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EDITORIAL—SOME HIGHLIGHTS

I General Economic Scene

State :

State Domestic Product: A quick estimate of the State Domestic Product at constant prices for 1977-78 shows an increase of 4.7 per cent, with a 2.7 per cent, increase of per capita real income. Food production increased by 14.7 per cent and industry by 4.9 per cent. This is a positive picture compared to the analysis of SDPs of 15 states set forth on the April 1978 Reserve Bank of India Bulletin. The quick estimate registered an increase in real per capita income over that of population. The Regional Director of National Savings also reports that the state made the highest pay roll savings, being one sixth of the whole country. Out of an all India total of 63 lakhs, in the state 10.3 lakh employee joined the scheme, contributing Rs. 10 crores in 1977-78, with a cumulative total of Rs. 125 crores. Against these positive trends, the Reserve Bank of India analysis presents for the state a rather poor inter state performance. Dividing the time period into 3 sub-periods, 1960-61 to 1964-65, 1965-66 to 1969-70 and 1970-71 to 1974-75, it is seen

that NDP at current prices increased at 11 per cent and at 1960-61 prices at 3 per cent, with the rate for the states ranging between 9 to 12 per cent at current prices and at widely varying rate at 1960-61 prices, Tamil Nadu's rate at current prices was the lowest at 6.07 per cent in the first sub-period, the fifth lowest at 8.10 per cent in the second sub-period and the second lowest at 11.25 per cent in the third sub-period, with the lowest at constant prices for the whole period at 1.53 per cent. On the other hand, Tamil Nadu's share in NDP was 6.9 per cent with 8.2 per cent of the working force and 4.5 per cent of the area, its growth rate in per capita SDP accelerated during the 3 sub-periods at current prices with wide varieties at constant prices, and its annual growth in per capita SDP at constant prices being the lowest at 0.05 per cent. In regard to intersectoral distribution, only in Tamil Nadu the movements of the shares of the primary sector at current and constant prices are close (in 1960-61 52 per cent at primary and 17.6 per cent at secondary and in 1974-75 34.5 per cent at primary at current prices and 52.0 per cent and 31.8 per cent for the



2 years at constant prices). Incidentally the last year in the time sequence 1974-75 was a drought year in the state, with a sizeable fall in agricultural and food-grains production which introduces a certain degree of distortion. Also in many years the share of the primary sector at constant prices is higher than the share at current prices, which is unique to this state. Tamil Nadu is classed among the second group of 3 groups of states with SDP per capita at Rs. 573 and percentage share in production being 53 in the primary, 16.1 in the secondary and 30.5 in the tertiary sector in 1970-71—which is above the all India percentage of 41 for the primary sector and below that of the secondary sector at 18.25. In terms of per capita SDP at current prices, Tamil Nadu ranks in the sixth place at Rs. 585 after West Bengal (Rs. 747), Gujarat (Rs. 782), Maharashtra (Rs. 797), Haryana (Rs. 861) and Punjab (Rs. 984).

State Loan: Tamil Nadu joined 19 other state governments and announced the issue of a 10 year loan of Rs. 24 crores, the highest being that of Uttar Pradesh (Rs. 36.75 crores), followed by Maharashtra (Rs. 25.50 crores), with the right to retain subscriptions upto 10 per cent in excess of notified amounts. All 20 loans are 10 year issues with annual interest of 6.25 per cent and repayable at par on September 12, 1988. Subscriptions for these loans will open on September 12 and will close on September 14 or earlier.

Power: The power situation in the state in August was normal with the good south west monsoon filling the reservoirs. The Tamil Nadu Electricity Board announced the floating of a loan of Rs. 10 crores, opening on August 21

and closing on August 26. It has proposed to the Union government the setting up of a captive thermal station at Mettur Dam and the construction of 4 small dams across the Cauvery between Bhavani and Mettur to generate 120 MW. The Union government has cleared (a) the Kadamparai Pumped storage scheme, (b) the Shervalaru Hydro-electric scheme, (c) the Pandiyar-Punnampuzha Hydro—electric scheme, and (d) the Nallithurai Hydro—electric scheme and on this basis preliminary works have been started on these schemes. Within the next 6 months, the Tuticorin thermal project will add 210 MW to the state's power grid and by mid 1979 a further 210 MW will be added. The field work and construction are proceeding on schedule. The Rs. 25 crores Suruliar electricity project was inaugurated in late August. The project which was begun in 1972 was completed a year ahead of schedule and will enable the farmers to make full use of their pumpsets which will now be fully energised.

For the country, power shortages are reported in August in Delhi, Bihar, Rajasthan and Calcutta. Calcutta and its industrial suburb faced a severe power shortage of 104 MW in the morning and 113 MW in the evening. It received 50 MW from Orissa through the DVC grid. In this connection, doubts have been expressed about achieving the 1978-79 target of 3,600 MW of power generation due to slippages such as in the 210 MW power station at Vijayawada, the 210 MW unit at Durgapur, the fourth 120 MW unit at Santaldih in West Bengal and the 65 MW second unit at Subarnarekha in Bihar—which means an attainment of only 2,000 MW. The country's estimated power needs are 1,12,000 MU while the anticipated

generation is 99,000 MU, leaving a gap of 13,000 units. In fact power experts doubt whether the Sixth Plan target of generating an additional capacity of 21,000 MW is feasible, given the fact that the country's present installed capacity is 24,500 MW, projects under execution providing 5,600 MW and a further 7,000 MW sanctioned as projects. This means that 10,000 MW of additional capacity will have to be identified, sanctioned and executed—which is not possible. A better strategy would be to ensure completion of sanctioned and ongoing projects so that there is no spill-over into the Seventh Plan of anything like 1,100 MW. This means that the aim of doubling power generation in five years cannot be attained by the mere allocation of the proposed Rs. 18,000 crores as much as by preventing slip-pages, completing projects on time and improve the performing capacity of state Electricity Boards. Upto March 1978, the Union government reports that it has invested Rs. 733 crores in thermal and hydro power generation. It is executing large thermal and hydel projects, the former including MTDC execution of Sangrauli (600 MW), Kobra (1,100 MW) and Ramagudam (1,100 MW) as well as the management of the Badarpur project. Also 3 central hydel projects at Loktan, Baimeasuil and Salal are under execution by the National Hydro—electric Power Corporation. Also aid to states for rural electrification upto March 1978 amounted to Rs. 517.06 crores. Obra with the country's first 200 MW power generating set, was commissioned in early August. Its ultimate capacity will be 1,649 MW, with BHEL providing 5 units of 200 MW each and 3 units of 100 MW and 33 MW. The good monsoon has filled the Sheravathy reservoir in Karnataka, so that the state

has stopped importing power from Maharashtra and has lifted its power cuts on industry. Also Kerala reports that the catchment areas of its various reservoirs have received good rains so that the state can meet both its power needs and maintain its commitments to Tamil Nadu and Karnataka. As against a contracted supply of 6 million units to these two states, Tamil Nadu was drawing only 2 million units and Karnataka one million unit because their hydel reservoirs were full.

Water: The Chief Ministers of Tamil Nadu, Karnataka, Pondicherry and Kerala met under the Chairmanship of the Union minister of Agriculture and Irrigation in early August at which the utilisation of the Cauvery waters by Tamil Nadu which was fixed in August 1976 at 489 tmc feet was reopened. Tamil Nadu's utilisation is higher. This is to be worked out by a technical working group and the Chief Ministers will meet again on September 3 to reach agreement on the division of the waters among the 3, now 4 states on which basis the cauvery Valley Authority would function. The water level in the Mettur reservoir crossed in late August the 36 metre mark (120 feet) which is the maximum for the reservoir. PWD had to issue the first warning about the full level at Mettur dam, with its heavy inflow of 75,000 cusecs per day. The shutters in the dam could be raised and the level further increased by 1.2 metres. The Madras Corporation is increasing the city water supply by 20 per cent from its present 55 million gallons a day, with increased underground water sources in Tiruvanmiyur, improved supply in Indira Nagar, Shastri Nagar and Besant Nagar and sub soil water of 8 million gallons

is to be conveyed to Tamarapakkam. Also a long range scheme to tap ground water resources in the Palar basin and bring water to Alandur and Pallavaram by relaying pipes over a distance of 62 kms is under execution. There is an urgent problem in Pallavaram where the ground water has been polluted by the effluents of the local tanneries and chemical industries. Hence a temporary augmentation scheme is to operate to pump 2 lakh gallons a day from the ground water source 6 km away. The drinking water needs of the Madras Metropolitan Area will increase from 60 million gallons a day to 240 million gallons and this will have to be met by waters from the Krishna and/or Cauvery (Veeranam). TWAD also reports a 6 year programme to provide drinking water to 456 town panchayats, to improve existing schemes in others and undertake sewerage schemes in 9 towns—at a total cost of Rs. 147 crores. In addition, drinking water is being provided to 6,000 villages which have no sources at a cost of Rs. 75 crores. Schemes for 3,000 of these villages have been completed.

Urban Development: A crash programme is under way to improve the amenities of Madras city involving improved city lights, beautifying the parks and making the city fountains to function and the treating of sewage water for use for agricultural and industrial purposes at the Nesapakkam works. In addition, the Koyambedu and Perungudi plants were ready for operation and work at the Kodungaiyur Sewage Farm constructed at a cost of Rs. 2.37 crores to treat 17.5 million gallons of water is about to start. The city authorities have also turned their attention to the erosion threat faced by shore hutments. About 60 huts were washed away at Pallav Nagar and Anna

Nagar due to sea erosion and those living in another 100 huts are fighting the waves which are creeping in. A stretch of 400 metres to 600 metres of embankment has been eroded and the fishermen have to be rehoused in safer and more stable ground. The Slum Clearance Board has approved the Vyasarpadi slum improvement scheme (Rs. 1.01 crores) involving the construction of tenements for 5,709 families, and constructing 520 fountains, roads and storm water drains, lights, 21 free schools 13 sheds for cottage industries, 3 primary schools and 1 high school. The Board has formulated schemes for Rs. 4.54 crores for the construction of 5,680 tenements at 9 places in the city with the financial assistance of HUDCO.

Transport: A broad gauge transit system, 24.9 KM in length, from Kasturba Nagar to Tiruvottiyur via Triplicane and the Beach is to be constructed by the Railways at a cost of Rs. 154.71 crores. The first stage of the project will be 5.5 KM long from Madras Beach to Bharathi Salai at a cost of Rs. 23.84 crores. The Railways are also undertaking a programme to increase and improve passenger amenities in all railway stations in the state and for this a provision of Rs. 56 lakhs have been made. The Madras Port Trust management announced in early August, the loading of the first shipment of 32,000 tonnes of high grade iron ore to China by MMTC. The ore loaded was the Donimalai ore which is of 65-67 per cent iron content. One issue on which there continues to be disagreement is that relating to the state government's request for the construction of a 180 metre long dry dock at the Madras port at a cost of Rs. 6.3 crores against the Union ministry of shipping's desire to build a 120 metre

non-commercial dry dock at a cost of Rs. 4 crores. All evidence—that from shipping companies, the Indian shipping industry, the capacity use of the existing 22 dry docks in the country at various ports—seems to suggest that the Madras port should be fitted with a 120 feet non-commercial dry dock and the state government should accept this and not allow more time to be wasted on surveys and opinion research. In mid August the Coast Guard of the Eastern Region was inaugurated at the Madras port. The Coast Guard will be responsible for policing and protecting offshore installations, preventing poaching in the country's economic zone, protecting fishermen, tackling fire and pollution at sea and enforcing the national laws in the maritime zones, including helping Customs with anti-smuggling. The Coast Guard will operate from Madras, Vizhakapatnam, Paradip and Haldia.

Pay Commission and Prohibition :

The Third Pay Commission completed its report as noted in the last issue (p445), and the government is processing the report and recommendations which together with the reasoning and background runs into 4,000 pages. The government expects that the Commission recommendations will result in a sizeable increase in the take home pay of its employees. The state government has once more placed the case for full compensation for revenue loss on account of prohibition before the Union government and has asked that the formula for the devolution of funds should have a specific component to cover this loss. The total tax base of the state is low and in spite of the massive mobilisation of resources, the per capita Plan outlay for Tamil Nadu is among the lowest—the 19th among the 22 states.

There is a strong case for the state being compensated for this important revenue loss.

National :

VI Plan: The major event in August concerning the VI Plan was the meeting as a committee of the National Development Council to review the question of Centre-State financial relations and at which various proposals were made for a higher proportion of the total transfer of resources from the Centre to the States. West Bengal proposed that all available Central resources including tax receipts, market borrowings, external assistance and deficit financing should be pooled and 75 per cent of the pool transferred to the states, together with a standing committee of NDC to decide on the principles governing the allocation of the transferred amounts as between the states and to review the expenditure by the Union government to ensure their optimum use. Tamil Nadu proposed the transfer of 50 per cent of the Union resources to the states along with Gujarat and urged compensation for the loss of revenues from prohibition. Other states proposed sharing of tax revenues, market borrowings, and institutional finance between the Union and states on the basis of principles to be agreed by NDC. The proportion of loans to grants to the states now existing at 70:30, it was suggested, should be reversed or at least established at 50:50. Kerala proposed that central assistance should be distributed on the basis of criteria relating to population, poverty, unemployment and inter state disparities. Under the current Gadgil formula, a lump sum provision is made for Jammu and Kashmir, Himachal Pradesh, Assam and other North Eastern States and the

balance is distributed to the remaining states, 60 per cent of the basis of population, 10 per cent on the basis of per capita income to those states whose per capita income is below the national average, 10 per cent on the basis of the tax effort, 10 per cent for continuing irrigation and power projects and 10 per cent for special problems. Most members suggested that the existing centrally sponsored and centre sector schemes in the areas of states responsibilities should be reviewed and reduced. All these proposals are being reviewed by a working group of NDC Chaired by the Deputy Chairman of the Planning Commission, the Union Finance Minister and the Chief Ministers of 11 states which will submit its first report to NDC in October and a second report after the Seventh Commission has reported in late October. The Planning Commission in August asked the states to decelerate the growth rate of their non-plan expenditure and not assume that it should increase by a fixed percentage every year, to make full provision in the Plans for proper maintenance of physical assets (irrigation, power, roads and buildings) and social services and to ensure that the additional resources mobilisation target of Rs. 4,000 crores is attained and surpassed. It has also set up a six member committee to formulate a comprehensive transport policy which will recommend an optional inter modal mix of different systems, suggest approximate technical choices within each system, keeping in view the need to generate maximum employment and meet the needs of the community, agriculture, industry and trade at the minimum social cost. The Draft Five Year Plan's projected sectoral growth rates and estimated physical outputs show a fall in the share of the manufacturing sector vis a vis agriculture,

transport and communication in the total gross value added estimate for 1982-83, with significant reduction in food products (from 1.86 per cent in 1977-78 to 1.5 per cent in 1982-83), textiles (from 3.2 to 3.02), leather and leather products (from 0.52 to 0.48), basic metals (from 1.29 to 1.10), metal products (from 0.88 to 0.72), electrical engineering (from 0.63 to 0.60), and transport equipment (from 0.90 to 0.86). Those whose shares have been increased are chemicals (from 2.32 to 2.50), wood and paper products (from 1.10 to 1.19), coal and petroleum products (from 0.34 to 0.38) etc., while the annual growth rates are more than doubled for petroleum, cloth in the decentralised sector, jute manufactures, newsprint, synthetic rubber, rayon filament, commercial vehicles and railway traffic, and lowered for rayon and nylon tyre cords, automobile tyres, nitrogenous fertilisers, nylon and polyester filament, pig iron, steel forging, lead, agricultural tractor, machine tools, ball bearings, textile machinery and dry batteries and generally in products produced by the larger houses. Those are in general a consequence of the Plan strategy and priorities. For the current year, the Commission and the Union government have sanctioned Rs. 265.01 crores for an integrated rural development programme, of which Rs. 65 crores are for SFDA projects and Rs. 50 crores for integrated development of 1,093 blocks and the DPAP programme in operation in 74 districts in 13 states for which Rs. 76.48 crores have been approved.

Prices and Anti-inflation: The wholesale index for July recorded a marginal decline of 0.1 per cent for the month, due to the fall in the price of fibres (-2.4), edible oils (-2.1), oil seeds (-1.5), jute textiles (-1.5), cereals (-0.9)

and pulses (-0.8), with rises in tyres and tubes (6.0), sugar (2.7) and electrical machinery (1.8). The inflationary trends in the economy are the increase in money supply which for the year ending July 28, 1978 stood at 18.2 per cent, including increase in currency at 12.8 per cent, the slower rate of increase of time to demand deposits (18.9 per cent versus 22.9 per cent) and the increased bank credit to government for the year of 16.7 per cent. If as a result of the increased money supply, prices have not risen, it is because of the stagnation in consumption expenditure, particularly the poor rural majority. Another element in this context is the government decision to grant a statutory minimum bonus of 8.33 per cent for the accounting year 1977 irrespective of the profit or loss of the company concerned. In the supplementary demands approved in August by Parliament of Rs. 551.16 crores, Rs. 430 crores were for providing special loans to state governments to clear their deficits for 1977-78. It is to be hoped that schemes announced at that time to regulate state over drafts—ways and means of the state to be settled if its over draft lasts for 45 days, RBI to issue a notice of caution when a state has availed itself of 75 per cent of its over draft facility, suspension of payments of over draft not cleared within 7 days—will work. The effects on prices of the decontrolling of sugar and the new system for production of controlled cloth are yet to be identified. On the anti-inflation side, the government decision and action on the revised public distribution is still awaited. The scheme is before the Union Cabinet and envisages FCI procuring food grains, sugar, pulses, and other farm products for the public distribution system, the supply of soft coke by CLI, kerosene by

Indian Oil, controlled cloth by NTC and edible oils by an Oil and Oilseeds Corporation to be created. Also there is the proposal to use the net work to make available certain commonly used industrial manufactures at exfactory prices. What is needed now is action on the public distribution system. Another element in this situation is the expansion of branch banking in unbanked rural areas which amounted 1,911 branches between July 1977 to April 1978 (being 70 per cent of the total 2,753 branches opened). The average population per bank office is 23,000 in April 1978 compared to 25,000 in June 1971 and 65,000 in June 1969 and the increase in deposits for the year ending June 1968 was Rs. 4,119 crores. Action on the Dantwala Committee recommendation to increase the number of Regional Rural Banks will be a further positive step in both providing agricultural credit to poor farmers and acting as a break on use of bank resources for inventory building.

Gold Sales: At the eighth gold auction on August 8, RBI rejected all bids (1,823) because none of them came up to the Bank's reserve prices. It raised its minimum reserve price to Rs. 711 for 10 grammes (compared to the minimum reserve price of Rs. 620 for its first auction in May) and on this basis at its ninth auction on August 17, it accepted 605 bids out of a total 1,935 which came up to its prices and sold 10,139.9 kg of gold valued at Rs. 6,593.95 lakhs. The market price on August 21 was Rs. 762 for 10 grammes and it seems doubtful if it will be able to bring down the price of gold and prevent smuggling unless it sells one tonne of gold per auction. The Union government decided on August 11 to provide gold to exporters of gem and jewellery under a scheme to

be effective from August 21 for export of gold ornaments of 14 carat with a minimum value added of 33.33 per cent over the value of the pure gold content. The State Bank of India will canalise the import of gold under this export replenishment scheme. Also gold sales are being liberalised with the decision of the government to sell gold to private individuals through the SBI and its branches. This will supplement gold auctions by RBI to check smuggling and facilitate the larger sale of gold to persons other than the handful of dealers who participate in the auctions. The government is still searching for ways to bring down the price of gold to around the international price of Rs. 511-Rs. 517 per 10 grammes.

Economy: National Accounts Statistics, 1970-71 to 1975-76, a CSO publication, together with the quick estimates for 1976-77 show that the national income for 1976-77 at current prices increased by 6.1 per cent over 1975-76 and at constant prices by 1.4 per cent, which means that with the 2 per cent population increase, the per capita income fell by 0.6 per cent during the year due to the decline in agricultural production by 6.1 per cent, while manufacturers increased by 8.3 per cent, construction by 9.6 per cent and power by 11.1 per cent. Over the 3 years ending in 1976-77 the share of agriculture in the net domestic product at current prices declined from 45.6 per cent to 39.1 per cent (in real terms by 2.2 per cent), with the share of manufactures at 15.16 per cent. At current prices, private final consumption declined from 73.6 per cent of GNP in 1975-76 to 71.6 per cent in 1976-77 (in real terms by 0.5 per cent). The rate of domestic savings for 1976-77 was the highest

reached so far as at 15.9 per cent of GDP compared to the previous year's 14.6 per cent. The net saving of the household sector increased from Rs. 7,122 crores in 1975-76 to Rs. 9,028 crores (by 26.8 per cent), while that of the private corporate sector fell by 50 per cent from Rs. 374 crores to Rs. 187 crores, and that of the public sector savings declined by 8.1 per cent from Rs. 2,506 crores to Rs. 2,302 crores. Hence the aggregate domestic saving increased by 15.2 per cent from Rs. 10,602 crores to Rs. 11,517 crores, the share of the household sector increasing from 71.2 per cent to 78.4 per cent. The rate of capital formation was not only lower than the saving rate, it declined from 14.4 per cent to 13.9 per cent, the net domestic capital formation increasing by 2.1 per cent (from Rs. 9,887 crores to Rs. 10,090 crores), being 13.6 per cent in construction, 9.6 per cent in machines and equipment, and a decline in inventories by 12.1 per cent. The public sector showed an increase of 3.5 per cent in gross domestic formation, while that of the private sector declined by 16.5 per cent in 1975-76 and by 31.8 per cent in 1976-77. Net investments in physical assets of households increased by 45.7 per cent from Rs. 3,252 crores to Rs. 4,738 crores. Agriculture showed the largest net domestic capital formation, rising from 9.6 per cent in 1975-76 to 13.2 per cent, the share of organised manufacture declining from 26.3 per cent to 25.9 per cent. With regard to the current year, 1978-79, the Planning Commission is of the view that the government's estimate of a 7 per cent growth is unreal, with 5 to 5.5 per cent being the more likely rate because of the estimated good performance in agriculture.

Industry: The ministry of industry reports that the rate of industrial growth for the first four months—April to July 1978—is an estimated 7 per cent, with power generation increasing by 14.5 per cent, cotton textiles by 5.8 per cent, sugar spurring from 47.7 lakh tonnes to 64 lakh tonnes, and increases in coal and steel production as well as industrial machinery transport equipment and wages. A 5 member Cabinet Committee is monitoring production in key industries including cement, steel and coal and the implementation of Plan programmes. The government also reports that an analysis of cost audit reports of 324 companies show under utilisation of capacity upto 50 per cent in 82 companies and high profitability in terms of gross return on capital in excess of 40 per cent in 30 companies in 1976-77. These two features, capacity under utilisation and high profits, characterise, cement, cycles, rubber tubes and tyres, caustic soda, airconditioner, refrigerator, electric lamps and fans, motor vehicles, tractors, aluminium, infant milk foods, vanaspathi, bulk drugs and sugar. The stock market in August maintained high values for industrial securities on the assumption that the economy is doing well and dividends increasing. A government panel on mining machinery warns that in the context of liberalised imports of capital goods, indigenous mining machinery units face an uncertain future unless an effective system is evolved for optimum utilisation of their capacity. Citing the case of Coal India importing its equipment, it points to this importing of complete sets of equipment under the guise of testing technology for use in the country, as one reason for worsening the under utilisation of indigenous industry's capacity. While import of

some sophisticated equipment is unavoidable, there should be a transfer of technology from the foreign supplier to domestic units.

Public Sector Performance: The total production of 10 public sector undertakings under the Department of Industrial Development registered a 10.5 per cent increase during April-June 1978, increasing from Rs. 27.37 crores in April-June 1977 to Rs. 30.24 crores. In June the output was Rs. 10.61 crores, being an increase of 13 per cent over May. Hindustan Cables produced Rs. 10.07 crores of goods, Hindustan Photo Films Rs. 9.07 crores, the Cement Corporation Rs. 2.95 crores and Instrumentation Limited Rs. 2.6 crores. The 16 undertakings under the Department of Heavy Industry increased their production value by 50 per cent between April and July from Rs. 182.74 crores in the four months of 1977-78 to Rs. 274.93 crores. BHEL increased the value of its production by 48 per cent, Hindustan Machine Tools 98 per cent, HEC 166 per cent, Bharat Pumps 207 per cent, with only Jessop and Britannia showing a small increase of 4 and 6 per cent respectively. DGTD also reports that the 6,000 units under its care having a share of 50 per cent in the industrial production index registered an overall growth of 8.6 per cent during April-June 1978 over the same period in 1977. The output of industrial machinery increased by 20 per cent, transport equipment by 15 per cent, metal products by 10 per cent, paper by 9 per cent, electrical apparatus by 8 per cent and chemical by 6 per cent. The production of machinery has contributed to the increased growth rate, boiler output increasing by 48 per cent, paper and pulp machinery by 43 per cent, machine tools

by 30 per cent, agricultural tractors by 63 per cent, typewriters by 42 per cent and refrigerators by 28 per cent. Printing machinery increased by 128 per cent, steel plant equipment by 177 per cent and wrist watches by 147 per cent.

Sachar Committee: The Sachar Committee on the working of the Companies and the Monopolies and Restrictive Trade Practices Acts, submitted its report at the end of August which recommended, inter alia, (1) a ceiling on inter corporate investments and loans, (2) a ban on the acceptance of public deposits by private companies, (3) representation of workers on company management, (4) more autonomy for government undertakings, (5) further concessions to small sector, (6) the reconstitution of the Company Law Board as a quasi judicial body, (7) maintaining the present ceiling of Rs. 20 crores for defining concentration of economic power for applications of the Act (rejecting the private industry demand to raise it to Rs. 50 crores), (8) lowering of the share of production, distribution and supply from 33½ to 25 per cent by any undertaking to be defined as a dominant undertaking and (9) bringing in shares and stocks, mining and processing including fish and animal products within the definition of goods in the Act. These recommendations strengthen the Company and MRTP Acts and make them more effective instrument for keeping the economy from domination by a few interests.

National Production Front:

Steel: In the first four months of the year, April to July, ingot steel production was 2.581 million tonnes, 18.4 per cent below the target and 5.9 per cent below

last year's first four months output. Saleable steel producing during this period was 2.071 million tonnes, representing a 17.8 per cent shortfall vis a vis the target. Production in the 6 integrated steel plants has been declining from 6.4 lakh tonnes in January to 5.6 lakh tonnes in July, due, according to the ministry, to power and coking coal shortages and unsettled industrial relations. It thus seems unlikely that the year's target of 7.678 million tonnes (compared to last year's actual of 6.894 million tonnes) will be attained. SAIL accounts for 1977-78 show that while Bhilai earned a surplus of Rs. 39.57 crores and Rourkela 20.64 crores, Durgapur lost Rs. 16.36 crores, Bokaro lost Rs. 7.20 crores and IISCO lost Rs. 31.29 crores. In this connection, the trade is short of steel supplies and the open market prices of steel which had fallen by Rs. 200 to Rs. 100 a tonne have started rising again. The trade has presented to the ministry a plan to allot to it at least 30 per cent of all steel production and to route all defective steel material (for example the large stock of such material from IISCO) through the trade. The government however has declined to place steel traders who sell in small quantities on an equal footing with actual users who make bulk purchases. To meet the production shortages, 6 lakh tonnes are being imported, 1.34 lakh tonnes costing Rs. 46 crores having been imported during the first quarter. Action has not yet been taken to pool together the higher prices of imported steel with the lower domestic ones because of the wide difference between the two (Rs. 1,000 to Rs. 2,000), the possibility that imports for the year may go up to one million tonnes, and the effects of any further rise in steel prices on the domestic price

situation and export commitments. The government has also drawn up a detailed 5 year plan to expand steel production, involving a 10 per cent annual growth involving building up of production in the existing integrated and mini steel plants through maximum capacity use, speedy completion of schemes under execution, further expansion of Bokaro from 4 million tonnes to 5.5 million tonnes, creation of a nucleus for the development of new steel plants at Salem and Vishakapatnam, reduction of costs through technological innovations, improved productivity and capacity use and increase in captive power generation for the plants. The total outlay for the 5 year period would be Rs. 2,546.53 crores, increasing production of saleable steel from 7.73 million in 1977-78 (which was the target but when the actual realisation was lower at 6.894 million tonnes) to 11.8 million tonnes in 1982-83 and 13.55 million tonnes in 1987-88 to meet the estimated demand of 10.9 million tonnes in 1982-83 and 15.4 million tonnes for 1987-88.

Crude: The government announced that precision gravity survey will commence in Calcutta and adjacent areas during this year to ascertain the prospects for oil in the area. ONGC announced in August that natural gas was struck in Broach while drilling well No. 1 and that it will start offshore drilling in north and south Tapti after the monsoons, and in the Andamans and Godavari basins in winter. In 1979, drilling will be resumed in the Bay of Bengal as noted earlier, and in Kutch and Cauvery. Norway has offered consultancy services, equipment and credit to Oil India for the Mahanadi offshore explorations. Also the British National Oil Corporation and US teams are being

contacted so that Oil India can obtain the latest technology and use them on the offshore drilling programme on a wider scale. In August serious dislocation to crude supplies were caused to Haldia refinery because the Haldia port oil jetty had to be closed due to technical defects and which will involve using small tankers for a long time. The difficult petroleum products situation is however relieved by the Hindustan Petroleum Refinery at Bombay starting up again at full capacity. On the BOC takeover, the agreement to pay it a compensation of Rs. 22 crores minus Rs. 5-6 crores being liabilities of the Assam Oil Company has run into difficulties because BOC wants compensation for the latter, at least at half the Rs. 5-6 crores to be deducted. The matter is being negotiated in light of AOC being the only unit to produce paraffin wax at its Digboi refinery and the gap between the domestic price of Rs. 2,000 per tonne and the international price of Rs. 9,000 per tonne.

Coal: The coal supply position continued to be difficult in August, the shortfall in the first 6 months of the year being 3 million tonnes, the paper industry reporting serious shortage of coal supplies along with steel plants, power units and cement factories. In addition, the coal Mines Officers Association decided in August to intensify its agitation to attain its 46 point demand and this further worsens the supply position. Against this background, the ministry continues to make optimistic reports referring to Coal India achieving an all time record of 2.74 lakh tonnes per day in July, so that total production for the month was 8.2 million tonnes, including 7.2 million tonnes from Coal India. Coal despatches to consumers

increased in July by 5 lakh tonnes to 7.1 million tonnes from Coal India with BCCL producing 16.80 lakh tonnes including 10.08 lakh tonnes of coking coal. But the shortfall in production compared to the year's target has yet to be made up and till that is done the opposition by the Bureau of Public Enterprises to the ministry of steel's move to import one million tonne of high grade metallurgical coal annually stands on weak grounds. The Planning Commission supports the ministry because the high ash content (more than 20 per cent) of coking coal is damaging the steel ovens and would be one way of conserving the 66 year supply of coking coal of 31,000 million tonnes. In view of the poor supply situation, the government has decided not to enter into any new commitment on coal exports except for the 1.34 million tonnes already contracted by MMTC to Burma, Bangladesh, Sri Lanka and some Western European Countries. The Baveja Committee on coal production has proposed changes in staffing, mines operations and marketing pattern of coal mines as a means of improving the economic position of coal mines. 50,000 workers are excess and their redeployment will save Rs. 3.50 per tonne of coal, absenteeism can be checked by the introduction of attendance bonus and the restoration of the minimum attendance rule and the non-budgetary support to the mines should be converted to grants, together with a directive that all government undertakings should make full payment to the mines after the coal is delivered. The Department is examining the recommendations and is aiming at reducing costs by Rs. 10 per tonne, though the mines do not see how this saving can be effected when the present price does not cover costs and stands in need of being raised. Meanwhile

Coal India reports that it has begun the installation of self advancing power support to Moonidih mines to improve its safety, involving an investment of Rs. 3.5 crores (which as noted earlier has been imported from the UK), as a result of which it expects productivity to improve by 2.5 to 4 times.

Copper and Rock Phosphates: Copper is and has been in short supply, the estimated demand being 84,000 tonnes for the year (compared to the DGTD-MMTC estimates in April of 65,000 tonnes). As a result speculative buying has pushed up prices. Hindustan Copper which was expected to produce 20,000 tonnes is now expected to produce only 16,000 tonnes, and with the mechanical difficulties at its Khetri complex and the prolonged closure of the Indian Copper Company is not able to increase its production. MMTC has been instructed to increase and speed up copper imports and maintain a closing stock of 20,000 tonnes at the end of March 1979. This means that copper imports for the year may have to be a large 60,000 tonnes. On the rock phosphates front, the Jhaman-Kotra mines in Udaipur have good supplies and a full fledged beneficiation plant, with a capacity of 150 to 200 tonnes per day to start with, is to be set up at the complex, which will be expanded to a full fledged plant with an annual capacity of 1.1 million tonnes, producing 5 lakh tonnes of concentrates a year, at a capital cost of Rs. 70 crores.

Shipping and Cement: Indian Shipping Corporation reports possible cash deficit of Rs. 350 crores in the next 3 years to meet their foreign exchange and Rupee loan liabilities for expansion of tonnage. The Shipping Development

Foundation aided the companies to acquire 2.3 million grt from foreign countries at a cost of Rs. 550 crores and one million grt from indigenous sources at a cost of Rs. 425 crores. Until world shipping business improves in 2 to 3 years, the government will have either to extend the time limit for repayments by the companies or nationalise them. The problem is economic, with some improvements needed in the management and ownership of the shipping companies. With regard to cement production, as against a total installed capacity of 21.67 million tonnes, the 1977-78 production was 19.2 million tonnes and the production for this year is estimated at 20 million tonnes. To meet the estimated demand of 22 million tonnes, it has been decided to import 1.5 million tonnes, to which 30,000 tonnes gifted by Japan and 7.5 lakh tonnes already imported should be added giving a total 2.28 million tonnes of imported cement. There is a little spare capacity in the industry which in April was working at 104 per cent of capacity but at 82 per cent in June. With the additions to installed capacity, the total capacity by March 1979 will be 24.34 million tonnes against the target of 28 million tonnes. The government plans also to increase cement production by an additional 20 million tonnes in the next 5 years and is planning to set up mini cement plants producing 1-30 tonnes a day in the rural areas of the country, if their technology is by then made definitive. This will increase rural employment opportunities.

Textiles and Cotton: As forecast in the last issue (p 459), the government announced the new textile policy in Parliament in August under which from October 1 mill made controlled cloth

will be limited to 400 million square metres and after earmarking the NTC share of production of controlled cloth, the balance will be let out on competitive bids at prices not exceeding that of NTC. The handloom sector is to meet the bulk of the demand for controlled cloth and in time the organised sector's production of it will be phased out as the handloom sector expands its production. With the removal of the obligation on the organised sector to produce controlled cloth, the financing of the project will no longer be on the public exchequer but by the whole textile industry. At first the financial burden sharing will be used to subsidise the sale of controlled cloth both by the mill and handloom sector and in time to the latter only. The poor will get the cloth at subsidised rates. Except for wool production, there is to be no increase in weaving capacity in the mill or power loom sector. NTC will give priority to expanding its yarn for the handloom sector and the reserving of certain items of cotton textile to the handloom sector will be implemented effectively. Now it remains to be seen as to how this policy which relieves the organised sector of its controlled cloth obligation is being executed. NTC is also working out a large scheme to be outlined later to employ unemployed persons in the distribution of cloth manufactured by it. The government is finalising this scheme in co-operation with the nationalised banks. The government has also set up a committee to work out the details of establishing a cotton buffer stock—the first of its kind—for the country. The committee is working out the modalities of the buffer stock, the quantities to be imported, the organisational aspects of handling the buffer, the prices and incentives to the growers etc. The proposed buffer stock will be created out of domestic

surpluses. This year's cotton production is just adequate and no imports are planned.

Sugar: Contrary to the sugar buffer proposal reported in the last issue (p 459), the government announced in Parliament in August that the 10 year partial control and dual pricing of sugar will end on August 16, because of the record sugar production, the high level of sugar stocks and the need to further increase sugar consumption. The statutory minimum prices payable to sugarcane growers from the coming season starting from October 6, will be raised from Rs. 8.50 to Rs. 10 per quintal linked to 8.5 per cent recovery. The government also warned that if the industry did not sell sugar at reasonable price, the controls will be reimposed. The immediate effect was a decline in sugar prices from Rs. 355/362 to Rs. 320/322 per quintal. The unsold levy sugar with fair price shops were frozen on August 16, and taken over by the government. Basic and additional excise duties on sugar from August 16 were fixed at 11½ per cent and 6 per cent advalorem (in place of 11 per cent for levy and 28.5 per cent for free sugar) and the tariff value of sugar fixed at Rs. 215 per quintal. The duty concession for excess sugar production between May and September was applicable till August 16, after which the rate of exemption was Rs. 25 per quintal till September. The government expected that the price of sugar throughout the country would not exceed Rs. 2.75 per kg. and announced in late August that it would reimpose control if the rate went beyond Rs. 3 per kg. This decontrol measure will work in a year of excess production like the present, but in years of short fall the reimposition of controls, which have been

dismantled, will not be easy. The levy sugar users of the past have now to pay 70 to 80 paise per kg more. Further some control over the excessive profits of the industry and canalising their resources to modernisation is equally the need of the hour.

Automobiles and Housing: Passenger car sales have begun expanding in 1977 at 37,612 compared to 30,471 in 1976. The largest increase in 1977 was in Kerala where 2,167 cars were sold compared to 837 in 1976. Maharashtra topped the car sales with 9,111, followed by 5,532 in West Bengal, 4,191 in Delhi and 3,643 in Tamil Nadu. On housing, the Planning Commission's working group estimates that rural areas require 11.8 million units and urban areas 3.8 million units. Rural housing should be met by self help methods with marginal aid from the public sector and should aim at marginal improvement and facilitate "sites and services schemes" through a close involvement of the beneficiaries in the form of labour contribution. Government assistance should be technical advice, demonstration of model houses and villages, and provision of improved designs and layouts, organisation of village co-operatives based on voluntary labour and provision of financial assistance to Harijans and other backward classes. It recommends a Rs. 1,400 crore scheme for the construction of 3.5 million housing units at a unit cost of Rs. 4,000 as part of a 20 year plan to provide housing for all families existing and expected.

Fertiliser and Irrigation: The Fertiliser Association of India reports a buoyancy in fertiliser consumption of 25.7 per cent, with substantial increase in the offtake

of phosphatic and potassic fertilisers. Favourable weather conditions as well as the better input-output price relationship due to fall in fertiliser costs and increases in crop prices account for this increase. Wider coverage under HYV, increased area under assured irrigation, and sustained promotion and extension support by the fertiliser industry and government also contributed to increased fertiliser consumption. The Union government's intensive fertiliser campaign and the timely availability of the required inputs to the farmer nearer the point of consumption also helped. FAI however refers to the fact that the 3.04 lakh tonnes of nutrients consumed are still below the level of 5 lakh tonnes set by the World Bank to assure sustained production growth. The inadequacy, high cost, cumbersome distribution and production credit procedures, lack of adequate penetration of fertiliser use in irrigated as well as rainfed areas, and inadequacy or lack of retail outlets in the interior markets are constraints which still operate. N fertilisers production has increased from 1.8 million tonnes in 1976-77 to 2 million tonnes in 1977-78, and phosphatic fertiliser has increased from 4.78 lakh tonnes to 6.7 lakh tonnes during the period. For the current year, 1978-79, because of the continued favourable weather conditions, fertiliser consumption will further increase, involving higher use of indigenous capacity and the import of more than 19 lakh tonnes of nutrients. Also the government has decided to maintain a buffer of 15 lakh tonnes of nitrogenous fertilisers. In irrigation, the major event in August was the award of the Narmada Water Disputes Tribunal which brings an additional 5 million hectares under irrigation, constituting 10 per cent of the irrigated area of the country. Of the

total availability of 28 million acre feet of Narmada water per annum, Madhya Pradesh gets 18.25 maf, Rajasthan 0.5 maf, Maharashtra 0.25 maf and Gujarat 10 million acre feet. With this additional five million hectares, six million additional tonnes of foodgrain plus increased cotton, cane, fruits and vegetables can be grown, employment enhanced, the value of the additional production estimated at Rs. 900 crores, and 450 MW of hydro electric power generated.

Agricultural Production: The Union government has set a foodgrains production target of 126 million tonnes (moving up to 130 million tonnes) for 1978-79, and 10.8 million tonnes for oilseeds, 7.5 million bales for cotton and 7.6 million bales for jute. 3.4 million additional hectares are to be brought under irrigation and fertiliser consumption is to be increased to 50 lakh tonnes (against last year's 43 lakh tonnes), HYV coverage increased by 5 million hectares and pesticides consumption by 65,000 tonnes. On the basis of the monsoon in August (and if it continues in September and October), the current year's kharif crop is estimated at 80 million tonnes. During the month transplantation of seedlings gathered momentum. Some setback is to be expected from the heavy floods in Uttar Pradesh which has affected 47 out of 56 districts (and claimed 275 lives), and the water logging due to heavy rains in one lakh acres in the Krishna district and 0.25 lakh acres involved in Godavari floods. Taking the country as a whole, the kharif harvest is expected to be larger this year than last year, with timely action taken by the Union ministry for the supply of seeds, fertilisers and other inputs. A series of regional meetings were held during June-July to identify and remove const-

rains in key areas and to help state governments to undertake districtwise and blockwise analysis of available resources and devise appropriate strategies. The jute industry and trade circles estimate a bumper jute crop of 80 lakh bales this season against 70 lakh bales in 1977-78 due to good weather conditions. As a result, jute prices are expected to come down to the minimum statutory prices, with the Jute Corporation of India readying itself to make heavy jute purchases. In the case of oil seeds, large scale measures to control pests and diseases on oil seeds, encouraging the use of phosphatic fertilisers on groundnut, extension of area in the command of major irrigation projects in Andhra Pradesh, Karnataka, Orissa and Rajasthan, the strengthening of the seed production programme and extension of non-traditional oil seeds (4.3 lakh hectares for sunflower and 2.56 lakh hectares for soyabeans) are expected to increase production. The Department of Electronics reports that it is working with the Food Corporation of India for building indigenous equipment required for electronic weighing and weight feeder systems, moisture measuring monitoring and analytical electronic instruments for periodic testing of grain quality. FCI needs such equipment to support its large programme for the creation of an additional storage capacity of 3.5 million tonnes of grains in silos located all over the country. The electronic instrument being developed at IIS, Bangalore is to be used as a direct reading digital grain moisture tester for wheat, rice, maize, jowar and ragi. Some of the electronic equipment required for certain farming parameters like soil water, soil alkalinity and acidity, nutrient concentration and soil density like pH meters and conductivity meters are now being produced in

the country at costs ranging from Rs. 3,000 to Rs. 6,000, which can be lowered when they are mass manufactured commercially.

Exports: On the basis of the performance in the first quarter of the current year 1978-79 where exports registered a fall of Rs. 209.98 crores at a total of Rs. 1,165.90 crores (compared to the Rs. 1,375.88 crores in the first quarter of 1977-78), it is expected that not only will the export target for the year of Rs. 5,800 to 6,000 crores not be met, but the trade deficit be near doubled from last year's Rs. 600 crores to Rs. 1,000 crores—Rs. 1,200 crores. By itself this deficit is not only not something to worry about, but a planned deficit is needed to revive industry and supply it with needed spares and equipment, as has been pointed out in earlier issues - provided the deficit is planned. In so far as government's new import policy allows the import of non-available industrial machinery, spares and parts to modernise industrial units, plus the government's decision to import plant and equipment for thermal power stations, cement units and coal for steel plants as well as the purchase of shipping vessels for increasing the country's merchant fleet, the trade deficit emanating from these courses is to be welcomed. It is not the import figure of Rs. 1,109.17 crores against the 1977-78 first quarter's Rs. 1,119.35 crores which is important but its composition. Also the government may be using its embarrassingly increasing foreign exchange reserves (standing at over Rs. 4,280 crores) to prevent its exerting an inflationary spiral. But in so far as the trade deficit is due to lower exports of tea, coffee, sugar, cashewnuts, chemical and allied products which totalled

Rs. 30.3 crores against the first quarter target of Rs. 42 crores as well as those of rubber goods, footwear, paints, varnishes, glass and glass ware, the outlook is not sound. There are some procedural bottlenecks such as delay in duty drawback which can be straightened out, but the major cause is slack industrial production. Romania has ordered 10 million tonnes of iron ore from the country with an immediate sale of 2.5 million tonnes, EEC envisages a 2.5 per cent growth in the Indian quota for garment exports to the Community countries (India's quota for EEC during the current year is 7.13 crore pieces of various types of garments plus 18,800 kg of under garments), gold imports have been exempted from import duty, cardomom exports which reached Rs. 46.36 crores in 1977-78 against Rs. 14.03 crores in 1976-77 is increasing further this year, the textile exports to USSR are expanding beyond the 60 million metres worth Rs. 30 crores which was last year's figure, gem and jewellery exports recorded a high Rs. 468.7 crores in 1977-78 and are likely to reach Rs. 600 crores this year, with the gold jewellery export scheme referred to earlier, CCI reports that by fixing a minimum reserve price of 70 US cents per lb, it was able to obtain a higher price for the export of Bengal Deshi cotton. On the other hand shrimp exports to Australia have fallen steeply from 45 tonnes in 1971 to 5 tonnes in 1976 (total Australian imports are 400 tonnes) due to poor quality and standards which are to be improved, edible oil imports for the year are estimated at 12 lakh tonnes and the Cashew Corporation is operating a Rs. 4 crore fund to increase cashew production and retrieve the export level to 50,000 tonnes.

Aid: In August UK decided to write off £ 900 million (Rs. 1,400 crores) of loan and interest due from the 17 of the world's poorer countries. This relieves India of a debt of Rs. 850 crores and this sum is to be used as annual additional grants to meet the rupee expenditure on mutually agreed rural development projects. It will provide extra grants of £ 30 million (Rs. 46 crores) in addition to its normal ODA to finance local costs of agreed development projects for improving living standards of the rural poor. This is a major break through in the North-South dialogue and UNCTAD, Nairobi and Paris negotiations on debt relief. This was followed by Switzerland which also decided in August to write off 180 million Swiss Francs of loans and interest to India and six other developing countries. Thus the UNCTAD Nairobi discussions are beginning to take effect. Also in August, India and Japan signed an agreement for a six billion Yen loan (Rs. 24.59 crores) to cover imports from Japan and OECD countries and to finance some of the machinery needed for Bombay High Phase II. US project aid to India which was suspended since 1971 at the time of Indo-Pakistan war was resumed with the signing of the aid agreement on August 1 for \$ 60 million for developing medium sized irrigation systems in Gujarat, the import of anti-malaria insecticides and for application of science and technology to rural areas.

International :

Pakistan: Indo-Pakistan trade which was regulated by the trade agreement between the two countries expired on January 1, 1978 and was extended for 6 months. Now there is need for further negotiations between the two countries

to arrive at an agreement on India's insistence on free trade except in canalised goods and Pakistan's demand that trade between the two countries be handled by government agencies only. India exports a wide variety of goods such as textile machinery, auto spare parts, light engineering goods, diesel engine pumps, railway wagons, power generators and jute goods and imports cotton, industrial alcohol, rock salts and dry fruits. India's export to Pakistan in 1977-78 were Rs. 20 crores and imports only Rs. 10 crores. This imbalance will have to be righted.

World Monetary Reform: IMF announced in mid August the disbursal of its fourth loan amounting to SDR 54 million to 43 member states bringing to a total of its loan disbursals in two years to SDR 841 million. In addition IMF will also distribute through the trust fund, profits from the sale of gold amounting to \$ 362.6 million to 104 developing countries. India will receive \$ 42 million from those profits. The US dollar reached its lowest point in August touching 1 \$ for 1.60 Swiss francs and fell below 3 Deutsch marks. Expression of strong Saudi Arabian support for the dollar and a decision of the US to increase sales from its vast gold holdings improved the dollar's position at the end of the month. One result of the fall in the value of the US dollar vis a vis the Japanese Yen is that this year Japan will be catching up with and may surpass US per capita GNP. (This further shows up GNP as a not very reliable indicator of a country's wealth, as this result emanates from a kind of numbers game). Japan's GNP this year will be 200,000 billion Yen which is over \$ 1,000 billion. America's GNP will be \$ 2,000 billion this year. As Japan's population is half that of US,

Japan's per capita income will be the same as that of the US, and as Japan's growth rate is far greater than that of US, the likelihood of the US catching up with Japan is remote, if the present exchange value holds. Even otherwise comparing Japan with West Germany, US and UK, Japan will be the first country to have the highest growth rate, the lowest unemployment rate, the largest balance of international payments and the lowest rate of increase in consumer prices for the year.

World Economy: The World Bank's World Development Report 1978 refers to 800 million people in the world living in absolute poverty and by the beginning of the 21st century they will be 600 million. The growth of industrial countries will slow down from 5 per cent in the early seventies to above 4.2 per cent, while by concentrating on agricultural and rural development, the developing countries can step up their growth rate from 3 per cent achieved in the last 15 years to 5 per cent. The world economy can grow not through a few countries US, West Germany and Japan, pulling all others forward but through all industrial countries moving forward together and helping the developing countries attain rapid growth rates, in order that the latter's markets can absorb the products of the industrial world (25 per cent of the industrial world's exports are absorbed by the developing countries). In many key industries of the developed countries where growth is led by exports, their dependence on sales to the developing countries means that it is in the industrialised countries interest to encourage the developing countries to grow rapidly. Trade restrictions on the latter countries goods inhibit growth in the industrialised countries, either be-

cause the developing countries retaliate or because their economies are crippled. The developing countries are also advised to liberalise their trade policies and increase inter-third world country trade in manufactures. The reports also point out that ODA is about half of the 0.7 per cent GNP target, and will be 0.39 per cent in 1985, and even so only if US, Japan and Germany increase their ODA. Many of the aid givers have liberalised the terms, some have cancelled the debts as noted earlier, and OPEC countries have emerged as major lenders, with their aid in some cases reaching two per cent of their GNP. The growing resort by the developing countries to borrowing in the private capital markets of the industrial countries is referred to with some cautionary comment. For the developing countries, the development path is hard but clear, calling for efficient management of agricultural and rural projects, developing marketing and communication techniques and using to the full their trained and skilled manpower.

World Trade: As noted, Japan's current account surplus is expected to increase from \$11,000 million in 1977 to \$18,000 million in 1978, due to an estimated trade surplus which increased between the two years from \$17,000 million to \$24,000 million. OECD has called up on Japan to take action to reduce this huge payments surplus, warned its member states not to take restrictive action against Japanese goods as it will undermine the free trade system on which postwar prosperity rests, and recommends that Japan increase its imports. Over the past 10 years, fuel and raw materials have accounted for 64 per cent of Japan's imports, manufactures have stagnated at 20 per cent

and food and consumer goods at 16 per cent. Now OECD advises Japan to increase its imports of manufactures. Particularly as its deficits on investments have levelled off at around \$6,000 million. The sharp appreciation of the Yen has helped the country's price level and reduced its inflation rate from last year's 8 per cent to 5.5 per cent. While no substantial reduction in current account surplus can take place in the next few months because the gains in the terms of trade due to the Yen's rise will cancel any impact on the volume of trade, in time the revaluation should lead to increased imports of semi processed and finished goods and should have a negative effect on its exports, the report points out.

Comparative Price Levels: A UN study points out that in India the price level for all components of its GNP is about 30 per cent of the US level. While price level of non-traded goods (like houses) was only 13 per cent of the US level, it is 50 per cent in the case of traded commodities. The study covers 16 poor, middle and rich countries and analysed their price and spending patterns, to arrive at gross demand product based on purchasing power, and so produces an index free of currency distortion and nearer to the real cost of living. As a result, it is concluded that (1) prices of non-traded goods are higher in rich countries than in the poor countries, (2) between two countries with the same level nominal GNP per head, prices are lower in countries more isolated from the impact of world prices, (3) large poor countries have lower prices than small and more open economies with the same level of income and (4) as noted earlier, while Indian price level is 30 per cent of the US, Kenya is

47 per cent, because though both have the same per capita GNP, India is larger and has a less open economy than Kenya.

Non-Aligned Conference: The Foreign Ministers of non-aligned countries meeting in Belgrade in August (a) called for more substantive cooperation among the members, (b) reiterated the concept of self-reliance as part of their development strategy, (c) insisted that ongoing negotiations should be strengthened and new ones undertaken within the UN system to restructure the global economic set up through implementing the New International Economic Order, (d) highlighted the commitment to action to resolve the problems of (i) raw materials, (ii) indebtedness now amounting to \$ 250 billion which should be converted into grants, (iii) assistance wherein the target of 0.7 per cent of ODA is still unattained, (iv) liberalisation of international trade, (v) reform of the monetary financial system, (vi) the urgency of industrialisation and (vii) the transfer of technology, including the development of an international code to regulate the process as well as the need for a revision of the Paris convention on the protection of industrial property, (e) called for a continuing dialogue with the industrial countries for agreement on a common fund to finance buffer stocks of raw materials, (f) favourably assessed inter-third world cooperation in science and technology, finances, health and fisheries, television, telecommunications, among news agencies, in establishing research, information system, increased trade, maritime transport and technical assistance, and (g) commended the establishment of the International Centre for

Public Enterprises at Yugoslavia, the Information Centre on Transnational Corporations in Cuba and the Centre for Science and Technology in India.

World Food: US department of agriculture estimates that the world production of high protein meal in 1978 at 77 million tonnes compared to 67 million tonnes in 1977. World production of oils, fats will be 52 million tonnes, 4.5 million tonnes above 1977 and soya bean meal being 53 per cent of the world total. Australian wheat production for 1978-79 is estimated at 10 to 12.5 million tonnes and Canadian wheat production at 19.7 million tonnes.

Asian Trade: The ESCAP ministerial conference meeting in New Delhi in August established a blue print to increase trade among the Asian countries and proposed (a) to implement the intra-regional trade expansion programme to accelerate the economic development of the Asian countries, (b) the promotion of trade creating joint ventures, (c) encouragement of long term contracts, (d) building up a net work of national trade promotion centres linked to the ESCAP Trade Promotion Centre, (e) the setting up of a Trade Co-operation Group (TCG) under ESCAP and (f) the working out of special measures for the least developed, land locked and island countries. The blue print emphasised the need for adequate and improved transport and infrastructure services for the development of trade, in the air cargo system, inland water ways, the Asian highway, and trans Asian railways, and the urgency of developing free trade within the ESCAP region, including the reduction of non-tariff trade barriers.

II Agricultural Development

Paddy and Food Production :

As noted earlier with the good south west monsoon, transplantation operations are underway in the southern districts as well as in North and South Arcot and a good kuruva crop is expected. Plans are underway starting in the Tiruchirapalli district for a close link up of production processing and marketing of food crops as part of a package of policies to back up government policies to increase paddy and foodgrains production. In this connection, as noted in the last issue (pp. 466-467), the intercropping of jute is now becoming viable with the use of short duration jute varieties. In the first fortnight of August, 1.5 lakh packets of vegetable seeds, 2 lakh vegetable seedlings, 5,000 plants each of coconut and banana, 8 tonnes of fertilisers and 2 tonnes of pesticides in Madras were distributed as a means of expanding food production. A special Rs. 15.50 lakhs programme by the Department of Agriculture is underway to vitalise the functioning of the State Seed Farms through improving irrigation facilities, reclaiming lands and providing other infrastructure to increase cropping efficiency and seeds production. Storage of seeds and equipment for seed processing and fumigation covers to seed godowns are being provided as better post harvest facilities, with particular attention to pulses, where 10 per cent of the area is being provided with quality seeds. To ensure adequate quality control, an independent seed certification agency has been created which will certify

pulses, oil seeds and vegetables along with measures to strengthen the seed testing laboratory at Coimbatore. Breeder and foundation seeds are being taken up for rice, millets, cotton and vegetables. To stabilise sunflower cultivation, the evaluation of synthetic sunflower at the Tindivanam oil seeds experiment station is being taken up to evolve HYV with better oil content and suitable for red and sandy loam soils under both irrigated and rainfed farming. 7 per cent of the paddy area is being covered by improved seeds, 15 per cent of the ragi area will be so covered, and 7 per cent of the cumbu, cholan and maize area will be included on the hybrid seed programme.

Paddy procurement Price :

The southern states have been requesting the Union government to raise the paddy procurement price to the level of the wheat price (see last issue p. 447). At the end of August, the government of Kerala acted on its own, and revised the procurement price of paddy by Rs. 43 per quintal from Rs. 77 to Rs. 120 per quintal to be effective from September 1. For this purpose the government has made a provision of Rs. 5 crores in the budget. Kerala's annual procurement of paddy is 15,000 tonnes which is enough to maintain its rations for one week. The procurement will be made at major paddy producing centres with a special state agency to be set up. This raising of the procurement price of paddy in Kerala will certainly affect the procurement paddy price in this state.

Research Results :

The Tamil Nadu Agricultural University's pulses research programme has produced short duration high yielding drought resistance varieties which can be used in multiple cropping or as companion or off season crops in order to save irrigated lands for paddy. Its green gram variety CO-3 is of 65 to 75 day duration and yields 680 kg per hectare, which is a 1:2.22 cost benefit ratio. Similarly its black gram CO-3 yields in 85 day 650 kg per hectare. Its most recent release CO-1 black gram treated with methyl methane is non-seasonal, yields 1,050 kg under irrigated and 640 kg under dry farming. Released as CO-4, it flowers and matures early. The University has also devised an ethel spraying programme at different concentrations to prevent the shedding of flowers in the pulses crop. With the increased fertiliser consumption in the country and the state, the need for further research by the university on the use of potash in paddy production in areas like Thanjavur, as well as in North Arcot and the Nilgiris is needed. Potash acts as a powerful nutrient for paddy growth, but whether it should be applied as a basal dose or as split application, at the tillering stage or early maturing stage, are some of the urgent questions on which further research is needed. IRRI in Manila has demonstrated that Indian neem oil and neem cake control the brown plant hopper, a major paddy pest, serving as a nitrification inhibitor and preventing leaching losses in the paddy fields. The Khadi and Village Industries Commission is researching at Pune on neem by-products, especially on neem cake blended urea as a substitute for costly urea nitrogen fertilisers. When introducing new crops, careful local planning is needed to choose between

different technology/cost combinations which depend on the local agro climatic condition, available local resources, aptitude of farmers, extent of available farm finance and the processing and marketing facilities. On this basis a choice can be made between high yielding low cost technology which is the preferred combination, or high yielding high cost technology which cultivators of medicinal plants may require, or low yielding low cost technology which some hill area cultivation may demand or low yielding high cost technology needed in some high value product. This micro local level planning for the state is planning at the block level. Research at Madurai Agricultural College has resulted in devising a method to fight prodenia, a cotton pest, which has destroyed thousands of acres of Varalakshmi plantations in the district. (In the Periakulam division alone 50,000 acres are under cotton). Spraying the crops with polyhydrosis - nuclear virus, the resulting dead caterpillars are ground into a mixture which acts as a deadly pesticide to the disease. 34 squads have been formed in the district to do the spraying and the Deputy Agricultural Officers of the district are being trained in the technique. Another problem, a post harvest cotton problem under which boll shedding and the opening of bolls in the later stages of the cotton plant growth is being tackled by 'spraying another weed killer, gramoxone, which ensure uniform and mature opening of the bolls and enables the cotton crop to be cut at the base and ratooned wherever it is possible. A new variety of sugarcane, CO-69 A 49, which sheds its leaves of its own accord, proliferates at the rate of 1 lakh stalks per hectare and the self-stripping of leaves by the variety helps in pest destroying predators is now being cultivated. Experiments have shown that when the

leaves strip and the pests are washed down by rains, even a 27 per cent of such washing down leads to 25 per cent increase in yield. Also this self stripping variety is amenable to machine harvesting and what is now needed is to induce the genetic character of the self-stripper into the popular canes with high sucrose content. Japan reports a new wheat cross breed, using for the first time a method based on the cyto-genetics in which the cell nucleus in one breed is inserted in the cytoplasm of the other resulting in very high yield quality. So far the experiment has increased the yield by 20 to 30 per cent, which is a high ratio and further increases are predicted by the ongoing research in Japan.

Agricultural Credit :

The state co-operative banks will be disbursing Rs. 140 crores to small farmers for agricultural operations this year, compared to last year's Rs. 120 crores. The rate of interest has been reduced from 12.6 per cent to 10.6 per cent. To make this programme fully effective in increasing agricultural production through liberal credit supply, there is need to reduce the trend of increasing arrears and for the arrearages to be repaid on time.

Dairy Farming :

As a result of operation Flood I, Rs. 91.25 crores had been realised from the sale of skimmed milk powder and Rs. 70.92 crores spent on dairy development programmes in the country. The Tamil Nadu Dairy Development Project has been expanded under this programme as a mother dairy and Operation Flood II is now being launched to execute its

expansion plant. The Madurai Milk Project converts 4,900 litres of skimmed milk, 4,000 litres of whole milk, 3,800 litres of butter milk into powder every hour. Milk procurement for the dairy covers Madurai, Ramanathapuram and Tirunelveli districts and parts of Coimbatore district from milk supply co-operative societies, milk producers co-operative societies and mini dairies owned by private and graduate dairy farmers. The daily average milk collection at the Madurai dairy is 68,000 litres in the season and 55,000 litres in the lean season of the year.

Tea :

The tea industry is passing through a difficult phase. Against the target of 600 million kg for the year, it is doubtful if it can produce 570 million kg as north India tea production upto June was 3 million kg less than what it was at that time last year, and the southern crop which lost 2 million kg till May made it up in June, so that it is the same as last year's production at this time. The overall result for the country is a shortfall of 3 million kg. In the north floods in Assam and poor weather in Bengal and lack of power for tea factories in north Bengal due to the short supply of coal (the industry needs 2,00,000 tonnes a month) are some of its difficulties. Also the continuing depression in tea markets has given rise to cash flow problems, with bank advances of Rs. 100 crores lying blocked by tea companies who want further advances. On top of all this, sellers report difficulties in London sales of the end of the season North Indian teas. A stock of 78 million kg, which is 4 million kg higher than last year's and their inferior quality are posing disposal problems in August, particularly as new crop arrivals will begin in

September. As noted in earlier issues (see Vol VIII pp 151 and 339), East African teas are picking India's teas out of the market due to their lower prices (at 65 pence per kg), against Indian tea price of 115 pence per kg. Hence the repeated demand for the withdrawal of the Rs. 5 per kg export duty. US and Japan however continue increased purchases of Indian tea. The Tea Board is planning to increase the tea production from the present 560 million kg to 7,000 million kg in the next 10 years and is planning to start tea plantations in non-traditional areas—Manipur, Himachal Pradesh, Sikkim, Nagaland, Mizoram, Arunachal Pradesh and the hill areas of Uttar Pradesh. The government is aiding the replanting scheme which costs Rs. 40,000 per hectare. Tamil Nadu has the highest per hectare production of 1,500 kg which is above the national average of 1,400 kg grown over 3.6 lakh hectares. Increasing the product per hectare will also help attain the 10 year target.

Coffee :

A record coffee crop of at least 1,20,000 tonnes is expected during the current 1977-78 season. Upto the end of June, this amount less 75 tonnes have been received by the Coffee Board, with a high proportion (61,691 tonnes out of 1,19,925 tonnes) of the good quality Robusta variety. Export prices are declining because Colombo and Brazil are back in the coffee supply market. Last year 55,827 tonnes were exported and Rs. 230.24 crores realised. This year 60,000 tonnes will be exported but due to the fall in international prices, the export earning may not reach that figure. Hence the Union government has reduced the export duty on coffee from

Rs. 500 to Rs. 200 per quintal from August 1. Also the world coffee producing countries met in Bogota at the end of August and agreed on a plan to stabilise coffee at reasonable prices—between \$ 1.80 to \$ 2.20 per pound. The International Coffee Council will meet in Colombo in mid September to negotiate this with consumer countries.

Rubber :

Following the government decision to suspend the import of rubber referred to in the last issue (p 470), there was the usual controversy, with the rubber industries protesting the decision in view of lack of supplies and the falling of their inventories and the price ranging between Rs. 1,200 — Rs. 1,350 per quintal. The short supply of rubber is due to the stopping of rubber tapping during the monsoons in Kerala. The Kerala government is on record to bring the prices down to Rs. 1,000 per quintal and the Rubber Dealers Association has agreed to supply the state government with 1,000 tonnes of rubber at Rs 1,000 per quintal. The Union government is also considering building a buffer stock of 15,000 tonnes to prevent this kind of scarcity situation, and the Rubber Board has accepted the proposal. Rubber production in 1977-78 was 1,46,987 tonnes against 1,49,632 tonnes in the previous year. From the first week of August, rubber producers were offering rubber at Rs. 900-950 per quintal. The Union government also decided towards the end of August to send a study team to Kerala to study the availability of raw rubber in the state and to investigate the reports of bad practices in the market where premiums money of Rs. 50—Rs. 100 per quintal are being demanded. This study is a good move.

III Industrial Development

Salem Steel :

The Salem Steel plant reports that its Rs. 74 crores orders for the entire cold rolling mill complex will have been placed by October. The orders for the supply and erection of 16 cranes costing Rs. 1.6 crores, skin press mill costing Rs. 5 crores and power receiving substation costing Rs. 50 lakhs have been placed. All the equipment would be arriving in the first half of 1980 and the plant would go on stream by September 1980. 1,000 tonnes of structures for the auxiliary buildings—the mechanical electrical repair shop and stores have been erected, and by November the structural fabrication for the cold rolling mill complex would be erected. The infrastructural facilities, the water supply scheme which had been started, the commissioned 8.8 km. railway siding and the Rs. 4.5 crores first sector of the township are ready. The first phase of the plant will cost Rs. 127 crores, out of which Rs. 21 crores have been spent. Also a well equipped modern training institute, to meet the needs of the steel plants of the country is being set up at plant at a cost of Rs. 25 lakhs.

Neyveli :

NLC reports that it will require seven excavators for the second mine cut and there is a good chance that Southern Structurals which has supplied this equipment for the first mine may obtain the tender. Southern Structurals manufactured the bucket wheel excavator for NLC, the first involving intricate and highly accurate work for the machine.

NLC has assessed the equipment as above average, which will be further improved if the next orders are placed with it.

Cellular Plant and Cement :

The cellular concrete plant run by the Tamil Nadu Housing Board is running short of high grade coal and special arrangements are being made by the Union ministry to meet this demand. Similarly the cement industry is working below capacity because of inadequate coal supplies, leading in turn to short supply of cement in the market. Though Tamil Nadu produced 36 lakh tonnes per annum, it is given 3.5 lakh tonnes against its annual need of 4.5 lakh tonnes, about 50 per cent of which is allotted to government project areas. With a view to forestalling the government taking over cement distribution, the Cement Stockists Association is setting up Advisory Committees in Madras and district centres which will invite applications from the public for issue of cement upto 20 bags. Inspection Committees have been set up by it as part of its self-regulation.

Raw Silk and Zari and Sandal Oil Extraction :

A raw silk and zari purchase committee is being set up in the state with representatives of the Presidents of the Weavers Societies, the Deputy Director, Weavers Service Centre, Kancheepuram, the Assistant Director of Handlooms and the Special Officer of Co-optex in order to make available quality silk at reasonable prices to handloom weavers co-

operative societies in the state and to counter sub-standard silk being purchased by weavers from Karnataka. There are 24 silk handloom weavers co-operatives at Kancheepuram, Arni and Kumbakonam covering 5,500 silk handloom needing 8,000 kg of raw silk and 260 metres of zari a month. TIDCO's project report on locating a sandal wood extraction plant in North Arcot is being completed and it is expected that plant will start operating from early next year. There is adequate sandal wood in the state to meet the raw materials requirement of the plant as well as that of the distillers.

HPF:

Hindustan Photo Films is planing to reduce the price of its products, once it does its distribution through its depots. Also by selling directly to consumers through its depots rather than through the 4 distributors of X-ray films and 7 distribution of still film who were given a discount of 8.5 per cent and who had to pay the 4 per cent central sales tax, it will be providing the films at lower prices. HPF is planning to open a depot cum show room in Vijayawada and will be manufacturing amateur negative film and cine roll film from December. It will set up a colour film plant during the Plan period.

TI Cycles and Jute Mill:

The Union government is examining the proposal to set up a public sector corporation to run the sick bicycle units in the country. There are three alternatives that are under study. One is to nationalise them and place them under government management, a second is to restructure the capitalised base of the company to facilitate the flow of fresh

capital into the companies, and a third is to sell the companies and use the sale proceeds to pay off their liabilities. TI cycles is however not a sick unit and its closure over the last six months is essentially a dispute between the management and workers which is now being sorted out. Plans are being discussed for the establishment of an economically viable jute mill in the state in a backward area, but near enough to Madras to have port and railway facilities and to generate employment in the rural area. The growing of jute and mesta in the state is itself under study as noted earlier, and its being grown in rice fallows or as intercropping with sugar cane and other commercial crop raise problems of one crop shadowing another and pests of one crop attacking another. The assistance of the all India co-ordinated project of jute and allied fibres of ICAR and the jute development directorate of the Union government will be used in arriving at a decision on the project.

Textiles and Co-operatives:

Total production of all yarns, cotton, blended and pure staple fibre in the 182 member mills of SIMA at the end of June 1978 is estimated a 1 31 lakh bales, with cotton yarn being 95,712 bales. Of this, the yarn available for the handloom sector is 75,712 bales of cotton yarns, 14,165 bales of blended yarns and 19,500 bales of staple fibre yarn. The stock of cotton yarn in the member mills is 29,903 bales so that the yarn position in the state is comfortable. The co-operatives in the state report good progress by December 1977 covering 38.72 lakh agricultural families out of a total of 45.63 lakh families including the coverage extending to 22.53 lakh

families from the weaker sections. Agri-cultural loans disbursed by village co-operatives amounted to Rs. 127 crores, with a target of Rs. 145 crores for the next 2 years. Long term loans issued by the Land Development Banks were Rs. 12.88 crores against a target of Rs. 19 crores. Jewel loans to the weaker sections amounted to Rs. 50.77 crores which will be expanded to Rs. 70 crores by the end of 1979. Co-operatives also distributed controlled cloth and textbooks, opened common kitchens for students, and operated schemes for hill tribes, labour contract societies, societies for providing employment to members as autorickshaw drivers co-operatives, barber co-operatives and washermen co-operatives. The total deposits of the 16 Central Co-operative Banks in the state stood at Rs. 127.3 crores at the end of April, with the Co-operative Central Banks of Coimbatore, Salem, Madras and Madurai being the foremost. Loans advanced by the banks amounted to Rs. 315.5 crores of which agricultural loans were Rs. 214.7 crores and loans to weavers co-operatives and others Rs. 100.8 crores.

Handloom :

The state government plans to increase the production of controlled cloth by the handloom sector from 10 million metres to 40 million metres and on the basis of the higher wage structure in the state has asked the Union government to pay a higher price for the cloth. The sector is facing serious problems in obtaining inputs like dyes, chemicals, synthetics and yarn, the competition with power looms, the marketing constraints and the need for ensuring all year round employ-

ment on the one hand and the closure of about 50 small scale handloom units as a result of the stoppage of readymade garments exports to the US. As a result, about Rs. 50 lakhs of readymade garments are piled up in various centres in Madras and the 20,000 weavers in these export based units face unemployment. The main problem now is not the US restriction which was generous enough at 35.4 million square yards, of which 50 per cent was for readymade garments, which were appropriated by poor quality readymades produced by mills and power looms and passed off as handloom. This led the US to impound goods worth 14 million square yards, and two lakh pieces which have been inspected by the Textile Commission and issued letters of credit are blocked plus another 50,000 in the pipeline. The remedy for this situation lies with the industry and the Union government. For 1979, 50 per cent of the export quota should be reserved for handlooms and should be administered by the Handloom Export Promotion Council, with 70 per cent of this reservation allocated to exporters with past good performance. The state government announced in August that its August 1977 decision to set up a statutory handlooms board to protect and promote the interests of the handloom industry is not being acted upon because of the many difficulties that it raises, and in place it is constituting an advisory panel for the Co-optex to streamline the procurement of stocks from the primary societies and to place district level procurement in the hands of an official.

Mechanisation of Coir Industry :

It will be recalled that the state government proposes setting up a mechanised

coir industry at Nagercoil and the Kerala government objected to it on the grounds that it will reduce employment opportunities in an area which is an important one to it. The problem however is that the coir industry is being mechanised in Sri Lanka and other neighbouring countries and there is little use in India following a technology which will make it non-competitive. The Union government has therefore set up a committee headed by Planning Commission member Mr. B Sivaramakrishnan to study the long term effect of the mechanisation of this industry.

Leather :

Leather exports in the first 4 months, April-July, have increased by 32 per cent compared to last year's first four months at Rs. 109.54 crores. In this expansion

finished leather, leather goods and footwear components increased, while semi processed wet blue chrome tanned leather and East India tanned hides declined in their exports shares. It is therefore expected that the declining export trend of last year will be reversed this year and the target of Rs. 330 crores achieved. The Union government appointed in August a task force with 14 members of the export trade, leather technologies, representatives of small scale industry, tanners, manufacturers and STC to review the working of export quotas for semi finished leather and footwear, identify constraints and make recommendations on further conversion from semi finished to finished leather goods and manufactures and the quotas so that the VI Plan export quota of Rs. 600 crores will be achieved.

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IV Education, Science and Health

Educational Reform :

Andhra Pradesh announced in August a change in School hours in the rural areas, whereby the schools will start at 6 A.M. for one hour with prayer, vedic programme and yoga and mass drill for one hour, ending with a cup of milk for each student. They will come again for regular classes from 9 A.M. to 1.30 P.M., ending with the midday meal. In the

evening they will again assemble for sports and games and another cup of milk. Also the government is working on changing the school syllabus, reducing the number of text books and eliminating homework. This is an important innovation which should be watched with interest by this and other states. The Tamil Nadu government announced in August that it will provide text books free to children of government servants

earning less than Rs. 200 per month. For this year the cost will be reimbursed to those entitled who have bought the books. The same group of students are also being provided spectacles and hearing aids free of cost. The colleges in Madras city were closed in the first half of the August because of student agitation over bus passes and were reopened during the second half.

Adult Education and Mass Media :

The Union government has decided to set up a National Museum of Man in Bhopal—as the country's first anthropological open air museum and will project the whole of man's development at one small point. The government also announced in August in Parliament that the Press and Registration of Book Act will be amended to weed out non-existing newspapers on the lines of the Bhabtosh Committee recommendation on Newspapers Economics (see Vol V p 293). The Committee pointed out that of the 830 dailies registered with the Registrar, circulation figures were available for 610, with a real existence of 534 dailies, while the remaining 300 dailies did not exist at all. It accepts the recommendation to assist the Urdu papers but not by bulk purchase of the dailies, but by arranging institutional finance for purchase of offset printing facilities and this principle will apply to all papers which need such aid. It has accepted the recommendation that the proper ratio between news and advertisements should be 60:40. Also the need for improvement in the quality and coverage of the news agencies and some raising of their rates are accepted.

Technical Education :

The Union agricultural minister has written to the states' Chief Ministers requesting them to examine the Randhawa Committee report on agricultural universities (see Vol VIII No.8pp.404-405) and ensure a sound organisational set up and adequate financial support to the universities. In view of the decisive role of these universities in transforming the rural areas, the Union government plans to discuss with each state government its problems so that its teaching, research and extension activities can be planned to meet the needs of the farmers in the state. The states have been asked to review the university Act to bring it into line with ICAR's model Act, transfer all state agricultural research, the staff, farms, budget, building and equipment to the university and not set up parallel research organisations in the name of adaptive research (see Vol II No. 1 p 15 and No. 11 p 35). Agricultural universities are state institutions and so state governments must meet both their developmental and operational costs, with ICAR help being only supplementary. On finance, the committee has recommended levying a cess as a percentage of market fees charged by the marketing committees, boards or federations for financing the Agricultural Universities, as these marketing agencies have grown and flourished, due to increased agricultural production which the universities have aided. The committee has made recommendations for improving practical training arrangements for agricultural graduates, attracting rural candidates, promotion of self-employment and rural orientation of home science—all of which should be acted upon by the state government and the Tamil Nadu Agricultural University. The Union ministry of health announced

in Parliament that it costs about Rs. one lakh to train a doctor. A study of the medical college at Simla and JIPMER, Pondicherry showed that the per student cost was Rs. 92,000 in the former and Rs. 1,35,000 in the latter. That is a good base for further benefit cost analysis and the costs of the medical braindrain that the country suffers. The state government announced in August that it has under study a proposal to upgrade 14 technical high schools attached to polytechnics as higher secondary schools as a further strengthening of the new plus 2 system that has gone into operation in the state this year. This means that the industrial vocational stream will to this extent be offered in these technical high schools which have the infrastructure and staff for these courses.

Science :

The committee to reorganise CSIR has submitted its report which the Prime Minister referred to in Parliament. The report has been accepted by the CSIR governing body and as a consequence each laboratory has an executive committee for internal management and a research advisory committee. Centrally, the Council will have research planning groups to review sectorwise plans. The existing coordination councils will continue their task of inter-laboratory projects coordination. The council also announced in August the setting up of a national mineral and forest wealth research and development laboratory in Madhya Pradesh. IIT research staff report the development of a system of power generation from the fastest growing water plants in the country. It involves chopping, drying, compacting and burning the plant in

boilers and from this heat, gas turbines work and generate power. The most promising for this purpose is water hyacinth.

Health :

The Union ministry reports the successful start of the community health workers programme launched on October 2, 1977 (see Vol VII pp 393 and 709), with 42,000 paramedical workers having been appointed and starting operations. By March 1979, 90,000 community health workers are expected to have completed their training to provide medical care to 90 million rural people. On this basis, the government states that it will be able to provide medicine and hygiene coverage to all the 5,80,000 villages in the country by 1982-83. There are however problems; these community health workers must be backed up community health specialists who have not been trained and are not in position: some states like Tamil Nadu, Karnataka and Kerala have their own schemes: there is also the acute shortage of medicines: and the medical colleges are not carrying out their function of looking after and administering the PHCs and health services in three blocks each. These defects can and must be set right quickly, as the family planning and nutrition programme also depend on this service. The state government has stated that in view of the large and growing dental diseases in the state caused by ignorance, poverty and bad eating habits, and 30 per cent of children suffering from various dental diseases, it has under consideration a proposal to develop the dental wing of the Madras Medical College into a full fledged independent Institute of dental health, strengthen the dental wings in other

colleges, and provide better dental facilities in the district and taluk headquarters hospitals and PHCs. The government has also formulated a 5 year programme for the eradication of leprosy under which leprosy patients will be admitted in government run centres, treated with imported medicines, and

offer surgical services for those needing them. In the state, there are 6.5 lakh persons afflicted by leprosy and due to the programme in the last two years, the numbers have been brought down from 7 lakhs. But what is left is a large human problem, which must be attended to effectively.

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V Employment

The 27th round of the NSS shows that in Uttar Pradesh during the Plan period, 1978-83, employment will have to be found for 60.98 lakh persons, comprising the back log of 27.24 lakhs currently unemployed (4.8 lakhs wholly unemployed and 22.35 lakhs inadequately unemployed), 85.39 per cent of whom (23.26 lakhs) are in rural areas and 33.74 lakhs who will be added to the labour force during the 5 year period. As at the national level, the organised sector employment growth has been 2.2 per cent per annum during 1971-77 which means that job opportunities in this sector increased only by 0.44 per cent every year. This absorption rate is so low even if it doubled it can employ only the percentage of the total annual increase in the labour force. Hence the only employment avenue for this vast number of unemployed is the unorganised sector—agriculture and small and village industries. NTC has proposed a scheme for the educated unemployed which will

provide self employment to 10,000 persons as NTC sales representatives. The scheme is to be executed in villages and small towns with a population of less than 50,000 and half the places will be reserved for scheduled caste and scheduled tribes. Under the scheme SBI will provide loans to unemployed persons to purchase cloth from NTC mills, and for the purchase of bicycles, scissors and metre scales. The borrower must be a high school completer, 21-35 years of age and the goods will be hypothecated to the bank till the loan is repaid in 30 monthly instalments. NTC will pay its representatives a commission of 12 per cent for the first Rs. 1,000 sales, rising by one per cent for every additional Rs. 1,000 sales upto 15 per cent. With a turnover of Rs. 4,000 per month, each person can earn Rs. 540 and after repayment to the bank have Rs. 408 net. NTC is providing 15 days training to these sales representatives. The state government announced in August a Re.1 crore

plan to provide employment to 100 unemployed graduates. Each graduate will set up an industrial unit depending on his qualification and the raw material available, contributing Rs. 5,000 himself to the share capital of Rs. 5 lakhs. TIDCO, TIC and SIPCOT will provide matching assistance of Rs. 5 lakhs and the balance of Rs. 90 lakhs will be provided by IDB. The industry concerned is to be started at the Kappalur industrial estate on the outskirts of Madurai. Twelve other such small industries are to be started in the rural areas to benefit about 1,000 families. In 1977 industrial unrest was widespread in the country as the number of mandays lost due to strikes and lockouts increased from 12.8 million in 1976 to 21.2 million in 1977. Tamil Nadu had the second largest number of strikes and lockouts at 301 (after West Bengal 392), and the number of mandays lost was 2.6 million, while Maharashtra and Gujarat had lesser numbers in both closures and number of mandays lost. However the Union government's declaration that it would not recognise any agreement arrived at under gheraos or other duress has stopped such incidents in industries, and with government efforts to improve the industrial climate, the number of mandays lost due to strikes and lockouts during the first five months in 1978 have fallen sharply to 4.76

million compared to 6.14 million lost in the first 5 months of 1977. What is even more encouraging is the monthly decline in the day lost (January 2.07 million, February 1.09 million, March 0.78 million, April 0.57 million and May 0.26 million). It is to be hoped that this trend will continue. The Union government's decision to allow bonus of 8.33 per cent for the accounting year 1977 has been referred to earlier, and the decision will apply for the present until the Bonus Act of 1965 is amended in light of the report of the Committee set up for this purpose and accepted by trade unions and employers organisations. The government also announced at the end of August that it did not accept the Bhoothalingam Committee recommendation for a uniform rate of dearness allowance for the whole country based on the DA being linked to the cost of living on a uniform basis; which in turn was to be established on the basis of the all India average consumer price index for industrial workers. It continues the existing system for government employees, accepted the Committee's minor recommendation that DA should be allowed for all including top salary workers, and has instructed public sector units which have not done so to switch on to the value per index Boothalingam system.

VI Other Items

Director's Section :

Through the newly started Research Scholars' Seminar the Institute tries to be of service to the Ph. D. and M. Phil. candidates (at the moment confined to Economics) in the city. It is a well known fact that research is one of the areas where learning can be only through doing and that those who are new to research are best initiated into it through their involvement in the work that other researchers are doing. It is a fact too that the absence of a community of researchers is largely responsible for the rather low level of research performance in our region. The idea behind the Research Scholars' Seminar is to bring together those who are working on their dissertations, or about to start on them, so that they will learn from one another how research problems are formulated, how the problems are proved and how the findings are communicated. The Departments of Economics of the Madras University, Presidency College, Loyola College, Ethiraj College and Madras Christian College have so far agreed to cooperate in this venture and it is hoped that one or two other Departments may also join the programme.

The main features of the programme were decided upon at a meeting of Heads of Departments held in the last week of July and the first seminar was held on Saturday, August 19 when Mrs Shanti, Ph.D. candidate from the Presidency College presented a paper on "Productivity Trends in Selected Industries of Tamil Nadu" concentrating on the problems of the measurement of pro-

ductivity. The seminar was attended by eight research scholars and three research guides. The next session of the seminar is scheduled to be held on Saturday, October 7 after which it is expected to become a regular feature on the first Saturday of every month.

A further and related project which the Institute proposes to commence immediately is the compilation of a Manual on Data Sources. Data relating to the state and the country are available with many of the government departments, libraries and other organisations in the city and the neighbourhood. And one of the primary problems of a researcher is to find out what kind of data are available and where. It is hoped that the Manual will be ready early in 1979.

India International Centre :

In August there were two meetings of the Board of Trustees of the India International Centre, one to deal with the annual accounts and the budget for the year and the other to prepare for the General Assembly. The General Assembly met on August 21, reviewed the working of the centre and requested the Board of Trustees to appoint a committee to undertake an assessment of the Centre's work and make such changes in its functioning as may be desirable.

Indian Adult Education Association and Nehru Literacy Award :

The Executive Committee of the Indian Adult Education Association met in early August and reviewed the annual pro-

gramme execution, the projects of the member associations with special reference to the National Adult Education Programme, and the preparations for the annual conference at Coimbatore. A meeting of the Jawaharlal Nehru Literacy Award Committee met, examined the 16 candidates that had been submitted and selected the person for the award.

Delhi Study Centre and TV :

The Delhi Study Centre met in August and had a full fledged discussion on national priorities. There was general agreement that the major priority was to execute the draft plan that has been adopted, and get as near the established targets and objectives as possible. That is the task before the people and government. Towards the end of the month there was a half an hour discussion on the National Adult Education Programme at the Delhi TV station with emphasis on the reasons why this time around there is hope that it will succeed.

ICSSR :

A meeting of the Research Advisory Committee of the ICSSR met in Delhi at the end of August. In addition to reviewing and approving a number of research projects and fellowships, it reviewed its own procedures and agreed with the member—secretary that there should be greater decentralisation to the secretary and that the committee should concern itself only with broad policy matters.

Anti-Apartheid Year :

The government of India has established a national committee to plan and

celebrate the Anti-Apartheid Year, 1978 under the Chairmanship of Mr Asoka Mehta. The Committee met in late August and drew up a programme of state's seminars, Radio and TV talks, public meetings, dramas, essay competitions and publications to make the anti-apartheid programme known and to get a large number to participate in it.

Second Report of the Education Finance Commission :

The second report of the Education Finance Commission was presented to the state education minister at the end of July. The report is the first of its kind to apply the cost benefit tool to educational expenditures in Tamil Nadu and draw some important conclusions about the wide gap between high individual benefits and low individual costs, low social benefits and high social costs that result from these expenditures, particularly at the university and secondary school levels. It has also proposed means of correcting these imbalance.

World Literacy Day

In connection with September 8 World Literacy Day, the International Jury met in Paris at the end of August and reviewed the proposals made by 16 countries for the award of the two prizes to organisations and individuals that had made outstanding contributions to the literacy effort. It awarded the Pahlavi Prize to the National Literacy Centre of Tanzania and made honourable mention of the effort of Mrs Welthy Fisher, the United Arab Emirates programme, and the Honduras campaign for literacy. It awarded the Krupskaya prize to the literacy programme in Vietnam, and made honourable

mention of the work of the Andhra Mahila Sabha, the women's literacy programme in Syria, and the fight against illiteracy in Burundi. The awards will be made on September 8.

Rajya Sabha

The Rajya Sabha worked all of August on various Bills concerning Police Amendment Act, the repeal of the Preventive Detention Act, the Constitution Amendment Bill, the Supplementary Appropriation Bill, the Children's Workers Bill etc. There was also a meeting of the Consultative Committee on Education, Social Welfare and Culture when the National Adult Education Programme was once more reviewed and supported,

and some of the education and social welfare activities reviewed.

September Seminar

The paper for the September seminar, "Population Trends" by Mr K K Pillay, together with a summary of the discussion which took place at the seminar under the Chairmanship of Mr M Srinivasan on September 28 appears as the first article.

Second Article

The first part of a paper on "International Educational Co-operation" appears as the second article.

POPULATION TRENDS

By
K. K. PILLAY
Madras.

In recent socio-economic history, no question has received such a great attention in India, as the problem of over population. Unemployment, the low standard of life and the miserable position of the villages are others, but they are all intimately connected with overpopulation. When a given population shows signs of increasing in such a measure as to indicate a growing diminution of income per head, we speak of a tendency leading to overpopulation.

Though Malthus, the English economist is the earliest of the modern writers to lay stress on the so-called 'population explosion' in the economically backward countries, several others have also emphasized it. Recent analysis has, however, shown that the theory of Malthus on population is defective in certain particulars. Nevertheless, it must be acknowledged that it still contains a fundamental element of truth. Basically Malthus was right in his estimate of the power of human increase and in holding that except under the most unusually favourable circumstances, means of

subsistence will not keep pace with the growth of population if human fecundity is realized to the optimum extent.

Long before Malthus, surveys of population, however perfunctory, had been undertaken. We learn about a Census in ancient Rome in the reign of Serrius Tullius, in the 6th century B. C. Later we hear of a more systematic Census in the time of Julius Ceasar in the 1st century B. C.

Several other countries had attempted to prepare their Censuses. The Arab world, however, has paid scant attention to it. Even in recent times when the Census was taken in some countries the results were kept confidential. For instance, no Census was taken in Lebanon since it gained independence in 1943. The reason was the acute rivalry between Christians and Muslims and therefore the facts connected with the population formed too sensitive political issues. No Census on a nation-wide scale has been undertaken since 1960. In Saudi Arabia a Census was undertaken only

last year. But the results have not been released. Oil politics is the principal factor. The authorities do not want to disclose to the world that the country is underpopulated. In Ethiopia again the Government is against Census. The Arab world on the whole, has intrinsically a suspicion about head counts and other census information such as the number of wives. A Western demographer declared that "there has never been a reliable census anywhere in the Arab world".

In India we hear of Census as early as the time of Kautilya. His Arthashastra speaks of two important officials, the *Samaharta* and *Sannidhata*. *Samaharta* was comparable to the Collector-General. He supervised the collection of revenue in the whole State. All the *Adhyakshas* (superintendents) whose duties covered the entire range of the civil and economic life of the people, were subordinate to the *Samaharta*. His function included the maintenance of census and survey, recording the enumeration of the people, their houses and cattle as also the measurements of their pastures, gardens, arable lands etc. The main objective was the collection of military data. It seems probable that the practice of taking census though imperfect, was in vogue in all places of India where settled administrations prevailed.

Not only in North and Central India but also in the extreme South, census operations were undertaken. As far as our knowledge goes, under the Imperial Cholas, one Senapati Kuravan Ulagalandan is mentioned in some of the Thanjavur inscriptions. Apparently the officer received his surname Ulagalandan (one who measured the world) after

carrying out the revenue survey which began in A. D. 1001. References to such surveys are found in several subsequent records which show that the preparation of Census, however imperfect, was in vogue.

In the Medieval period also we find certain examples under well-organized administrations as under Akbar. The *Ain-i-Akbari* was an encyclopaedic treasure of statistics regarding the empire. We do not have authentic references to the practice of preparing Census returns in the other parts of India till 1872 under the British. But this Census Report of 1872 itself was incomplete. In fact, the Census report of modern times commences only with that of 1881. It was prepared systematically on an actuarial study of the age data and the preparation of a life time with the aid of well qualified British actuaries. In respect of the subsequent Census operations, this work was undertaken by trained Indian actuaries.

Ever since the Malthusian gloom had infected the British economists, it began to influence their Indian counterparts, too. Therefore, the subjects mainly concentrated in the Census Reports of India were the problems of population and food supply. While the census Returns of the decades from 1881 to 1921 were describing the statistics and other details concerning the people, the problem of overpopulation began to receive a marked attention from the Census Report of 1921. One of the effects of the new emphasis was that the Indian National Congress appointed a National Planning Committee which had a sub-committee on population. The report was published in 1947. But it did not suggest any bold plans. Further advance

in the direction of arresting the growth of population took place only later.

Before we consider the later Census Reports and their recommendations, mention may be made of other devices adopted to gather details about certain aspects of the population.

(1) Civil Registration¹

This old system had been current in many parts of India. But, during the Second World War it came to be neglected. Since then the efficiency of the system has further deteriorated especially after it was entrusted to local bodies such as panchayats. In the earlier days, when registration was entrusted to police and chowkidars (watchmen), births and deaths were reported more completely, at least in some states. Now it has deteriorated in efficiency even in such areas.

The uniform Registration of Births and Deaths Act of 1969 has been enacted and is enforced in almost all states. However this has not achieved accurate and full results. Every one realises the importance of accurate registration of statistics for determining current trends in birth and death rates in the different parts of the country, but so far the successes achieved are not satisfactory.

(2) Simple Registration Scheme

Simple Registration Scheme was commenced in 1964 in order to obtain reliable estimates of State births and deaths. It is a miniature registration scheme set

in randomly selected villages and towns, through local informants, and is supported by independent semi-annual house-to-house surveys to detect omissions. The progress achieved by the Scheme is promising, but there is scope for improvement. The scheme has extended its range of tabulations and has produced estimates of different measures of fertility and mortality. To the extent that age-specific fertility and mortality rates average number of children born alive and mothers' age, deaths by their order, infant mortality rate, expectation of life etc. can be ascertained. But simple registration cannot be too much depended upon for any region much less for the whole country.

(3) National Sample Survey

National Sample Survey is the above scheme extended over the whole nation. Moreover, it is a multi-purpose survey covering a wide range of subjects. Theoretically this is very useful. It affords a great scope for producing accurate nation-wide data, but unfortunately one cannot be sure of the accuracy and quality of these data. It should not, as it often does, publish whatever it gets, good or bad. There may be a basic difficulty of a multi-purpose survey such as the N. S. S. in producing reliable data for specific purposes. The defects can be improved by proper pairing of data collection with arrangements for tabulation and analysis.

(4) Standard Fertility Survey

In 1964, Standard Fertility Surveys were undertaken at six centres primarily

1. A Status Study on Population Research in India, Demography, Vol. II, Ch. 3.

as methodological studies for obtaining reliable estimates of birth and death rates and other fertility indices and to evolve sensitive indices for detecting small changes in fertility. Uniform methods of data collection, analysis and report writing were adopted. Among the centres chosen for the study, that of Gandhigram provided the best results. It is a useful experiment which can be tried elsewhere, too.

All these devices form auxiliaries to the Census projects. Their weakness lies in the fact that the respondents are often illiterate and ignorant. Their answers to the questions are not given after due deliberations. But now electronic computers have greatly extended the scope for exhaustive study of demographic, economic and social interactions in fertility, where a large number of variables interact through time. With the aid of these computers, the predictions in the fields of fertility, mortality and migrations have been vastly improved. But still further improvements remain to be undertaken in these surveys and data collection.

The data provided by the Censuses in Modern India

The Census returns of modern India are valuable. There has been an unbroken chain of decennial population censuses from 1872, a record that few countries in the world can claim. The Census of 1872 was incomplete but the succeeding ones were systematic and full. With the taking of the last Census in 1971 we completed 100 years of Census taking in the country. With every Census the technique adopted has shown improvement. Since the Census of 1971, the Census data pertain to the population as at the sunrise of 1st April of 1971 or the Census year. The enumerations are all done on the basis of a well-laid plan. All possible care is taken in the Census count in order to ensure complete coverage. Nevertheless, accuracy in respect of all details concerning the population of the vast sub-continent cannot be claimed to have been achieved.

Some basic Tables alone are recorded below:—

INDIA'S POPULATION: SOME DEMOGRAPHIC CHARACTERISTICS

Year	Population (in million)	Sex Ratio (Females per 1000 males)	Percentage of Distribution Rural	Urban
1891	235.9	958	90.5	9.5
1901	238.4	972	89.2	10.8
1911	252.1	964	89.7	10.3
1921	251.3	955	88.8	11.2

—Contd.

Year	Population (in million)	Sex Ratio (Females per 1000 males)	Percentage of Distribution Rural	Urban
1931	279.0	950	88.0	12.0
1941	318.7	945	86.1	13.9
1951	361.1	946	82.7	17.3
1961	439.2	941	82.0	18.0
1971	547.9	930	80.1	19.9

The data provided even in the Census Reports are not quite accurate. Infact, one recent writer stated that "the non-availability of reliable and up-to-date statistics is a basic flaw in the management of our economy."

On account of the great importance paid to the language question the following Table pertaining to 1971 is included :

Language	Population in million	Percentage of the total population
Hindi	162.58	29.67
Bengali	44.79	8.17
Telugu	44.75	8.17
Marathi	42.25	7.71
Tamil	37.69	6.88
Urdu	28.61	5.22
Gujarathi	25.88	4.72
Malayalam	21.94	4.00
Kannada	21.71	3.96
Oriya	19.86	3.62
Punjabi	16.45	3.00
Assamese	8.96	1.64
Kashmiri	2.44	0.45
Sindhi	1.68	0.31
Other languages	69.36	12.48

How glaringly disparate statements are made about this language affair even by responsible men!

Religion :

According to the 1971 Census 82.7% of India's population belonged to the Hindu religion and about 11.2% to Muslim religion. The percentage of the Christians and the Sikhs was 2.6 and 1.9 respectively.

Literacy :

Literacy in any languages was as low as 6% in 1891 and only 8% in 1931. In 1971 it had increased to 29%. Male literacy was found to be nearly 39% and female literacy was found to be about 19%. Rural areas have lower literacy rate than urban areas. The proportion of literates with the population of 5 years and more in age is 33.8%, it being 43.4% among males and 21.5% among females.

Perhaps an important grouping is on the basis of fertility.

Fertility :

The fertility of Indian woman is high and normally between 6 and 7 children are born to a couple who remain married throughout the reproductive period. This average number is, however, reduced from 4 to 5 when some are widowed, divorced or separated.

The pattern of age-specific fertility among females between the ages 15—44 shows that the highest fertility exists among females in the ages between 25 and 29 years. The rate then tends to decline and the decline takes a very sharp turn after the age of 35.

There is some evidence to indicate that fertility of those women who are educated above Matriculation and also of those who marry after the age of 19 is lower than of those who are less educated or marry earlier.

The growth of population :

According to some rough estimates the population of India about the middle of the 19th century was nearly 100 millions. It had risen by 1941 to 318 millions. It is estimated by certain demographers that in recent years India's population increases every year by at least four millions. Many students of Indian demography have been greatly shocked by the "alarming rate of increase", for India is apparently adding the population of a Spain or a Poland or an England every decade !

The growth of India's population in the last two decades has been amazing. In 1961, it was about 439 millions. It increased to 548 millions in 1971 and is estimated to have reached 604 million in 1975 which represents an increase of 10.4% since 1971. The annual increase was 1.26% in 1941—51, 1.97% in 1951—61 and 2.2% since then. The projected population of India in 1980 is 672 million, in 1990—819 million and in 2000 A.D., 969 million. This shows that every year India is adding to its number of people no less than 15 million. At this rate, the population of the country might reach nearly 7000 million in 200 years, time. This is staggering ! The density per sq. kilometre is a little less than 200 now; it is likely to reach 315 by 2000 A.D. Progress in public health, improved agriculture, assured food supply from outside when necessary, control of

droughts, inundations except occasionally as in the current years, and famines and the comparative improvement of economic conditions are responsible for the growth of population. Occasionally some theoreticians raise a doubt whether the increase in population is such an undesirable phenomenon as it has been made out to be. They hold that in the past periods of rapid economic development have also been periods of increasing population but whether there is any causal relationship between the two or how it works one cannot say with any certainty. In the periods of rapid development and changing techniques it is questional whether the concept of 'optimum' population can have any precise meaning. But generally speaking, there is no doubt that given a situation in which shortage of capital equipment rather than of labour is the main limiting factor in development, a rapidly growing population is apt to become more a source of embarrassment than of help to a programme for raising standards of living. In other words, the higher the rate of increase of population, the larger is likely to be the effort needed to raise the *per capita* living standards.

In this connection it has to be noted that in recent times there has been immigration from abroad. Besides immigration from Burma, Pakistan, Bangla Desh and other places, about

64,000 families of Sri Lanka repatriates are expected to arrive in India during the Sixth Plan period.

Even earlier the menace of growing population and its consequences were stressed by Jawaharlal Nehru and others of the Congress soon after India became independent. It was emphasized that the pressure of population in India is already so high that a reduction in the rate of growth must be regarded as a major desideratum. To some extent, improvement in living standards and widespread education, especially among women, will themselves tend to lower the rate. But positive measures are also necessary for inculcation of the need and the techniques of Family Planning.² The Five Year Plans for effecting essential changes in the economic development were contemplated. But before considering the suggestions made by each Planning Commission in respect of population it is not irrelevant to examine the position in the leading countries which are not overpopulated. There is no doubt that countries like Japan³, West Germany and United Kingdom as well as India are faced by the threat of overpopulation.

In some countries, of Europe, America and in Australia, the population has either been growing slowly, is stationary or is declining. France is perhaps the only country which has experienced an actual excess of deaths over births

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2. JD. Rockefeller, the oil-magnate, was very much concerned with over population problems. Therefore, very recently he set up the Population Council and he serves as its Chairman and has got the signature of thirty world leaders on a population statistics presented to the United Nations in 1967.
 3. Japan, during the 70 years from 1873 to 1942, saw the stupendous growth of approximately 136%.

for more than a short period. For instance, the French birth and death rates for 1939 were 14.6 and 15.5 and for 1943 they were 15.9 and 16.4 respectively. France was also known as the classic country of birth control. But since the end of the Second World War the new French Government has pursued a very vigorous pro-natalist population policy and there is already a slight reversal of the downward trend of the French population. Now there is an actual small overall increase of the French population.

On the other hand, there is a tendency for the population to decline. One writer stated: "If the birth rate of the United States should continue to decline as it has during most of the present century, by the year 1975, there would be no babies born at all." But it is noteworthy that quite recently the trend has been in the direction of increase in population; the birth rate has mounted up.

Yet population explosion is a myth so far as the U. S. A. is concerned. About 10% of the Americans are over 65 and this proportion should grow if the birth rate decline continues. When the proportion of old people increases, with proportionately fewer taxpayers in the younger age, there is difficulty in financing the social welfare programme needed by the elderly people.

It must be noted that in U. S. A. a larger female population is remaining single now compared with the position in 1960. And many women marry late. So overpopulation has no real meaning for contemporary America.

Africa, South America, Australia, Central and Northern Asia have largely vacant areas with densities of less than 15 per sq. k. m. They may be said to be underpopulated.

But really when the whole world is taken into consideration it cannot be said that it is not overcrowded. The only problem arises from the fact the population is unevenly distributed. South East Asia Europe and eastern North America contain 80% of the earth's population living on 13% of the land's surface, with densities ranging from 15 people per sq. k. m.

It must be noted that some of the areas with the highest densities have the highest standards of living. Holland, for example, has a density of 985 people per sq. mile, the highest in the world. This compares with rates such as 710 (Japan), 627 (West Germany), 590 (U. K.), 455 (Italy), 416 (India), 237 (France), 197 (Indonesia), 174 (Greece), 57 (U.S.) and 29 (Soviet Union). In respect of some countries the density is not known. One thing to be observed is that generalisations in regard to population and its density have to be made with caution. But in relation to the resources there is no doubt that in recent decades India has become overpopulated. Before considering the measures undertaken to combat this problem, there are a few incidental results which call for notice.

Pollution control, on account of the growth of population, has become a necessity in several places in India,

particularly in Tamil Nadu. Loud speakers add to the gravity of problem. Noise causes permanent damage to the eardrums leading to the loss of hearing. It also results in dizziness, headache, fatigue and inefficiency at work. In our country legislation to control noise sources is virtually absent. Really stringent measures have to be taken. Pollution control is a subject that has to be tackled on a war-footing before man becomes a victim of his own making with his living environment getting polluted by various toxic chemicals. India has the largest number of blind children. A cautious approach is needed for industrialisation of the rural areas from this point of view. An efficient type of dust collector has been invented. It is hoped that India may be able to adopt it.

There is a view that planning of trees on either side of the roads around industrial areas, residential localities, hospitals, etc. will minimise the nuisance created by noise considerably. Mr Frank Hodges, WHO consultant and expert on pollution law, has suggested that the Indian Government should create a revolving fund for the provision of soft loans to industrialists for setting up effluent treatment plants. Voluntary organisations like the Bombay Society for the Creation and Prevention of Clean Environment (SOCLEEN) are urgently needed so as to focus public attention on environment ethics and the inter-relationship and complexities of environmental issues. There is a great danger of the spread of leprosy in Tamil Nadu.

The Housing Problem is another acute result of population growth in towns and even in certain villages. The Tamil Nadu Housing Board has evolved a low-cost

design suitable for the rural population. First it proposes to start 200 units at Guduvancheri to be constructed in two years. Water should be drawn from a common well and supplied from an overhead tank.

The Reserve Bank study group has suggested that the commercial banks should provide to this sector Rs. 75 crores. But even this is a drop in the ocean. Taking the rural and the urban areas, there is a shortage of about 16 million dwelling units in the country even according to conservative estimates.

Meanwhile the HDFC Loan for Housing the Rs. 25 crores Housing Developing Finance Corporation Ltd. (HDFC) of the Government of India set up last year, will provide housing for middle and low income groups, as well as for industrial and rural workers. The HDFC will offer long-term loan finance on moderate terms for construction purchase and ownership of residential houses in urban and rural areas all over India.

In Tamil Nadu it is gratifying to learn that a huge housing complex has arisen at Arumbakkam on the western outskirts of Madras, specifically to benefit the economically weaker sections. The other two schemes, to be taken up shortly, are at Villivakkam and Kodungaiyur, near Arumbakkam. All these have been launched by the Government of Tamil Nadu with financial assistance from the World Bank.

Family Planning

For checking over population, besides the basic measures, which can yield only results in the long run, the urgent positive

steps must first be considered. Even before the Five Year Planning schemes in India stressed the need for arresting the growth of population, some attempts were made. Faint beginnings of the birth control movement can be traced to the early twenties. Indian representatives attended the first international birth control Conference in London in 1922 and the New York birth control Conference in 1925. The birth control movement in India became progressively more organised until its culmination in the formation of the Family Planning Association of India in 1949. This Association convened the first All-India Conference on Family Planning in 1951 and an International Conference on Family Planning was organised at Bombay in 1952.

In between these dates—events promoting interest in family planning were (1) establishment of the Neo-Malthusian League in Madras in 1928 (2) the Mysore Government's direction in 1930 to State Hospitals to give birth control advice (3) the founding of the *Family Hygiene Society* and of the *Journal of Marriage Hygiene* in 1935 (4) the *Lucknow Population Conference* in 1936 and the useful discussions in it (5) the convening of the *First Family Hygiene Conference* in connection with the Second All-India Population Conference in 1948 (6) the strong recommendation of the Health Survey and Development Committee for taking up propagation of family planning as an official responsibility.

Regarding the Birth Control controversy between Mahatma Gandhi and modern demographers there appeared differences only regarding methods. The Mahatma wrote over 50 articles urging the need for controlling population in Young

India and Harijan between 1925 and 1946. But he unstintingly advocated self control or Brahmacharya life as the infallible sovereign remedy. He knew abstinence was difficult, but he denied that it was impracticable. At a later stage he counselled avoidance of sexual union during unsafe periods, confining it to the safe period of about 10 days during the month.

(7) The President of the 1938 session of the Congress, S. C. Bose cried for the need for arresting the growth of population. He constituted the National Planning Committee of the National Congress under the chairmanship of Jawaharlal Nehru and it passed several resolutions, the chief of which urged Birth Control. Thereafter, with the advent of Independence, Jawaharlal Nehru as Prime Minister took up the question seriously in connection with his Five Year Planning Scheme.

The Five year Plans and Over Population in India :

Prime Minister Jawaharlal Nehru who evinced a keen interest in the matter of population appointed a Planning Commission in March 1950. He was himself its Chairman. The general aim was to increase productivity and reduce inequality and the First Plan laid great stress on the development of agriculture and for this a large amount of Rs. 1001 crores was allotted. Industries were not neglected. But the focuss of attention was still on large scale industries. The promotion of social welfare, particularly education, health and housing was attended to. On the whole in the various spheres mentioned above, some progress was achieved. But the problem of over

population did not receive direct attention.

The Second Five Year Plan (1956—61) developed further on the lines stressed in the 1st Plan. An additional feature was that the village, cottage and small-scale industries were attempted to be promoted in order to improve the condition of the masses and reduce rural unemployment. Another additional feature was that emphasis was developed on transport facilities. Regarding the problem of population, the Commission was content with stating that "since rates of population growth can be altered only over a period one has to go by the results of trends which commenced earlier." A solution suggested was only a rapid improvement in incomes and levels of living.

The Third Five Year Plan (1961—66) witnessed two external events which influenced the pattern of the plan. The Chinese aggression of 1962 and the Pakistan hostility of 1965 demanded a great attention to the question of defence. Therefore, the third Plan had to provide more for defence than for agricultural and industrial development, though they were not neglected. But the most relevant feature to be noticed here is that the results of the 1961 Census demanded attention to be paid to the question of population. This Census showed an excess of as much as 7 million over what up to then was considered a high estimate of 431 million in the aggregate. It was in the light of these results that

the plan came out with the following statement—

"A large part of the increase in output is absorbed by the growth of population. Improvement in condition of health and sanitation will further lower the death rate, specially the rate of infant mortality and may for a time event end to raise the birth rate. The objective in stabilising the growth of population over a reasonable period must, therefore, be at the very centre of planned development. The programme of family planning involving intensive education, provision of facilities and advice on the largest effort in every rural and urban community has, therefore, the greatest significance."⁴

The third Plan, therefore, devoted considerable attention to spelling out the programme, means and logistics of mounting the family planning movement. The growing problem of unemployment, compelled greater attention to the population problem.

The fourth Plan was started as an emergence, One Year Plan. The supreme aim of the Fourth Plan was to revolutionize agriculture, though the attention on heavy industries was not neglected. The population problem also received attention. The Plan urged a nation-wide appreciation of the urgency and gravity of the situation.

The fifth Five year Plan: Again the population problem received great attention. The need for quickness

in giving effect to the scheme was realised. The importance of providing minimum public health services was also felt to be a corollary of the population problem. It was felt to be necessary to consolidate past gains in the various field of health, such as communicable diseases, medical education and provision of infrastructure in the rural areas.

The Sixth Draft Plan: (1978 — 83): During the period of emergency there were some abuses of Family Planning schemes, particularly in U. P. This created a reaction after the Janata Party assumed power. Population measures received a setback for a time. According to reports received by the Central Government from the States, the number of sterilisations during the year ending March 1978 totalled only 9.2 lakhs compared to 8.2 millions recorded in 1976-77. This is unsatisfactory. At the Conference of State Health Ministers in April 1977 the aim for the year was stated to be 4 million sterilisations. But in fact only 25% of this aim could be achieved. Even other devices of birth control measures were found to be unsatisfactory.

One reason is the reaction to the Emergency. Cases have come to the notice of the Government in which the doctors have been reluctant to undertake sterilisation operations even when persons have volunteered. Evidently the doctors have a lurking fear that they may land themselves in trouble if they perform sterilisations. The Prime Minister and the Health Minister had sought to dispel these fears. It remains to be seen whether this will have the desired effect.

The departure from the scheme decided by the previous Government lies in the nomenclature. The words "family planning" have been substituted by "family welfare", "targets" by "levels of performance", and "sterilisations" by "voluntary sterilisations."

But really, the avoidance of the phrase "family planning" has proved counter productive and should again find its due place in the scheme of development. According to a recent study group which comprised leading economists, demographers, journalists, sociologists and medical scientists—the progress in the Draft Plan for 1978-83 relating to minimum needs, integrated rural development, adult literacy and other welfare measures should be linked with fertility regulation and family planning should be given a clear and unambiguous place within the strategy of national development as a whole.

Methods of Family Planning in India :

The current policy does not utilise all available means of *contraception* much less all birth control measures. (1) The Indian Government wasted valuable years in the early stages of its population control programme by experimenting exclusively with the "*Rythm*" or safe period methods long after this technique had been demonstrated to be one of the least effective.

(2) *Sterilisation* is adopted either through vasectomy of fathers or tubectomy for mothers. Vasectomy is less dangerous. Today even tubectomy is simple and less dangerous than before. Although the Indian family planning programme was officially launched in

1951, nothing substantial was achieved prior to 1965, by which time, only 0.855 million sterilisations were recorded. In 1965, the programme was installed on a sound organizational base. The official bulletin shows that about 11 million sterilisations and 4.3 million I.U.D. insertions were performed prior to 1973.

(3) *I.U.D. (Intra Uterine Contraceptive Device)* or the loop was introduced in 1965. But it led to excessive bleeding in about 10% of the cases. Further, some women have experienced discomfort in inserting the loop. A better design is attempted to be discovered. However, even as it is, it remains the only known inexpensive and reversible method not requiring repetitive attention.

(4) *An anti-fertility vaccine* was discovered. It was believed to arrest conception. But a recent controversy has arisen, because some consider it to cause cancer, while several medical experts contradict it. Actually from April 1978 its use is extended.

(5) *Condom* or the *sheath* is another contraceptive device. Earlier, the required number was not produced. Now India is self-sufficient. Even so, it is important to ascertain the implications of the new scheme of free and commercial distribution of condoms in terms of programme impact. The Government should evolve some suitable machinery to obtain correct statistics about regular users through systematic survey, and the surveys should also give use-effectiveness.

(6) *The pill* is one of the most recent contraception methods. But it had to be imported from outside and therefore at the outset it was expensive. Now two

American concerns have established plants in Bombay. This would tend to reduce the price of the pill. Formerly some thought that it produced adverse effects. But that fear has ended and experts have voted in favour of the pill. Nevertheless, continued use of oral contraceptives is not advisable; there should be intervals of non-use. Diaphragm, jelly tubes and foam tablets are other contraceptives now being experimented. A contraceptive Pill for Men from China Rose has been recently prepared. It has been tried on rats, monkeys and dogs. An expert, Dr Dikshit who has conducted these experiments, claims that unlike other birth control devices, there were no harmful or depressing side-effects by the use of this pill.

(7) *Abortion* is a positive and drastic device. But it is controversial issue. Some feel that abortion is against Indian culture, while others maintain that it is not to be condemned if the persons involved are the legally married husband and wife. Earlier in India as in Britain abortion was illegal. In India in 1971 the law was passed sanctioning abortion. But most countries have rejected this method. On the whole though the Government of India has been increasingly spending money on Family Planning, occasionally there has been a slump. After the Emergency was terminated and the new Government assumed power there has been a weakening of the Family Planning programme. The aim for 1977 was stated to be 4 million sterilisation. But in fact only 2.5 per cent of this could be achieved. But now again there is a renewed attempt at improving the programme.

The recent Committee of experts mentioned earlier lays stress on (1) on the role to be given for women whose involvement in the development process is fundamental to the success of the population policy (2) integration of family planning with the health care delivery system, and inclusion of specialists in social psychology in the scheme (3) evolution of an operational strategy to achieve the targets of reducing birth rate to 20 per thousand by 1982-83 (4) inclusion of medical termination of pregnancy as an essential component of the maternal and child health services, (5) mobilisation of voluntary effort in a larger measure and (6) revival of the "cafeteria approach" to enable the couple to choose the methods according to their desires and greater emphasis on vasectomy than on tubectomies.

Thus the Janata Government lays greater emphasis on voluntary effort than target-oriented birth control measures. But it is doubtful whether this alone will be enough to bring about a visible gain in the near future. The industrial workers should be persuaded to adopt family planning methods by offering incentives. Rural medical camps can also function effectively at stated times. A new scheme of Family Planning has been announced on 22nd April 1978. According to this a two year scheme is to be tried for family planning. Private doctors are to be permitted to perform tubectomy operations for women. Each doctor will be paid Rs. 30+5. The women undergoing the operations will be paid Rs. 70+3. It is to be tried in the whole of India, and there is a great chance of its proving successful.

The Social prejudices against Family Planning: There are certain obstacles

to the adoption of Family Planning. India is a tradition loaded country. Conservative people are against birth control. Moreover, the Hindus generally believe in the Karma theory which does not help the promotion of Family Planning.

Secondly, the Jan Sangh in particular contends that more Hindus than Muslims are being sterilised and that this has its political repercussions. The Hindu point of view is that in a secular democracy the monogamic Hindus will be handicapped. But it should be noted that now Muslims also are taking to Family Planning. The opposition of the Ulemas has become weak. The Roman Catholics were once against compulsory sterilisation. The Cardinal said that according to the U. N. Declaration on the Human Rights, the family is the "the natural and fundamental element of society and the State." He stated that it is the parents who have the right to decide on the number of children.

Thirdly, in India in particular, there is the desire on the part of parents to have children. Many pray in temples for children. Some pray for male children.

Finally, the Communist ideology opposes the Malthusian contention but insists only on proper distribution. It is said that Marxism does not recognise birth control and that it is opposed to its practice. In fact, however, this is not so at all. Engels in a private letter wrote "This is a private matter between husband and wife, and possibly their family doctor." Now, in the Soviet Union, women are free to determine for themselves the number of children.

Fundamental Preventive Measures

I. *Raise the age of consent*: The maximum age at marriage for girls fixed at 14 by the Child Marriage Restraint Act of 1929, was raised to 15 in 1957. This, too, was not satisfactory. The Government have recently raised the age of consent to 18 for girls and to 21 for boys.

The age at which young men marry has been slowly going up to 21 years, particularly in urban areas due to extended education, economic necessity, housing shortage and other factors. However, in rural areas the concept of marriage at higher age levels has not spread. If the villages are provided with some new vocational high schools for girls with emphasis on home economics, hygiene and mother craft, the girls could be kept busy, and this might help to postpone marriage by a few years. In Europe the girls marry only between 25 and 28 years.

II. *Elevate the status of women*: The outlook of women should be changed through education and a suitable environment. Their education must be vastly improved. Fight against early marriage and also condemn the inauspicious nature of infertility and the unwanted barren woman, the desire for male children, the social ban on widow remarriage, the lack of economic independence for single woman, and encourage the facilities for securing professional careers for women in general reduce the unhappy plight of the widow, divorced and separated woman. A proper approach to these questions will have a direct effect on family size and population growth.

III. *Education*: Special attention must be paid to education. The level of literacy has increased from 24% in 1961 to 29.31% in 1971 to 39.5% for males and 18.4% for females. Clearly 70% of the population is still illiterate. As against this, the level of literacy achieved in Australia, Canada, U. K. and U. S. A. is 95%. While the Constitution of India provided for free and compulsory education for all children until they complete 14 years by 1968-69, only 63% of the children in the age group 6-14 attended the school. Not only is the number of school going pupils small, but there is a considerable wastage in education. There are many drop-outs at various stages.

We hear much about Non-formal Education in recent years. One problem is how to improve the educational opportunities for the rural masses and thereby bettering their employability and economic status. Many villagers are unable to pay for their education. It has, therefore, asked for a "double piercing system" under which the expenses of education of these people will be considered by the Government while those who are economically better off will be charged for their education. Further, it is recommended that the benefits of more efficient teaching and training available in "independent schools" like public schools should be made accessible to the socially and economically disadvantaged candidates by reserving for them 50% of the seats. Care should be taken to ensure that this does not lead to a decline in standards.

But the U. G. C. and others have laid stress on organising correspondence courses in core Universities; in core subjects and then extending them to the other Universities; however, to

apply it to all subjects will take more than two decades.

Again, non-formal education, if it is to commence from the post-elementary stage will call for a much larger volume of expertise than is being trained and got ready now.

Delink degrees from jobs in order to avoid gate-crashing in Colleges and take to education for its own sake.

Adult Education must be work-oriented rather than target oriented. The concerned teachers must cultivate familiarity with the habits of the rural folk.

Free and compulsory education is an urgent problem according to the Directive Principles of State Policy.

There has been good progress but yet it is not satisfactory. It was hoped to bring 90% of the 6—11 age group to school by 1971 and 100% by 1975. But still it is a far off cry.

Prohibition has been introduced in a few states including Tamil Nadu. The enforcement of Prohibition is not easy. Problems of illicit production of liquor have created difficulties for the Police. Education may be of help in this direction, but only after a long period of time.

Education on Family Planning :

During the course of education attention may profitably be paid to the important question of family planning. The Karnataka Government is thinking of introducing family planning education

right from the elementary school level. But though that is going to one extreme, ideas on family planning can be introduced in certain stages of education. Perhaps it can be skilfully incorporated in topics on Social Studies in the High School stage. More than that, job-oriented courses in 'Population Planning' can be started in the Universities. In Tamil Nadu except the Annamalai University, the other Universities are not imparting any courses of study on 'Population Planning'. Both demographic research and population education are equally important. Fortunately, a two-year project of promoting population education coordinated with workers' education is being launched by the Government of India from October, 1978.

It may be noted that the Kerala University is the only Indian University which has introduced a post graduate course on Population study.

Since Demography is multi-disciplinary, the training of demographers who are drawn from different disciplines, poses many problems. However, the experience of the Kerala University is encouraging.

Vocationalisation of Education is now recognised as a longfelt need and is drawing the attention of educationalists. A large number of high schools and junior colleges are located in rural areas. The education programme in these institutions should take into consideration the family background and the vocational requirement of the pupils. Mostly belonging to the cultivating class, their education must be adapted to agriculture. The areas in the farm enterprise where scientific knowledge can be

imported and skills can be developed are: seed production and seed processing; fruit preservation; propagation of plants; bakery technology; rat control; honey production; sericulture; raising nurseries of commercial crops; soil analysis and fertilizer usage; seed treatment; grain storage inspection and control of stored products pests; production of bacterial cultures; ornamental gardening; dairying, poultry etc.

The vocational programme should be self supporting and production oriented. Production skills developed during schooling will create confidence in the pupil to handle the situation he chooses for his vocation.

Urbanization and Migration

India is usually described as a land of villages and the migration of people to towns has been slow except during certain decades. The causes of this feature are the home-loving character of the Indian people, which is the result of economic and social causes and of the immobility of the agricultural population rooted to the ground fenced by caste, language and traditional social customs and filled with an innate dread of change of any kind.

Nevertheless, there appeared a spurt in the growth of migration for about four decades after 1931. The increase was atleast 30% each decade. On the other hand the corresponding figures given by the 1971 Census are 19.7% showing only a small change.

Greater Bombay ranks first in the growth of urban density. In 1961 it had 4.15 million; Calcutta came second

with 2.93 million, Delhi, third with 2.34 million, Madras, fourth with 1.73 million, Hyderabad, fifth with 1.25 million and Ahmedabad, sixth with 1.5 million. There are numerous towns in the different parts of the country. Intra-urban migration impeded rural urban migration due to the heavy backing of unemployed and underemployed persons in urban areas.

The cry 'Back to Villages' was given a great impetus by Gandhiji. It fitted with his ideal of social reconstruction, development of the Khadi and other village industries.

Planning for regional growth and development of villages:

There are several studies of growth and location of towns and cities in some States but none on a regional basis. The important problem is to disperse population concentrations regionally and between town and country in such a way as to facilitate the optimum use of national economic assets.

As mentioned earlier, the emphasis on the need for the migration of urban people back to village started with Gandhiji. He observed with great anguish that there is a wide cultural gap between the urban elite and the rural masses. The urban elite in the large centres is Westernized. There is a notable gap between the attitude of the town folks and life style and those of the peasants and urban workers. Even between these two broad divisions there are gradations. Generally speaking the expectation that cities would act as centres of cultural change and dissemination has not been realised in any notable measure.

It may be said that in cities and towns caste distinctions do not appear on the surface as much as class differences. In the villages people of different castes have been living in different streets. The Village Panchayat Raj has encouraged casteism rather than integration of the different groups in a village community. The joint family system was more the rule than the exception in villages.

Gandhiji initiated a programme of village industries to develop a self-sufficient village economy. This is expected to reduce the disparity between towns and villages. The Third Five Year Plan laid down the following requisites for this purpose.

- (1) New industries should be established away from large cities.
- (2) Planning of large industries should be based on regional concept—not ignoring the village.
- (3) Economic interdependence between towns and surrounding rural areas should be strengthened.
- (4) A diversified occupational pattern in rural areas should be aimed at in place of the present extreme dependence on agriculture.
- (5) Other measures include (a) aid to village industries (b) promotion of small business (c) location of industries and industrial estates on the periphery of large cities. But most of these prescriptions have proved only theoretical. Industries have an irresistible tendency to cling to cities and towns.

To expatiate upon the development of rural industries is common but it is difficult to be achieved in practice. The

Rural Urban Relationship Committee (1966) correctly observed that urbanization must be considered as a continuous rural-urban transition process, the present differences representing only a stage in the ultimate realisation of the noble aim of Gandhiji and more recent social reformers. In actual practice rural-urban migration in search of employment has been steadily progressing.

But in addition to the introduction of new industries in villages, some of the age old crafts could be revived. For ages there have been a number of experienced craftsmen and artisans and their services could be utilised to train other people who could be enabled to earn their livelihood with self-respect. This can go ahead along with the starting of small scale industries. The workers in the villages can be employed for providing infrastructure activities like laying roads, bridges and provision of watersupply. The present organisations of co-operative societies should be converted into multiple co-operative societies. Some industrial magnates can voluntarily come forward to open new industries in villages, if necessary with Government aid.

Diary scheme brings cheer and income to village women. Cottage industries as well as suitable handicrafts can be encouraged in which both men and women can co-operate. Women in particular can take to tailoring, embroidery work, cane work etc. In Tamil Nadu nearly 30,000 persons had been absorbed in the small sector manufacturing match-boxes. But several small industries are languishing, as for example, the handloom industry.

Distribution on the basis of sex :

That brings us to the question of the variation in sex ratio in India. It is commonly observed that in the Western hemisphere, the trend has been in favour of a feminine population, whereas in Asia in general and particularly in India the trend has been in favour of a masculine population. This trend has persisted till to-day.

All over the world, there is a general observance of an excess of male births over the female births, but whereas this trend is reversed in the advanced nations, in India, the loss of more females after birth due to insufficient attention and care given to girls after birth—functional derangements after puberty etc results in excess of males over females. It must be noted that females per 1000 males were only 932 at the time of 1971 Census in India, while in U. S. S. R. this ratio was 1,170 and in U.S.A. 1050. Even according to the Census of 1921 itself the number of males in India was 163,995,554 and that of females was 154,946,926, giving a proportion of 945 females to every 1000 males.

The cause for such a feature is that in India, unlike elsewhere, after the period of adolescence is reached the death-rate amongst females shows an excess over that of males contrary to European experience. (1) An explanation is afforded by the existence of certain social practices such as that of the purdah which is specially disastrous in its effects on the health of women both among Muslims and certain regions near Muslim areas among Hindus also. (2) Prevalence of early marriages carry risks of early motherhood. Nervous debility, consumption and uterine diseases create havoc

among them. (3) Another subtle cause is that in India female life is held cheaper than in the West not only by men but by the women themselves and this results in a deliberate neglect of health in the case of females. (4) Women workers in field or factory are seldom in a position to enjoy the necessary period of rest before and after delivery which impairs their physique and (5) until recently unskilful midwifery.

Another peculiarity of sex-distribution in India is that the deficiency of the females in the general population is further greatly accentuated in the population of the towns, in contrast with the exactly opposite conditions which prevail in Western countries where females are largely in excess of males in the towns. This is accounted for by the migratory character of the factory hands who seldom bring their families to the towns, and secondly, by the relatively very much smaller employment of women in town industries. The number of women per thousand males in 1921 was only 500 in Calcutta and 524 in Bombay.

It need scarcely be pointed out that this shortage of females in the towns adversely affects the health, comfort and morals of the workers. The position of the females in India has to be improved.

Among the measures recommended on the basis of the survey of the living conditions in the Union territory of Delhi (in 1977) includes 2% reservation for widows in Government jobs. Most of them, particularly rural Hindu widows, were all married at the age of 16 or under.

According to the survey done by the Department of Social Welfare a large

majority (62.6%) reported that they were forced to wear simple cloths and shun showy dresses. Visits to their relatives and friends were reduced. A majority reported that with the demise of their husbands, their health had deteriorated often suffering from headaches, disturbed sleeps etc.

Many had become widows when they were 36 years or under. A majority were against remarriage on the ground that it was against their religion. About 22% of them felt that those who were childless and below 30 years of age should remarry. Only 2% expressed the desire to remarry.

There was an appreciable reduction in the family income after widowhood. The study disclosed that the earnings of Christian widows were higher than those of Hindu and Muslim widows.

About 94.62% of them had to work full time to run the family. Most of them were holding Class IV jobs, like sweepers, ayahs, peons, gardeners and packers. The urban self-employed widows were mostly engaged in knitting, tailoring, selling vegetables and delivering milk. More Muslims (56.94%) widows had taken up employment in comparison to Hindu (48.77%) and Christian (41.18%) widows.

The sample data indicated that literacy percentage of widows in rural areas was very low. As many as 93.33% were illiterate as compared with 53.14% of the urban widows. Out of the 150 rural widows only 10 had some education.

The study group recommended 2% reservation of jobs for widows by the Government and relaxation of their qualifications for their appointment. The other recommendations included allotment of shops on preferential basis, provision of raw materials and loans on concessional rates, establishment of vocational training centres, setting up of co-operatives for the sale of their products etc. A majority suggested the introduction of a pension scheme for those without any economic support.

Water for villages: This is the last to be considered, but really it occupies a prominent place. Many villages and several towns suffer from lack of adequate water supply. In 1971, Tamil Nadu set up an autonomous Board to tackle Water Supply and Drainage. This (T. W. A. D.) Board has executed many projects, major and minor, rural and urban in these years. How has it gone about this work?

We must remember first, the magnitude of the problem. Out of 58,595 villages and hamlets in the State, 4,916 villages do not have any source of water supply. About 2,230 villages have water that is polluted and they cause diseases. And over 11,800 villages face chronic scarcity conditions during summer.

Of course, it is admitted that among villages, there are variations in respect of the available water supply. Nevertheless in the Government's actions in general, there has been haphazard execution. The rural schemes are being implemented under five different groups namely (1) UNICEF assisted scheme (2) Minimum Needs Programme

(3) Drought Relief Programme (4) Water supply to Harijan Colonies and (5) Special drought relief work.

So far there had been no uniform procedure in undertaking the scheme. A time-bound scheme has to be taken up.

For towns, most of which have protected water supply schemes, it is only augmentation of existing schemes that is needed.

For protected Water supply in villages, it will be good if the Big Business Houses help in opening wells or Bore wells with chlorination and where electricity is available with overhead tanks and taps. If a Company undertook to provide just this facility for a few villages every year and to supervise and maintain the related equipment, it would have made a useful contribution. It is gratifying to learn on 28th August 1978 that the Government of India have made provision for 2.75 lakhs of wells and 2.25 lakhs wells equipped with water pumps and other equipments.

The City and suburbs of Madras feel acute scarcity of water, particularly during the summer months. The Tamil Nadu Government has allotted Rs. 1.23 crores for improving the water supply to the City. There are two main regions with their peculiar problems. One is the Tiruvanmiyur region on the vicinity of which have grown up the urban areas like Sastri Nagar, Besant Nagar, Indra Nagar and Kamaraj Nagar. The water supply for these areas is only 2 lakh gallons. It is now proposed to double it by the contemplated scheme.

In North Madras drinking water as well as water for industries is to be augmented. This is described as the Manali and Tamarappakkam projects. It is important to notice that the World Bank, a Committee of which is at present in the City of Madras has also come forward to render aid to these projects. It is relevant in this connection to notice that the World Health Organisation has estimated that 80 per cent of all sickness and disease in the world is attributable to contaminated water.

Taking an overall picture of the population trends in India, we have little reason to be complacent. True, much has been done to relieve the multitudinous problems arising from the ever increasing population. As mentioned earlier, it is expected that by 2000 A.D. our population would reach the staggering figure of approximately 969 million. Many schemes have been tried to arrest the prodigious growth and also to combat the consequences. Nevertheless, the prospects are none too rosy. In addition to all the above mentioned devices of control what more positive solution can be offered? Several suggest Communism as the way to combat the situation. But I personally feel that it is not suited to Indian conditions and traditions. Whether religious or not, we have developed a socio-religious system which throws even economic suffering to the background. What is worse, Communism of whatever brand we think of, leads to a type of dictatorship, for instance, Chinese government was for many years Mao's government. Further, the approach is negative. Man does not live by bread alone, nor by ephemeral flippant merry making. It is my view that Indian tradi-

tions are unsuited to Communism, whether it is dictatorship of the Proletariat, or dictatorship one or a few ring leaders.

Then shall we provoke a Third World War and annihilate most of us? It is absurd. Here comes one method. The U.N. must approach the whole problem not only in a negative way but in a positive way too. A well organised civilized unselfish and rational distribution of the population in the world in respect of the resources must be undertaken. A move has been made in this

direction. But it has to be squarely and firmly faced. Countries like Africa, South America, Australia, Central and Northern Asia have largely vacant areas. Several of the countries of the Arab world can accommodate thousands. These have to be persuaded to be accommodative without allowing politics to interfere with the solution. Regions in the South East Asia must change their outlook. That, to my mind, is one of the important devices of facing a grave all-absorbing problem. At the same time Family Planning must be seriously adopted.

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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 Thursday, 28th September 1978 under the Chairmanship of M Srinivasan, the Chairman referred to the very little encouragement given to family planning programmes by the present government in comparison to the last government. Consequently, the number of people who had adopted family planning had come down from 8 million in 1976-77 to 90 lakhs in 1977-78. And these programmes had achieved better results in the southern states than in the northern states largely because of people's voluntary participation in the south. The Chairman was also of the opinion that the age composition of the population was another factor which had accentuated the population problem in India.

The author presenting the paper said that there was no match between the rapid growth of population and our resources. He also felt that there was an in born conservatism among our people towards family planning and stressed the need for imparting real education to our people. And this can be done better through adult education programmes by using mass media like radio and television. The low status of women is also contributing to the rapid growth of population and hence there is need to raise their status in the

society both by spreading education and enacting proper legislations in this regard.

During the discussion of the paper the causes for the population problem had sought to be analysed in its historical perspective. In the past, there were frequent occurrences of famines, earthquakes and the deadly diseases like malaria, associated with inadequate transport facilities had largely contributed to a very low population growth. Over the years the reversal of all the above features had sufficiently contributed to the population explosion especially after independence.

In India the public policy through its public expenditure had only succeeded in decreasing the death rate but not the birth rate. Any attempt through public expenditure to control population is viewed with suspicion. And the population problem cannot be tackled in isolation without taking into consideration the socio-economic problems particularly need for security in old age. Here the example of China was referred to where an attempt to control the increase of population was taken up only after ensuring that the basic needs of all sections of society were taken care of. Added to this the moral aspects involved in the living conditions of the people like the atrocities on Harijans

and on weaker sections had some effect on population growth which cannot be neglected. However it was felt that there was no need for pessimism and the public policy to check population growth will succeed in course of time.

While implementing the family planning programmes we should also take into consideration the illiteracy, the

moral aspects, status of women, the ideology of its people etc. In this connection it was pointed out that Kerala our neighbouring state, of late achieved a tremendous decrease in its population growth mainly due to the increase in primary education and women's education in that state. And that example can be followed in other states also.

From International Aid to International Cooperation

Some Thoughts in Retrospect*

(PART I)

Education system and Learning

International cooperation in Education viewed historically is the second stage in a country's educational development. The first stage is the learning process that is developed in a locality—in a home, temple, mosque or church, a village, a town or city. Learning is the process of internalising an external event in order to understand and/or control it. The process is aided and speeded by the educational infrastructure—namely the teacher, the book, the school, the library, the workshop etc. These are useful infrastructures. Learning itself is the internalising of the local environment the physical and material facts, the nature of the fellow human beings, their values, structures and cultures. This is a rather lonely process in the sense that it concerns an individual person *qua* individual person and despite the modern faster than sound means of communication movement and travel that we have developed within our countries and between countries, education is essentially an individual affair. It started that way, despite the wandering monks and scholars within a vast country like India or China or between countries in the continent of Europe and North

Africa in search of scholarship and wisdom. With all the international cooperation in education that we have developed, the final test is still what happens within each individual's head—and his heart and soul—which externalities can only peripherally affect within this substantive frame.

First phase of International Education Cooperation (Pre-World War II)

In this context, International education cooperation has passed through several phases. The first phase was the pre-world war II period when the educational systems of the United Kingdom, France, Belgium, Portugal, Spain, Germany, Italy and the United States (to be called for short Euro-American systems) were replicated in Africa, Asia, Latin America and the Caribbean either as a colonial government decision or as part of the humanitarian and religious mission of the christian churches of the metropolitan countries. Parallel to trade following the flag, and the christian missions following the trade routes, educational cooperation—if cooperation it can be called—followed the flag, trade and the christian missions.

*Extract from a note by Dr. Malcolm S. Adiseshiah for the Twenty-fifth Anniversary Issue of the International Review of Education, Hamburg; Federal Republic of Germany.

This phase of the imposition of the Euro-American educational systems and structures in the Afro-Asian and Latin American continents in one sense cannot be called international cooperation. It was uninational rather than international in the sense that there were not two national entities who could discuss and agree upon any joint action: it was one country's system being introduced by unilateral decision—whether by government or by the religious orders on the subject peoples. It was not cooperation because there was not two educational systems which could react to each other, review each others strength and weaknesses and attempt borrow from each other and adopt what was considered educationally sound and forward looking. In the case of countries that make up the Indian sub-continent, China, Indo-China, Indonesia and some of the Arab States, the local learning systems were simply superseded—sometimes through a simple act of suppression but more often through attaching a monopoly systems of rewards and incentives to the new Euro-American system which ensured that the local system died away. In Africa, there was a seeming clean clear state on which the metropolitan power could start on the only kind of educational system it knew. In Latin America and the Carribea the Euro-American system was an integral part of the colonising of these lands.

There is, however, another sense in which this inter-action between the colonial power and the colonised people shared in the basic, innate feature of all international educational cooperation. And that is that such cooperation, whether it be that of the pre-world war II period or that of the emerging New International Economic Order of today, does not arise out of the learning process

as delineated at the start: it is rather a functioning of the socio-economic-political relations and framework existing at any particular time. There is nothing educational about international educational cooperation in the sense that it is not a cooperative, shared learning process at any stage: in a sense if education shorn of its infra-structures in learning, and if learning is the process of cognitive growth of an individual, this is an individual act—what I have earlier called a private lonesome act—in which there can be little of cooperation and certainly no international cooperation. What is called international educational cooperation is the help given by an international community—another group, agency, country or countries—in developing the infrastructures to the learning process. And these infrastructures—the school and the university structures, the audio and visual aids—old and new—the laws and procedures for entering and learning the system, its guides, monitors and instructors, the rewards attached—are always and at all times a reflection of the non-educational—the political and socio-economic conditions prevailing. In this sense the educational structures developed by the Euro-American colonial powers and by the christian missionary bodies which is the first period of international cooperation that has been referred to partake of the essentiality of international cooperation: they were a function of the colonial relationship and a reflection of the relationship of the governors deciding what is educational good for the governed.

Second Phase (1946-1950)

The second phase of International cooperation in Education was the second half of the forties—the period immediately

following world war II. In this period there was a massive programme of cooperation between countries in the reconstruction of the educational infra-structures which had been destroyed by the war. The effort was concentrated in rebuilding of schools and universities, the equipping of laboratories and restocking of libraries and re-establishment of intellectual contact between scholars and scientists which had been interrupted during the five war years. Some three features of this phase may be noted.

By and large, with the exception of China and the Philippines this massive educational reconstruction effort did not touch what we call the developing countries of Africa, Asia, Latin America and the Carribean. These countries watched this rather vast and gargantuan international effort at rehabilitating the economies of the war devastated countries and re-construction of their educational system starting first with the countries which were the victorious allies and very soon reaching out to the enemy powers, notably Germany and Japan. There were, however, important lessons in methods of capital infusion, organisation and coordination that this programme taught later programmes of cooperation. Particularly the so-called Marshall Aid programme and the United Nations Relief and Rehabilitation Programme showed that the inputs part of the cooperation had to be massive if it was at all to be effective.

Another feature of this phase of the cooperative effort was the conceptual distinction that it introduced between re-construction and rehabilitation on the one hand and development on the other. Reconstruction implies that there is some

construction that needs reconstruction. Rehabilitation involves the existence of structures or relationships that can be habilitated. The developing countries of Asia, Africa and Latin America had of course educational institutions and programmes that had been destroyed by floods, storms and other natural calamities. But these were insignificant compared to their massive human and material resources that had been lying around neglected and undeveloped. Out of this post-war programme of international educational reconstruction of the economically and industrially advanced countries, the seeds of the development concept which was left aside as a second and lower priority began emerging.

A further characteristic should be noted. The starting point of this note was that education in the form of learning is essentially a private individual affair. That was a reference to the process of sharing information, acquiring knowledge and forming concepts. In this second stage of international cooperation, education began emerging publicly as a public good in the sense international cooperation began to focus on what was learnt and not merely on ensuring the infrastructures for the process of learning. In a sense, of course, there was implicitly always, and explicitly sometimes, a decision made by agents external to the individual as to what was to be learnt. In the Euro-American governmental schools, the implicit values learnt were the blessings of order, law, obedience, the superior status of the metropolitan culture: in the Christian educational system, the Christian belief and the values attached to it were explicitly and implicitly made the subject of learning. But it was in this period immediately after the second world war

that certain ideological overtones emerged, specifically with regard to international educational cooperation. The governments represented in the United Nations Educational Scientific and Cultural Organisation (UNESCO) reviewing the systems of Nazi Germany, Fascist Italy and Militarist Japan proclaimed that education against Nazism and Fascism and Education for International Understanding and Cooperation should be subject of International cooperation and collaboration. The international educational cooperative programme that was undertaken in Germany, Italy, and Japan was focussed on eliminating all vestiges in education of Fascism, Nazism and Militarism; it later developed into a series of bilateral initiatives aimed at removing from the text-books and other audio and visual aids information which promote international hatred and misunderstanding; and it created in time a net work of educational institutions which included in their learning systems what was called education for international understanding.

Out of this and the general review of the causes of international warfare and its preceding and accompanying human indignities arose the doctrine the Declaration of Human Rights in which the right to education of every man and woman and child regardless of class, race, religion or cultural formation was solemnly and unanimously proclaimed. This was a far-reaching and revolutionary decision of the community of nations taken at a time when only 20 per cent of the men, women, and children of the world were educated, the other 80 per cent not having even the minimum infrastructure to enter the learning stream. Even as this Universal Right to Education was proclaimed, an ideology

was attached to the educational right in clear and unambiguous terms: "Education shall be directed to the full development of the human personality and to the strengthening of respect for human rights and fundamental freedoms. It shall promote understanding, tolerance, friendship among all nations, racial and religious groups and shall further the activities of the United Nations for the maintenance of peace." (Article 26 (II)). It may be noted that this educational ideology set forth in the declaration was a good start: it was, however, the ideology of the industrialised and educationally advanced world. There was missing in it any link to the other rights—the right to work, to just and favourable remuneration and the right to a standard of living (Articles 23 and 25), and to that extent the declaration remained a great moral imperative with little impact in regard to international cooperation in education. The time was ripe now to move from the international educational reconstruction of the industrial countries to the countries which had little or no educational infrastructures: to turn the right to education into an action plan.

Third Phase—The fifties:

Hence in the next phase—the fifties—International cooperation in Education took an institutional expression in what came to be known as technical cooperation between governments of the educationally undeveloped countries and those of countries with advanced educational systems and through the United systems of agencies led by UNESCO, ILO, FAO, WHO and the UN itself. A new element which entered this institutional frame of international cooperation was that the country in order to receive international assistance had to

(a) request such assistance, (b) decide what areas is to be assisted, (c) also decide the form of assistance and (d) approve the specific inflows of educational specialists training opportunity and equipment into the countries. For the first half of the fifties this country (national) decision base of international educational cooperation was a kind of educational experience in itself for the developing countries. I recall that the first three years were taken up in explaining to the ministers and educationists in the countries what the term technical assistance meant. Both in the bilateral and United Nations cooperation programmes there was a great deal of tutoring and some doctoring of the government representatives by the representatives of the bilateral and multilateral agencies. But the real problems were much deeper in three respects.

First for countries of Asia and Latin America (Africa was at this under colonial rule and so was not within the international frame of educational technical cooperation), everything was needed: there was little basic education for the children, and even less second level, technical and higher education and there was massive illiteracy pervading among almost all its peoples. Where was one to start national action and in what of such areas was international cooperation to be invited. And so international educational cooperation in the fifties was largely one of assisting in surveying and mapping the whole educational area in the countries and advising probing and experimenting with a series of ad-hoc activities such as training teachers, operating technical and vocational education institutes, devising science diffusion and popularisation

programmes and running adult (fundamental) education pilot projects. These international technical cooperation programmes in a country did not add up to a coherent educational effort because there was as its undergirding base and support either absent a national development plan, out of which educational areas of significance and priorities could be determined and on which international education cooperation could focus; or where a National Plan did exist as in India or Egypt, it focussed heavily on the capital intensive modern sector, basing itself on the trickle down theory, so that education was somewhat irrelevant to it and except for technical education classed as a low priority social service. The first lesson that was learnt was that international education cooperation to be effective had to function within a National Development Plan and its educational sub-plan.

A second problem that the international technical cooperation programme in education faced was that it rested on the assumption that educational development can proceed by a system of transfer, by transferring the structure, the technology, the learning content, teachers, text-books, from the industrially advanced to the less developed countries. Earlier, it was noted that at this third phase, this institutional frame rested on a national decision at every stage and in every facet. It was also noted that this country base meant little if the country had no means of determining its decisive areas and priorities. But more serious than this limitation was the foreignness of the international educational cooperation programme. What the programme brought into the country was not foreign

in the sense that it was a continuation of the existing educational infrastructure of the Euro-American system of the colonial period. It was foreign in the sense that now it was not imported by a ruling power but was by decision made by the country itself sovereign and independent. It was foreign in the sense that it negated the substance of the learning process—the internalising of the local external environment, in terms of the culture, values and structures of the society. The technical cooperation specialist came into the country with a rich experience of some part of the learning process and educational infrastructure of his country: he could only transfer it in the quickest and the most effective way he can to the country in which he was serving. In many cases he tried various methods of adaptation, of transformation and even some restructuration, but it could never be part of the local mind or local milieu. This process of educational progress by transfer was to bedevil the national development and educational sector of the countries of Africa, Asia, and Latin America for a long time. A second lesson learnt was that international educational cooperation had somehow to discard its inbuilt exogenous component and consciously promote endogenous educational flowering.

Associated with the problems of adhocism and foreignness was the cost factor. I can still recall ministers and finance ministry officials asking, "what is this assistance going to cost us?", and in the case of two early draft programmes, the governments concerned deciding that they could not afford the assistance being offered to them. Technical cooperation in education as in other areas such as industry, management,

health and agriculture was a high cost enterprise. (I am told that today a single technical cooperation specialist costs around \$ 60,000 per annum which would support 500 university teachers in a country like India). This high cost factor of international educational cooperation was serious for the countries concerned because as noted in the case of India, it bore no relationship to the low cost living prevailing not only in their unorganised sectors which is the majority sector even today in all of them but also because by a process of osmosis it acted as an inflationary force, except that while inflation is usually a time bound phenomenon, in this case a long term and permanent trend was introduced in the educational systems that kept raising costs. In a sense technical cooperation further widened the gap between the high cost well off educated elite on the one hand and the mass of people living at or below the poverty line in the country.

Towards the end of the fifties and at the start of the sixties, a movement was therefore set in motion to plan educational development in the countries of Africa, Asia, Latin America and the Caribbean as well as in Europe and North America. Continental plans from ministerial conferences emerged for Asia at Karachi, for Africa at Adis Abbaba, for Latin America at Santiago, for the Arab States at Beirut and for Europe and North America at Washington in the years 1959-61. These continental plans varied in nature, scope and content but there were certain common features.

First the need to plan education as an integral sector of the National Development Plans was recognised. At every one of these ministerial conferences the

economic pay off of education at various levels—first, second and third—of varying content—general and technical, and through separate but related forms in the school structure and through adult education programmes was begun to be quantified as the major argument for the rapid educational development of the countries—both industrially advanced and those educationally undeveloped. Education was affirmed as a human right but the new dimension stressed as a means of attracting national resources and international cooperation was its capacity to lift the countries out of the poverty morass in which it was.

A second common feature was the establishment of quantitative targets by each of the continents for each level and form of education. The targets envisaged essentially unilinear quantitative expansion of the educational system of each of the continents. Later, in the late sixties, there was to be criticism of this expansionist strategy, but many of the foremost critics of the expansionist approach were in the lead in the early sixties urging the African countries, for example, at Adis Abbaba and later at Tannanarive to set their second and third level targets at higher levels than the African ministers themselves had at first decided. To some extent this expansionism was part of the euphoria accompanying the liberation of Africa and Asia and which the international community sparked off, but even so there was a very deep and genuine conviction that universal education held the key to

the consolidation of the newly won freedom of the countries and the only pathway and pre-condition for their needed irreversible economic development and social and cultural progress.

A third common feature was that every one of these continental educational plans set forth again in rather precise measured financial terms the international cooperative framework within which they were to be successfully executed. Some of the costing was based on the high cost educational structures of the rich countries, some of the parameters to such international cooperation such as the limited number of trained specialists from the educationally advanced countries as well as the limits to the training opportunities they offered were assumed away, the fact that in education the amount of cooperation in the matters of local teachers, textbooks, even brick and mortar which would leave a permanent effect was not very large was ignored, and above all the shying away of the rich countries from any specific, continuing and expanding aid commitment which international educational cooperation represented were not foreseen. However, the plans did produce a global blue print for international cooperation in education and was followed rather closely for about a decade by both groups of countries—the so-called donor countries and the so-called beneficiaries.

I qualify in these terms 'so-called' the two groups of countries because inter-

national educational cooperation is from the financial point of view a one way street in favour of the rich countries. A recent UNESCO survey of international educational cooperation expresses this truth rather bluntly. Most of the international cooperation in education has in fact meant that indirectly resource flows have returned to the donor countries. 80 per cent of the cooperation has been in the form of technical assistance and fellowship which means: advisers whose income has been mainly directed at consumption of imported luxury goods,

saving etc., while trainees have paid tuition fees to foreign institutions. The remaining 20 per cent has been bricks and mortar and equipment for schools, often bought in developed countries (e.g., the practice of tied aid).¹

Finally an insistent theme which ran through each of the continental conference recommended that member countries plan their educational systems as part of their National Development was now ready to be acted upon and that moves us on to the next phase.

(1) UNESCO: Major Problems and Trends in Educational Development
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