes broadly aimed at a ratio of 70:30 between manual labour and materials/equipment, in some cases the state governments had to provide a higher ratio for materials/equipment for the reason that the assets created (like roads) could be bettered in quality with larger or better material inputs. It is interesting to note that the survey estimates required an expenditure of Rs. 888/-(at current prices) per worker.

Well informed but impressionistic estimates based on 1971 census data and the data of the National Labour Institute place the figure for unorganised labour (in nondescript occupations) at 10 million. About 11 million more are said to be engaged in household and cottage industry. The 1971 census reported about 48 million agricultural workers.

The ILO offered some labour force estimates and projections for 2,000 AD. The ILO considered that the activity rate which was 40 *per cent* for India in 1970 would go down to 38.3 *per cent.* Now the percentage of labour force was found to be 69.3 *per cent* in agriculture, 13.5 *per cent* in industry and 17.2 *per cent* in services. The non-agricultural sector was considered important for higher levels of activity rates in the developing countries. It was also pointed out that the automobile industry offers but limited scope for the developed nations to improve the employment opportunities over the 1980's. It may be different for some of the developing nations which have to develop their transport services as yet. World shipping capacity was estimated to be double the capacity required over the next decade, but this line of activity has rather limited scope for additional employment for the developing nations.

According to the figures cited by Dr. V.K.R.V. Rao for 1971, in India those who are unemployed, severely unemployed and those available for additional work were 185 lakhs. Of them all, 163 lakhs were in the rural areas and 22 lakhs in the urban areas. An analysis of the candidates in the employment registers revealed that about sixty per cent were employed over 1961–74. In a study, by Prof. Warrier, relating to the number of post-graduates and their employment situation it was found that the states ranking high with regard to the facilities for increasing the number of post-graduates also had been ranking high with regard to educated unemployment. This was judged from the statistics of the Employment Exchanges.

V

The importance of the industrial sector has increased in recent years in Tamil Nadu where about a quarter of the domestic product is accounted for by this sector. During the last decade industrial progress covering metal and metallurgical products, chemicals, farm equipment, engineering goods, automobiles, railway coaches, etc., was witnessed. Lignite, limestone, magnesite, gypsum and bauxite are important among the minerals in the state and mineral production which has been rising recently shows further promise of rising under the plans. The close co-operation of the small and large sectors of industry and a diversified pattern of production in small units were aimed at by the government and this policy needs to be further strengthened to promote economically the absorption of labour in productive activity. The backward tracts of the State were identified by the State Planning Commission so that a more even regional dispersal of industry could be secured.

While putting the figure for unemployment (including under-employed persons) at over 46 lakhs (1971) the Perspective Plan for Tamil Nadu points out to the absence of reliable estimates of unemployment in the State and also to the difficulty of defining unemployment in a uniform manner applicable to different economic systems and situations. The labour force in the state was estimated to be 163 lakhs or 39 *per cent* of the population of 412 lakhs in 1971. Unemployment was said to be nearly 11 *per cent* of the total population or 28 *per cent* of the labour force. It was also estimated that about 46 *per cent* of the rural people and 37 *per cent* of the urban population were below the nutritional poverty line (*i.e.* those who spend Rs. 27.9 per month in rural areas and Rs. 34.8 per month in urban areas at 1969–70 prices). On this basis about 170 lakhs were found to be below the poverty line. The Commission also felt that unemployment in 1973–74 might be 52 lakhs if under-employment is taken into account and 17 lakhs if this were ignored.

The following table shows the projections of the State Planning Commission which point out that almost full employment can be reached by 1983–84.

TABLE 1

JOBS AND UNEMPLOYMENT, TAMIL NADU, 1970 to 1984.

Year (April–March)	Number of jobs required (million)	Number of jobs available (million)	Unemployment (million)
1970–71	16.029	11.499	4.530
1973–74	17.160	12.935	4.225
1978–79	19.071	15.477	3.594
1983–84	21.480	21.185	0.295

For tackling unemployment in the short run there were proposals put forward for (i) the employment of 18,000 unemployed secondary grade teachers, (ii) setting up agro-service centres which would absorb skilled and semi-skilled workers, (iii) identification of entrepreneurs, under a scheme which would create about 15,000 job opportunities. (iv) the employment of educated unemployed, (v) road construction schemes absorbing 1,500 engineers and 47,700 other workers (vi) modernisation of the occupations of washermen, carpenters *etc.*, (vii) rural industrial estates for housing, (viii) developing, on the basis of a sound system of policies for science and technology, an integrated scheme for meeting the rural unemployment problem.

The Perspective Plan made an assessment that 28.71 million people are denied their minimum needs and proposed an investment of Rs. 651 crores on meeting the minimum non-food needs of these people during 1973-74 to 1983–84. The results of these schemes are yet to be seen but they agree with the broad policy pronouncements of the Union government.

VI

In employment planning besides the capital – output, capital – labour and land – labour ratios, demographic factors such as regional growth rates of population, rates of migration and mobility of labour and changes in the educational and occupational structures can hardly be ignored. The changes in the magnitudes and forms of employment in relation to investment and income growth attract special attention in the planning process. Employment policies have to deal with unemployment, underemployment, duality in labour markets and such other factors.

The elasticity of employment (N) to income (Y) is given by the ratio of the rate of the growth of employment to growth rate of income or value added. In developing economies the ratio of $\frac{Y}{N}$ or $\frac{N}{Y}$ is said to be statistically operational in a much better way than the capital–output ratio for employment planning. The ratio N/Y is regarded as a good proxy for labour intensity when this is sought to be measured in their economies. With an activity level of 39 *per cent* and a per capita income of Rs. 795 the ratio of the labour force (N) to income approximately works out to 0.49 in the Tamil Nadu Perspective Plan for 1977–78.[2]

TABLE 2

ELASTICITY OF EMPLOYMENT TO INCOME (N/Y) AND THE PERSPECTIVE PLAN AT 39 PER CENT ACTIVITY LEVEL

Year (April–March)	Per capita Income (Rupees)	Y/N	1000 N/Y	C/Y	Population (Million)
1977–78	795	2,039	0.49	3.9	47.9
1980–81	945	2,423	0.41	2.25	50.8
1983–84	1,215	3,192	0.31	2.25	53.7

In adverting to labour absorption phenomena the product mix of the economy needs to be considered carefully. Thus in an economy a shift to housing, hotels, cottage industry, infrastructure construction could be labour intensive. But the long run labour absorption might be of a different character from that observed in the short run, if only transient forces had been operating on the output levels and their implicit factor demands. When the transient causes had spent their force, even a deceleration effect in the demand for labour in the corresponding production lines may become evident. A corollary of sound and equitable employment policies is the promotion of stability in the factor markets.

A source of difficulty in regional employment planning is related to the availability of the right kind of statistics. Another difficulty is related to the

2. Estimates of the productive capital per worker for 1974 in different lines of enterprise are indicated in the appended tables A. 1 and A 2.

concepts (including the one such as cheap labour supplies available in the country) and the methodology pursued in defining the various facets of employment or unemployment in a manner that would serve the purposes and priorities of planning. A third difficulty is concerned with the conflict of goals that might arise when too much stress is laid on only one or a few of them. A fourth problem is the way the public and private sectors operate in their relation to the labour markets. Still another problem, fifthly, is concerned with the manner in which the Union and the State Governments co-ordinate their activities.

For a regional economy the ratio of labour to machinery appears sometimes exogenously. This arises when methods of production from the developed nations (regions) are merely taken over by the developing nations (regions). However, indigenisation of production has been a notable feature in India and has produced favourable results. Liebenstein and others hold that labour absorption in 45 various activities of a region is based on the presence of other favourable factors of production as well. In some cases as in West Bengal it was found that the nature of demand in the regions was closely associated with the spurt of industry (the small industry particularly) rather than the complementarity of factor supplies. Still another view is that the employment situation in an area reacts to the methods of agricultural production and their productivity. The industrial sector is supposed to react favourably when the wage goods supply to industry is eased by the agricultural sector.

Besides encouraging labour absorption in intensive crop production, agro-based industry too offers an avenue for improving employment prospects. The Khadi and Village Industries Commission, and the Small-Scale Industries Organisations have been especially charged with the cause of advancing the agro-industries sector in different regions. In as much as the exploitation of agro-wastes, forest materials, minerals and other natural resources could improve the contribution to output, schemes based on these resources have to be given special significance. The "Key Result Areas" are based on such schemes in Maharashtra, which is also operating an Employment Guarantee Scheme. Similar schemes might be considered by other states.

For promoting improved rural economic conditions that could ensure higher employment levels, the idea of a land army is mooted in Tamil Nadu. It could attend to irrigation works, road works, housing construction, and flood control measures and the like. To promote non-agricultural activities the development of (1) urban growth centres (market towns), (2) educational centres, (3) agricultural service centres and the like are also suggested. The labour absorption which these approaches create implies a notion that the labour force could be in a surplus in the rural areas. However, when the labour supplies are inadequate for want of skills, training and education has to be imparted to the workers. The inclusion of labour training costs should not be ignored in considering regional supplies and demands for labour around growth poles particularly.

The policy mix that strengthens the resources of the states for planning purposes includes the taxation of agriculture and the acquisition of an adequate share of federal financial transfers. The latter have hitherto been guided to a large extent by revenue deficits. It would be desirable that the transfers are linked to "performance criteria", in the states such as the removal of destitution. The present pattern of making federal transfers has been said to be leaving the poor states worse off since they had been accumulating revenue surpluses. The capital-high industries of a region should be dovetailed with ancillaries and small industries. The banks have a pivotal role to play in regional development of this nature, if they aim at providing supply-leading services *i.e.*, providing financial services ahead of the demand for them. Sources of energy such as power which show defects in management should be effectively regulated for securing the more even dispersal of industry and promoting employment. Science and technology policies should be also evolved so that labour absorption is encouraged in productive activity. A reliance on one-sector models emphasising on industrialisation alone might not make for sound employment policies. Such policies could go hand in hand with income and wages policies as well to ensure equity and economy in the long run. It is clear enough that there is a host of problems for research related to the employment situation in a large area such as Tamil Nadu, and they need a multidisciplinary approach.

TABLE A 1

CAPITAL-LABOUR RATIOS IN FACTORY INDUSTRIES, TAMIL NADU, 1971

	Industry	Productive Capital per Worker (Rupees)
1.	Spinning, weaving and finishing of textiles	8,267.3
2.	Electric light, power and gas	57,393.0
3.	Manufacture and repair of motor vehicles	17,700.0
4.	Manufacture of machinery except electrical machinery	23,751.7
5.	Manufacture of miscellaneous food preparations	5,578.0
6.	Manufacture of electrical machinery, apparatus, appliances and supplies	1,66,440.8
7.	Manufacture of railroad equipments	6,862.5
8.	Printing, publishing and allied industries	7,497.8
9.	Basic industrial chemicals including fertilisers	1,30,790.5
10.	Ferrous metal industries, iron and steel basic industries	22,067.5
11.	Sugar industries	29,937.2
12.	Manufacture of miscellaneous chemical products	7,203.9
13.	Manufacture of rubber and rubber products	39,527.2
14.	Manufacture of cement (Hydraulic)	77,429.5
15.	Manufacture of metal products except machin and transport equipments	15,526.5
16.	Tanneries and leather finishing plants	4,057.9
17.	Manufacture of motor cycles and bicycles	23,874.5
18.	Manufacture of grain mill products	10,741.0
19.	Manufacture of non-metallic mineral products (not elsewhere classified)	27,044.9
20.	Other industries	29,834.7

TABLE A 2

CAPITAL-LABOUR RATIOS (PROVISIONAL) IN FACTORY INDUSTRIES, TAMIL NADU, 1974

Industry	Productive Capital per Worker (Rupees)
1. Grain mill products	10,054.9
2. Manufacture and refining of sugar (vacuum pan *sugar factory*)	44,871.1
3. Manufacture of edible oils and fats (*mustard* oils, groundnut oil, til oil, etc.)	6,412.2
4. Tea processing	18,576.5
5. Manufacture of food products not elsewhere classified	4,432.6
6. Cotton ginning, cleaning and baling	3,221.2
7. Cotton spinning, weaving, finishing *etc.* of cotton *textiles in mills*	12,715.8
8. Spinning, weaving, finishing and other textiles (synthetic fibres, rayons, nylons *etc.*)	26,787.1
9. Manufacture of paper, paper products, printing, publishing and allied industries	20,326.9
10. Tyre and tube industries	45,651.6
11. Petroleum refineries and manufacture of products of petroleum not elsewhere classified	13,60,855.3
12. Manufacture of basic industrial organic and inorganic chemicals and gases	55,669.7
13. Manufacture of fertilisers and pesticides	1,70,570.7
14. Manufacture of drugs and medicines	20,566.8
15. Manufacture of matches	1,928.5
16. Manufacture of cement, lime and plaster	73,664.7
17. Iron and steel industries	43,543.5
18. Foundries for casting and forging iron and steel	20,827.1
19. Manufacture of agricultural machinery and equipments and parts	24,416.9

(Contd.)

TABLE A 2 (Contd.)

Industry	Productive Capital per Worker (Rupees)
20. Manufacture of prime movers, boilers and steel generating plants such as diesel engines and parts	41,465.0
21. Industrial machinery for food and textile industries	25,550.1
22. Manufacture of railway wagons and coaches and parts	12,180.8
23. Electricity	68,143.3
24. Repairs of motor vehicles and motor cycles	7,119.5
25. Tanning, curing, finishing, embossing–Japanising of leather	9,221.4
26. Other industries	19,446.2
Average	28,947.2

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Summary of Discussion

In the discussion of the paper at the Seminar held in the Seminar room of the Institute on 27th October 1977, under the Chairmanship of Mr. T.V. Natarajan, Computronics, Madras, the author in presenting the paper stated the employment problem is a vital issue from the policy angle. Some of the basic issues involved in working out an effective policy are: the acceptance of certain values in terms of social justice, a clear analysis of the physical dimensions of the problem with reference to sectoral demand, supply and regional variations. Moreover the techniques of planning call for some modification. A coordinated approach within a regional context has not been evolved. In an economy like India's which is not fully controlled, regional employment planning faces some difficulties. The statistics required are not available in the forms desirable. Planning for employment requires clarity and uniformity in concepts and methodology which do not exist now. A larger issue is the need to reconcile apparently conflicting ideas and concepts. An aspect which must not be overlooked is that employment does not always mean an income to ensure a standard of living above the poverty line. A further problem is the operation of the public and private sectors in relation to the labour market. There is also the administrative bottleneck in the lack of coordination between the State and the Union Governments. Reviewing the employment forecasts in the agricultural sector, the author said that the projected heavy investment in irrigation to the tune of Rs. 7000 crores is likely to have a favourable impact, Green Revolution has also led to some additional employment generation. A disquieting feature is the increase in the number of landless agricultural labourers. In the sphere of employment in industry the development trends have not been towards labour intensive enterprises. If small industries are to absorb a sizeable proportion of the work force, then short term production patterns and long term perspectives will have to be worked out. Discussing policy prescriptions and planning modalities, the author raised a query whether entrepreneurs would accept a lower rate of profit in the interest of increasing employment. Another consideration pertaining to resource mobilisation is a tax on the agricultural sector.

During the discussion it was observed that the subject was of importance as the present policy of the Government was employment oriented. Further, well planned employment generation put purchasing power in the hands of the poor. The Tamil Nadu Government also subscribes to the objective of liquidating unemployment in 10 years time. Commenting on the role of economists in planning for employment, they had yet to make a significant contribution to programmes which would achieve this objective in the time limit set. In the context of the changes in planning techniques, the Rolling Plan was compared to an artillery barage which maintains sustained fire, when the enemy movement or position is not clear. The concept involved in the Rolling Plan has not been clearly elucidated to the public. Regarding the Committee on Unemploymont (1970) estimates of 25 million jobs and the wide block level variations referred to in the PIREP. Survey do not seem to give the correct picture. It was pointed out that unemployment calculations should be based on the total labour force and not on the entire population. The communist countries seem to have solved the problem of unemployment. The basic issue in any discussion of employment perspectives is that of concepts. Unemployment is the excess of the labour force in relation to the absorptive capacity of the economy in a given institutional frame. The employment problem has several dimensions of which the major ones are : the time dimension or the number of of hours put in; the income dimension or the return for the labour which may not be adequate even after long hours and the productivity dimension. In formulating an employment policy, it has to be decided as to which of these dimensions, singly or in combination, has to be accepted to attain our objective. An important element is the institutiona lstructure or framework in which employment is provided. The communist countries solved the problem by disassociating the time and income aspects. In China the institutional frame is the commune where a minimum income is assured, the individual being engaged in any kind of work. In the Indian context we have to provide not only job opportunity but also assure a sufficient income. The studies at the Central and State levels have not analysed the coefficients between employment and income. Yet another aspect is whether the employment sought is self-employment or as wage earner. Investigations should cover this aspect. An opinion was expressed that exhaustive data are not a pre-requisite for policy decisions as the existence of a large number of unemployed is evident, aggravated by a large and increasing population. The picutre is also vitiated by the paradox of strikes on one hand and unemployment on the other. The number of holidays enjoyed by the organised sector seems to be greater than anywhere else in the world, and would in the long run, affect productivity. "To each according to his need and from each according to his ability" is a sound if simplistic nostrum. Regarding the eradication of unemployment, we should have an optimistic outlook and concentrate our effort on a five-year period. The policy of reserving certain industries for the public sector needs some rethinking in the present context. For example, as there is a shortage in cement supplies adversely affecting some other activities like housing, expansion in the private sector could be encouraged. Another point raised was that highly paid staff need not always be considered redundant as their skills and abilities could be effectively used for better productivity. The level of technology was also an important factor in achieving levels of production. In all self-employment the entrepreneur should combine both working skill and managerial enterprise. Hence to promote self-employment adequate professional guidance is necessary. The raising and utilisation of resources is one of the prime factors in employment generation. We cannot disassociate employment policies from income and wages policies. Therefore, a well designed policy taking into consideration all these multiple factors seems to be the answer.

Some Notes on a Mid-Year Review of the Economy*

A Twilight Zone :

A mid-year review of the economy for this rather unusual year, 1977-78, has all the advantages and handicaps of analysing events in a twilight zone. One era lasting over a period of 30 years, of economic strategy, policy and policy instruments has ended and the new economic strategy, policies and policy instruments for the coming years are yet to be born. Hence this mid-year review should be as much concerned in probing the yet to be defined, emerging future over-all economic framework as—if not even more than—analysing the normal sectoral trends for the year in the rate of growth, the state of agriculture, manufactures, prices, saving and investment, balance of payments, employment and even the outlines of the Sixth Plan.

There are certain broad landmarks in the form of economic objectives that have been established in this twilight zone: One is the importance of the agricultural sector, intensified irrigation, agrarian reforms and a higher plan allocation for the rural sector. Second, statutory reservation of spheres of production for small-scale and cottage industries and the narrowing down of rural-urban disparities and a new rural-urban nexus. Third, emphasis on Gandhian values of austerity, *antyodaya*, and a decentralized economy. Fourth, an end to destitution in 10 years and affirmation of the right to work and a full employment strategy. Fifth, development of appropriate indigenous technolgy for self-reliance. Sixth, emphasis on wage goods production for mass consumption. And seventh, a wages and price policy, a national water policy, a national energy policy and environmental care.[1]

Within these landmarks, the twilight zone raises questions on all the major issues of economic strategy and policies for the future.

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* Extracts from a paper presented by Dr. Malcolm S. Adiseshiah at the Workshop conducted by Associated Chambers of Commerce, New Delhi in October 1977.

1. The Janata Party Manifesto: 'Both Bread and Liberty. A Gandhian Alternative' N. Balakrishnan, New Delhi. February 1977.

There is first the debate which has been opened between agriculture and small, cottage and employment generating industries on the one hand, and heavy industry on the other. This issue may be posed somewhat sharply in the statement that there is a real choice facing the country between further extended investments in agriculture and the employment generating sector generally and investment in increasing the capacity of heavy industry units or creating new ones. This is not to say that the investments in heavy industry have been adequate or are efficiently utilised. In another note, I have shown the levelling off of the rate of increase in investment in heavy industry since the end of the Third Plan.[2] The index of output of capital goods industries for instance which increased by 19 per cent during the first quinquennium of the sixties declined to 15 per cent during the second half of the sixties. In a sense this is the interlocking nexus between agriculture and heavy industry. The fact that there is no increase in the demand for foodgrains and mass consumption goods facing a stagnating market has meant a decline in the demand for various kinds of capital goods and a deceleration in the rate of investment growth in industry. Equally one of the latest reports of the World Bank on our economy calls attention to the inefficient use of our invested capital.[4] Analysing the Incremental Capital Output Ratio (ICOR) of 118 countries (non-communist) for 1965-73, the report shows that this country's low gross investment is not compensated by higher efficiency of capital use. In spite of abundant labour and adequate resources endowment, our ICOR is as high as that of the developed countries (standing 72nd in ranking of investment and 73rd among 101 developing countries for our high ICOR). This means that in order to avoid diminishing returns to invested capital, our investment strategy must improve the allocation of capital between sectors and increase the use of installed capacity. To return to the main issue facing the country and the government—the question of increasing investment in agriculture and employment generation generally in place of further investment in heavy industry must be faced. (In place of 1 heavy industry plant, 2 million hectares of irrigation or 300 small agro-industries can be developed). In this regard, there are some hard truths that flow from national and international studies that must be faced. The first is that there is no way that an economy can develop at any satisfactory rate without rapid industrialisation. A second well known lesson is that in the process of industrialisation, heavy industry must grow more rapidly than medium and small industry. The most recent reiteration of these economic truths is set forth in the United Nations study undertaken by Wassily Leontief where the 15 region 45 sector world model outlines several scenarios, of which the preferred one shows that the present intranational and international income gap between the rich and poor which is currently 12:1 can by the end of the century be reduced by 50 per cent to 7:1, and can be completely closed by

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2. Towards an Effective Sixth Plan: Dr. Malcolm S. Adiseshiah; Southern India Chamber of Commerce and Industry Journal Vol. XV No. 5 May 1977 pp 5-10. Madras.
3. Government of India. Index of Industrial Production 1960-61 to 1969-70.
4. IBRD - Special Report on the Indian Economy - April 1977 Washington D.C.

2050 A.D.[5] I regard this study as a major break-through in development analysis. One of the twelve major conclusions of this study is for us a warning and reminder on the need to continue increasing investment in heavy industry: "accelerated development points to the necessity of a faster growth, on the average, of heavy industry, as compared to the overall rates of expansion for the manufacturing industry." I would suggest as a guideline, a growth rate in the Sixth Plan of our heavy industry of 7–8 per cent per annum as against our Fourth and Fifth Plan performance of around 4 per cent.

The second grey area that the economy faces is with regard to the related problem of the industrial policy of the future. The five point industrial policy statement made by the Government in the Lok Sabha on July 11[6] is a reiteration of the objectives—referred to earlier as the broad landmarks—and in certain selected points a continuation of past policy. They do not add up to a coherent industrial policy from which the instrumentalities can be derived. The issues that need clarification and decision include: the role of the manufacturing sector in the development of the economy and the target rate at which manufacturing industries should expand in relation to the growth rate of GNP, given the fact that the higher the general rate and level of development, the larger the need for the creation and expansion of manufacturing industries: the role of the economic aspects of allocative efficiency such as scale of production, location, export relevance, modernisation, diversification, etc. and the related social effects in diverting resources for producing low priority manufactures: (an added complication is the trade-off between the small sector entertainment electronics and the draining of resources to the non-priority items of TV, radio sets, tape recorders, etc.) ; the place of the use of more or less capital intensive techniques: the rationale for the continuing role of "import substitution" and "saving on foreign exchange" which have dominated industrialisation with its related high cost domestic industrial structure since the second plan period, and as an alternative relating our technology more nearly to our factor availabilities, adhering to the principle of comparative cost advantage generally, and the establishment of viable industries with internationally comparable cost structures: the role and composition of the public sector and the private sector and the related problems of increasing levels of investment, pricing and subsidies and allowances: the role of the semi public joint sector, which while acting as an antidote to monopolies and ensuring the spatial and financial dispersal of industrial units, creates the problem of unviable units: the role of small industries where the current reservation of 128 items is responsible for the production of 45 per cent of the industrial output of the economy and any large unit entering this area has to export 75 per cent of its output: policy regarding the newly emerging problem of sickness in the manufacturing sector, due to the interacting forces of uneconomic size, low capacity use, poor maintenance, lack of managerial inputs and inadequate finance (and where the questions of ownership and merger of producing units now being

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5. United Nations: The Future of the World Economy P II. New York 1976.

6. Financial Express, July 12, 1977.
   Economic Times, July 12 and 13, 1977.

debated seem somewhat irrelevant): the linkage between small, medium and large industries and the resulting product mix needed to produce maximally mass consumption goods on the assumption that the economy will produce a sufficient surplus (accelerated growth) for its realisation: the precise content of employment oriented industry as against the past and current market trends of the expanding demand from those to whom additional incomes accrue for goods from the highly capital intensive sector, alongside of the eight selected manufacturing areas from grain milling to leather and leather goods for action in this regard; and, the question of investment allowance being related to employment generation rather than to any kind of a time span of the investment.

A third area in need of clarification is with regard to the new emphasis on agriculture. The absolute priority of agriculture and related activities in relation to (a) feeding the country's fast growing population (which will grow exponentially till the early years of the next century), (b) providing the industrial inputs for the manufacturing sector and for generating the major part of the employment needed, and (c) acting as the infrastructure for a national wage policy, is not in question and is accepted on all hands. The issue on which there needs to be policy and policy instruments developed is the issue of doubling and trebling agricultural productivity. This increased productivity issue must not be confused with the debate on the arithmetic of agriculture's past and future allocation percentage. Agricultural productivity in the country is on the average lower than that of most other developing countries of Asia and about one third of that of Japan. In this regard, there is need for a target guideline. For instance if the work force is increasing as it does in this country at 2.5 per cent per annum, if per capita consumption is growing as it is doing at 2 per cent per annum, then labour productivity in agriculture should rise at 3.7 per cent per annum. That is the kind of target from which the level of investment in land reform and a more equitably productive agrarian structure, in expanding irrigation of the *kharif* belt, in dry farming technology, seeds, fertilisers and mechanisation can be derived as a function.

There are other twilight areas which similarly need policy definition and the subsequent forging of policy modalities. These include the elaboration of Gandhian values of austerity which first means that there cannot be freedom in the means, methods and quantum of generation of incomes to be followed later by exhortations for self-imposed canons of austerity, policy with regard to exports beginning with some computation of the cost of subsidies and the use of a shadow rate of foreign exchange in order to correct the built in high cost inefficiency of our export sector, and policy with regard to unemployment and wages.

In the absence of these firm benchmarks, the review of the various sectors of the economy that is further undertaken is somewhat like whistling in the dark to keep up one's courage.

Growth Rate :

The Economic Survey for 1976–77 reminds us that the overall growth rate of the economy is still characterised by both wide ranging fluctuations and stagnation. It shot up to 8·6 percent in 1975–76 and dipped to 2 per cent in 1976–77 and on the basis of current trends in agricultural output and manufacturing industry is likely to be of the order of 5 per cent for the present year 1977-78.[7] But the trend rate continues at 3 to 3·5 per cent compound and that is about the overall growth rate at which the Fifth Plan will be ending. This is serious because the objective of the end of destitution in 10 years requires a trend rate of 5–6 per cent and the closing of the income gap between the rich and poor by the middle of the next century calls for an overall growth rate of 7-8 percent.[8] These trend target rates have implications for growth rates of agriculture, manufacturing, saving, investment and final consumption.

State of Destitution :

The mid–year report of NSS with regard to the number, composition and location of destitutes in the country shows the importance of accelerated economic growth.[9] Severe destitutes constitute 20 per cent of the population, destitutes are one third of the population and around 50 per cent live below the poverty line. That is, the poor at this time number 245 million, of which 200 million live in rural areas. The rural poverty pockets extend over the 3 Southern States of Tamil Nadu, Andhra Pradesh and Karnataka, West Bengal in the East and Maharashtra in the West. The NSS rounds show an increase in the number of poorest rural households over the Fourth and Fifth Plan periods (with an increase in the incomes of the top 20 per cent of society).[10] This raises the question not only of not simply making available goods of mass consumption to people living in the poverty sector, but also the question of ensuring that, and what the Economic survey calls "a restructuring of the economy" which involves making a start on replacing the present unequal agrarian, industrial and financial factor ownership situation illustrated by the facts of 4 per cent of the rural households owning 30 per cent of cultivated lands and 75 houses owning 53 per cent of assets in the corporate sector.[11] Given the effect of the rise in prices on the poor, a start should be made on the structural change referred to, both to supplement the low earnings of the majority of the work force and to orient fresh investments towards employment generation.

Rise in prices :

For the first three months, April–June 1977, the price rise was 3.6 per cent, the major contribuants being pulses which rose by 13.2 per cent, oil seeds by 13.6 per cent, among what the wholesale index terms primary articles, and edible

7. Economic Survey 1976–77. Government of India, New Delhi, June 1977.

8. United Nations: The Future of fhe World Economy, pp 6-11, New York 1976.

9. NSS Annual Report 1976, New Delhi 1977.

10. Twenty Second, Twenty Third and Twenty Fourth Rounds NSS: Department of Statistics, Government of India.

11. All–India Report on Agricultural Census 1970–71.
Southern Economist Vol. 16 No. 1 P. 21, Bangalore.

oils by 11.8 per cent and metal products by 5 per cent among manufactured products.[12] Primary articles prices have been rising faster at about double the rate of the rise in prices of manufactured products, and in the absence of counter-valing action, a 0.5 to 1 per cent monthly rise in prices, with prices of primary articles leading, can be expected during the rest of the year. The inbuilt inflationary forces in the economy are the low growth rate of last year at 2 per cent, the increase in money supply at over eight times that rate at 17 per cent, and the increasing population at 2.2 per cent.

Of those three factors, the outlook for the year with regard to increased production and supply of goods in the primary articles group is not bright. The June decisions of the representatives of the private corporate sector generally to hold prices at the June level will keep the prices of manufactures and intermediates stable. Even that decision assumed that the prices of raw materials and industrial inputs will not rise sharply—an assumption that does not hold good with regard to cotton, oil seeds, cement, and the decision of the industrial houses has not been followed by a parallel decision towards self-restraint in price rises and speculative activities by the trading community—which is where really the price rise shoe pinches. The possibility of using the overly large stock of food-grains amounting to some 20 million tonnes and the growing foreign exchange reserves now reported at Rs. 3,242 crores, which is the equivalent of 7.9 months of imports, to keep down prices, as long as they remain immobilised stocks, will not only not bring down prices but will contribute to monetary expansion. The huge and wasting food stocks are not being deployed in the market primarily because at their issue prices there is little demand (the offtake of which through the public distribution network has been steadily declining from 11.3 millions in 1975 to 9.3 million in 1976 to even lower amounts in 1977, if the May offtake of 5 lakh tonnes and June of 4.5 lakh tonnes continue as a trend). Here there is a trade-off problem of reducing the issue prices by Rs. 10/-per quintal and the Rs. 100/- crores increase in budget subsidy that it would involve. But the brute fact is that to increase the supply of cereals and bring down their prices and to counter the present trend of the rural and urban poor being priced out of the market and the public stocks ending up in the hands of the affluent and becoming private stocks, the issue prices must be reduced, in addition to expanding further the public distribution network to cover the rural poor. Similarly, a small part of the fast expanding foreign exchange reserves needs to be put to anti-inflationary use in importing speedily and on an adequate scale supplies of edible oil, cotton and fibres. Every day of the non-use of these reserves further increases the supply of money which competes for these very goods in short supply.

On the money supply factor, the issue is complex in that its actual rate of increase for the first quarter of the current financial year is less than that of the first quarter of 1976-77, but the inflation potential for this year is much higher. In the period April to July the total money supply increase has been a little over 5 per cent compared to last year's near 9 per cent and the currency increase with

12. Reserve Bank of India, Bulletin Statistical Supplement Vol. 78 No. 29 P. 4 Bombay.

the public was 6 per cent during April–July 1977, compared to the over 10 per cent expansion during the comparable period last year. On the other hand, bank credit to Government and not foreign assets have expanded and with the slack in production demand for credit, the Banks have reduced their RBI borrowings and are in a state of high liquidity,[13] which may finance indirectly and directly hoarding and speculative activities. There are three further monetary forces which will exert an upward pressure on prices during the rest of the year. The first is the overt deficit of Rs. 72 crores which has been budgetted and the Rs. 1,500–1,700 crores of the implied Union Budget deficit. This implied deficit comprises (i) Rs. 179 crores of borrowing from the Provident Fund, (ii) Rs. 500 crores of the net market borrowing from the RBI and commercial banks (which will not withdraw currency from the public), (iii) Rs. 800 crores borrowing from the Foreign Exchange Reserves of the RBI minus any use of this sum to import needed consumption goods or spare parts, (iv) Rs. 130 crores to be borrowed from the impoundable resources of RBI, and (v) Rs. 45 crores of US Rupee deposit funds. This minimum of Rs. 1,500 crores and maximum of Rs. 1,700 crores will be competing for goods in short supply. The second monetary force which will have an inflationary effect is the late July decision to pay out in August Rs. 320 crores, which is the second additional instalment of the impounded dearness allowance, which the government at the time of announcement admitted would have an "expansionary effect on money supply." A third element is the bonus issue, where the minimum will be 8.5 per cent, which will increase the money supply with persons in the organised sector. A general conclusion is that to keep the price rise at around 0.5 per cent per month, it is necessary to immobilise around Rs. 2,000 crores, which means a cut in personal consumption of the well-to-do classes through appropriate fiscal, credit and even marketing policies and the planning of credit out-flows to priority production sectors.

Industry :

The state of the manufacturing industry at mid-year presents a mixed picture, with the negative elements demanding special attention and action. The macro picture which is characterised by a revived decade record of 10 per cent overall growth, and the continued good performance of the 16 units under the Department of Heavy Industry which are averaging a monthly production of over Rs. 40 crores (with industrial disputes, however, threatening to lower output in some key units) is a positive element. But even that encouraging macro industrial performance in 1976-77 must take account of the fact that in that year, 56 per cent of companies in the private corporate sector operated at a loss and some 65 per cent of 724 companies either did not declare a dividend or lowered their declared dividends compared to 1975–76.[14] The RBI survey of 385 large public limited companies for 1975–76 shows the basic causes as being due to the sharp decline in rates of growth in sales, value of production, total income,

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13. RBI Annul Report 1975–76 P. 33
    RBI Bulletin weekly statistical supplements Vol. 28 Nos. 17–29.
14. Economic Times, June 2, 1977 p. I.

gross and net capital formation rates, increase in the debt-equity ratios, fall in pre-tax profits and high dependence on external sources of finance.[15] The problems faced at this mid-year point by the firms are problems of transition from an inflation ridden economy when profit margins and not outputs were enlarged, and production was cut back in response to further price increases and a fall in profitability, resulting in the raising of their average costs, in the restricting of demands for goods and services which are further restrained by the fiscal and monetary deflation measures put into effect, and in growing unutilised capacity. Now in the transition to a normal price situation industrial units find it difficult to reduce prices, and when they do, demand does not pick up because of the past neglect of investment in heavy industry and the downstream units and inadequate or unrealistic pricing of finished goods and materials, leading to various forms of sickness and operating losses. At this mid point, shortages in some key inputs act as a further constraint. Power which is in perpetual short supply has hit manufacturing output severely in Harayana, Punjab, Delhi, Uttar Pradesh and Karnataka. For this year and next year, the additional power needs are estimated at 7 million KW. Another important input which is similarly in short supply is cement, which is attributed to inadequate manufacturing capacity aggravated by power shortage. Here the several licenses and letters of credit issued to 17 private sector units for 4·9 million tonnes and to 12 public sector units for 5 million tonnes need to be activated, along with alternative fuel use, and the present irrational price policy under which cement sells at Rs. 3 per Kg. in Tamil Nadu and Rs. 6 in Gujarat needs to be corrected. Other shortages include fuel oil, cotton, fibres, jute and other agricultural products. On the other hand the full use of capacity by firms in some sectors faces lack of demand, resulting in the funnelling of the surplus through exports or in the piling up of stocks. Of the country's small 7·4 million tonnes of steel output (about a fourth of the China's steel production), as much as a quarter is being exported due to the domestic market not being able to absorb the output. Similarly of coal production (whose target for this year has been successively lowered from 112 million tonnes, to 108 million tonnes down to 92 million), stocks at pithead are reported in May at 13.8 million tonnes at a cost of Rs. 100 crores. Heavy engineering units have also growing unsold stocks which are being somewhat desperately advertised for sale in the oil laden gulf countries. Industry is thus caught in the inter-looking circle of lack of demand, lack of employment, lack of income and purchasing power and lack of demand. Then there is the sickness of medium and small industries which in addition to the reasons referred to earlier, face the national fact of high cost of capital equipment which on the face of it might seem to provide a premium to low cost labour intensive techniques. However, the pattern of demand as noted earlier makes for capital intensive techniques, and such fixed capital costs are a one shot expenditure unlike wages which are periodically raised. And overall there is the problem of both inadequate investments and the divergence between the planned and actual pattern of investment, which for the major segment of the economy, the private sector, has to follow the market

15. RBI Finances of Large Public Limited Companies : 1975-76 Supplement to March 1977 issues of Bulletin.

forces of high profitability. This involves not only a divergence from the planned pattern but also leads to output restrictions and resort to the free (black) market, when price controls are resorted to in order to make essential goods, e.g. cloth, sugar, cement, paper etc., available at low controlled prices.

Thus industrial revival and growth call for action on several fronts. The first is the continued growth of agricultural output both food and commercial crop production, which will be dealt with in the next section. Second the power situation needs immediate attention— namely, relating more closely estimated power needs and creation of capacity (the needs for this year and next year are estimated at 7 million KW, the power plan provides for 5·5 million KW and the achievement will be 3·5 million KW for this period), the import and installation of gas turbines to relieve heavy reliance on and supplement uncertain hydel generation, and more careful and adequate maintenance of power plants. Third the question of prices is one of relative rather than the wholesale price index movements. Here the pricing policies being followed may by reviewed and the means of making industry and manufactures more competitive internationally, now that saving on foreign exchange is not the primordial purpose that it was, needs to be tackled. There is need for a rather severe reduction in private personal consumption of the well-to-do section of society to ease the demand pressure. There is need to devise and operate a fiscal and credit policy which will ensure that adequate credit is made available for growth, that is for attaining higher production levels, diversification and modernisation. Fourth the import policy which is largely a continuation and liberalisation of the system of open general licenses needs to be tailored to meet the need of industrial raw materials, machinery and components available or in short supply within the country. Also small and medium units need to be provided with needed financial resources from the organised market and the means for the upgradation of their skills. Fifth is the need to increase the rate of investment in industry, particularly capital goods and heavy industry and the creation of new capacity and new units in railway equipment, power, machine tools and electrical and non-electrical engineering. The increased plan outlay of 27 per cent at Rs. 9,960 crores for the current year is a start: (provided it does not follow last year's 31·3 per cent increase in plan outlay alongside of the 5·5 per cent increase in the Government's development outlay): its direction and actual use will to a large extent decide the revival of demand which is the single most urgent pick up point that industry needs.

Agriculture:

Whether or not the year's target of 125 million tonnes of foodgrains will be attained, on the basis of *kharif* performance which produces 60 per cent of country's foodgrains of rice, bajra, jowar, and maize, the year's foodgrains output should exceed that of last year's 111 million tonnes to something of the order of 120 million tonnes. If the buffer foodgrain stock is effectively used, this year's production should provide the needed food infrastructure for industrial growth and some stability in food prices. Within the food items, it is pulses production which needs to be further expanded together with dairy production and vegetables output. Among commercial crops, jute supply is not very satisfactory both in terms of the total quantum and shortages of high grade fibre. The government's decision to increase the support price of raw jute (from Rs. 136 to Rs. 141 per quintal) should expand hectarage and improve supply for the next round. Similarly, oil seeds supply—not so much its production—continues to be inadequate, which is a demand reflection phenomenon. In addition to the programme designed by the Oilseeds Development Council to increase the acreage and volume of oil seeds production—groundnut, rape seed, mustard, sesamum, linseed, castor, sunflower, safflower and soya bean, there is need for a planned policy of import of the major oil seeds, in addition to soya and rape seed oils. Similarly, the output of cotton which for the year is targetted at 75 lakh bales, faces a shortage of 8 to 10 lakh bales, despite the effects of the Intensive Cotton Districts Development Programme, use of HYV, the increasing area under irrigated cotton and extension to non-traditional areas. With a system of more precise forecasting of the cotton crop and taking into account the increased demand for the year, it is necessary to provide for a planned import of 12–15 lakh bales of cotton for this year and for the next 5 to 6 years; that is, until the major cotton areas can be brought under irrigation and one of the expressions of the textile industry's sickness, which is the annual loss of 184 million Rs. of cotton through the use of inefficient and obsolete machinery (60 per cent of which is over 30 years old and a further 20 per cent installed in weak and marginal units) is corrected by the rehabilitation and modernisation programme which has been talked about for so long.

At a general level, the major problem of the agricultural sector—the food and cash crops sub-sectors—is its continued heavy reliance on the monsoon and the need to strengthen its investment oriented performance and raise its productivity, as noted earlier. Short-term measures to this end should start with agrarian and tenurial reforms which are on the statute book but not implemented, a new programme of consolidation of holdings, which is meeting with less resistance, increased investment in major, medium, and minor irrigation in the *kharif* belt to increase the present inadequate 20 per cent of irrigated lands overall, a more intensified programme of rural electrification (a quick survey in one State, Tamil Nadu, reveals that there are as many wells - 7.65 lakh wells - awaiting energisation over the past 5 years, as the wells which have been energised and that State has the largest number of energised pumpsets in the country), and more adequate and more timely supply of inputs—HYV seeds, fertilisers, pesticides and credit to the small and marginal farmer. For improved performance with regard to the cash crops on which so much of manufacturing growth depends, there is need for further research and application of the dry farming technology in terms of both inputs and soil and moisture conservation techniques. The implications of this general outline for increasing agricultural productivity, incomes and employment which, expressed as a ratio of monsoon dependence to investment products now stands at 75:25 to something nearer 60:40 calls for fertiliisers production and pricing that can result in an ICOR of 1:1 for irrigated and 1:1.5 in unirrigated areas and a massive development of the animal husbandry programme linked to small and marginal farms.[16]

Foreign Trade :

For only the second time since the country's independence, the foreign trade account for the past year, 1976-77, reports a favourable balance of Rs. 73 crores, and this trend is continuing for the early months of the current year wherein the government reports a favourable balance of Rs. 117.82 crores for the 2 months, April and May. The export target for the current year has been set at Rs. 5,750 crores, with the possibility of increasing it to Rs. 6,000 crores. A further gain is that this is the one economic sector where the outline of a policy and the appropriate policy instruments are being fashioned. The other positive elements include an average 8 per cent rate growth of exports over the past 3 decades, and a steady expansion in export earnings from Rs. 1,199 crores in 1967–68 to Rs. 4,980 crores in 1976–77. But at this mid-year point, it is necessary also to examine some of the weaknesses in our foreign trade sector, with a view to suggesting corrective action.

First it is questionable whether the favourable trade balance of last year and its continuance this year is a factor promoting non-inflationary development. Some part of our exports is a result of the shrinking domestic market for manufactures and agricultural products. Further, the favourable trade balance is as much due to the 7 per cent decline in imports, at a time when massive imports were called for, of some consumer goods like edible oils and cotton, of replacement machinery for our sick units, balancing equipment for capacity expansion and diversification and power equipment and spares for the power sector, which, as noted earlier, has acted as a major bottleneck to agricultural and manufacturing growth. One moral is to plan an import programme for the year both of the consumer goods in short supply and machinery and capital goods and seriously build the buffers as set forth in last year's review[17] so that the growing foreign exchanges reserves will cease to be an inflationary force and will be run down and deployed in the interest of agricultural and industrial growth.

Second it is well to bear in mind that any talk or theory about export led growth for this country comes up against the hard facts that the foreign trade sector represents around 6 to 7 per cent of the total annual economic transactions of the country, and the country's share of world trade which stood at over 8 per cent thirty years ago had shrunk to 1 per cent in the early sixties and is less than 0.5 per cent today. This means the foreign trade sector must be planned and

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16. Estimates of area and production of principal crops in India, 1975–76, Ministry of Agriculture and Irrigation, 1977.
    Approach paper for the Fifth Five Year Plan, Ministry of Agriculture and Irrigation (Fertilisers Division) 1972.
    Animal Husbandry: State Planning Commission, Madras 1973.
17. Malcolm S. Adiseshiah: Some Thoughts on a Mid-Year Review of the Economy p. 12—the Associated Chambers of Commerce and Industry of India 1976.

developed as a supplementary rather than as a lead sector.

Third, the major inbuilt weakness of the export and foreign trade sector is in in its composition and somewhat narrow geographical spread. Traditional exports—jute, tea, cotton, textiles, leather, iron-ore, and oil cakes—which formed 63 per cent of total exports at the start thirty years ago still predominate at 38 per cent. While iron-ore exports alone account for 5.4 per cent of the total, non-electrical machinery was a mere 2.7 per cent. As for the geographical coverage of our export clientele, there is the same kind of heavy reliance on four countries—US, Japan, USSR, and UK, which together take 35 per cent of our export goods. There is need for diversification of our exports both in regard to non-traditionals and non-essentials on which this year's export policy may make a start and a further geographical spread of the market, of which the start made in Iran (with a share of 6.9 per cent of our exports) and Japan (with 5 per cent) may be hopeful future pointers.

Another area to be watched is the need to minimise cargo losses which the steady increase in exports and their diversification call for, demanding improved packaging systems and adequate safety measures.

Finally there is need to compute the real cost to the economy of our export promotion programme, which includes the obvious announced subsidies, as well as the import entitlements cast in money terms, the concessional interest rates for export and packing credit, the excise and railway freight rates drawbacks, the shadow foreign exchange rates (which are difficult to quantify precisely as they range from almost infinity for those of us who travel or trade abroad or use imported goods to almost zero for one living in the poverty sector), the assessment of the inefficient high cost structure of certain industrial units that are perpetuated in our closed economy and the opportunity cost of the sum total of these resources which could have been invested in non-inflationary development for the attainment of some of the landmarks with which this paper started. Such a study of the cost of our expanding export programme is needed in order to guide this part of our economic policy, and to suggest how a beginning can be made in opening up our economy to reduce its unviable investments, its high cost structures and unhealthy profit margins, for which there is little justification except as functions of a closed economy.

Savings and Investment:

In these notes all aspects of deceleration and slack demand for industrial products have been in the main traced to low, almost nil, rate of increase in industrial investment, and the related sluggish domestic savings ratio. The RBI and CSO[18] estimates of private final consumption are 77 per cent of GNP which should be set off against the norm of 60 per cent of GNP for private final consumption built into the United Nations Leontief model referred to earlier. So a first

18. National Income, savings, Capital Formation 1975-76—RBI Bulletin March 1977—249-256, 1975-76.

Estimates of National Product, Saving and Capital Formation: Central Statistical Organisation 1977.

thought is that this reinforces the Gandhian austerity objective as far as the 40 per cent non-poor in our society are concerned: Second as noted in last year's review the savings ratio has been, with some intermittent variations, increasing as a percentage of GNP from 9.3 per cent in 1960–61 to 13.1 per cent in 1974–75 and 14.7 per cent in 1975–76 which is about the rate for the current year also, and is a long way from the 23–25 per cent which the UN Leontief model beckons us to in India. If this signal is operationalised, then this second thought of moving the savings ratio towards the twenties during the VI Plan can also be realised. Third in domestic savings there is a heavy 75 per cent reliance on household savings, with about three quarters not available for industrial or agricultural investment as they are in physical assets. Further, there has been a rather sharp reduction in the savings share of the private corporate sector, from 7.2 and 9.9 per cent in 1973–74 and 1974–75 to 5.2 per cent in 1975–76. This low saving of the private sector is a function of its low capacity use, poor management and inappropriate pricing policies. The savings behaviour of the public sector is equally disappointing, not only in the decline in its savings share from 23.4 per cent to 21.7 per cent, but also in the increased tax revenues made available to it being largely consumed by non-productive government expenditures, This means that the V Plan marginal savings rate of 26 per cent as against the realised less than 20 per cent must be achieved, if the 5–6 per cent growth rate is to be realised, which in turn means that public sector savings must more than double from 3.2 per cent to 7.2 per cent of GDP and administrative savings must rise from 2 to 5 per cent of GDP. The sobering third thought here is that this means a rather sharper rise in taxation than provided for in this year's Union and state budgets, and a cutback in recurrent public expenses (which now that elections have been left behind and the honeymoon period ended, might be feasible). Fourth with regard to investment, the momentum of the first 3 plans when the growth rate of investment was 8.3 per cent has since been lost with the growth rate falling to around 3 per cent. The recent World Bank Review referred to earlier, points out that gross fixed investment rate as percentage of GDP has been stagnant since the end of the Third Plan. Gross public sector investment declined in the sixties and by 1974–75 rose by less than 1.5 per cent per annum over the previous 10 years. It also refers to gross fixed capital formation in 1974–75 being lower than in 1964–65. The thought here is clear—that the share of public (and private) investment in total capital formation which has decreased since the end of the Third Plan must now be pushed forward to a target of 35 per cent of GDP. In this regard the revival of the equity market for which I made a case at the last review may be the one positive aspect of the reduction in interest rates effected in May, which should be followed by a reduction in borrowing rates. Finally, there is the use of foreign savings in our investment. Foreign savings are a small part of the investment programme, alongside of frequent variations which seem to be its distingushing feature. (Just last year it increased from 0.7 per cent to 1.6 per cent). There is also the distorting effect of the fast growing foreign exchange reserves, which makes possible financing of 21 per cent of our investment for 1978–79 (against the V Plan assumption of 19.9 per cent) with such foreign funds. The final thought which this suggests is that while short term investment can be increased by the use of foreign savings and reserves, long term investment, growth and removal of destitution depend inexorably on the rate of increase of domestic savings.

Employment :

At this mid-year point, the unemployment situation has worsened. Registered job seekers at the Employment Exchanges have increased at the end of 1976 to 10 million, with over 50 per cent of them with matriculation certificates and above. The last figures of the unemployed were those of the Bhagwati Committee of 20 millions to which should be added the underemployed who would be a third of the labour force. At this point one general reflection and one specific suggestion may be made. Employment generation through the new emphasis on agriculture and irrigation, small and cottage industries development and the use of appropriate technologies is rightly conceived in relation to our factor and resource endowment. Such a policy must also be related to the economic and social facets of our allocation policies, production structure, pattern of income distribution and finally to coherent linkage between the primary, small and cottage, medium and major industries of the economy, if the employment policy, programmes and projects are to avoid the adhocism of the past. On the specific suggestion, last year's review urged the development of ancillaries and subsidiaries along lines of BHEL in contradistinction to our monolithic integrated steel plants. This suggestion is reiterated and in addition one of the experiments in the country the Employment Guarantee Scheme of Maharashtra which is extended to the whole country is estimated to cost Rs. 833 crores per annum,[19] might be studied and assessed as part of the shift in planning priorities—to agriculture, irrigation and rural small and cottage industry. The Maharashtra scheme has the makings of such integration into the State rural development programme—except that it was conceived separately and later attempts at integration were made. Here the elements of the scheme as they relate to the various rural development programmes formed into an integrated package and the involvement of the people concerned in the decision making networks can be the starting point of the new programmes that are being planned. That would also meet the major problem that the programme faces—that of placing purchasing power in the hands of persons without a corresponding creation of the goods they need. It is here that a wise, effective and speedy use of our buffer stocks—particularly of foodgrains—can become an important instrument for sparking employment at this mid-year point.

Sixth plan :

I began this note after my prolegomena on the Twilight zone by referring to the rest being an exercise of whistling in the dark to keep up one's courage. And this particularly applies to any reflections or guidelines that may refer to the Sixth Plan.

19. N. Reynolds and P. Sundar: Maharashtra's Employment Guarantee Scheme. A Programme to emulate—Economic and Political Weekly, Vol. XII No. 29 pp 1149–58.

I would hope that we would first have a statement of policies before the Plan sets forth and works out the instruments. And I end on the same note I ended the mid-year review with last year. Let this year's and next year's plans develop and be executed as Annual Plans–that is what the new Union Government has decided on anyway. Whatever the strategy and the number and nature of the policies that are formulated these must ensure at long last a real rise in the rate of investment in heavy industry, in agriculture, irrigation and power. For this there must be considerable belt tightening all round. Then all else will follow.

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