Report No. 2431-IN

Economic Situation and Prospects of India

April 9, 1979

South Asia Region

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CURRENCY AND OTHER EQUIVALENTS

Currency

Prior to June 6, 1966:	US$1.00 = Rs 4.7619 Rs 1.00 = US$0.21
From June 6, 1966 to mid-December 1971:	US$1.00 = Rs 7.50 Rs 1.00 = US$0.13333
Mid-December 1971 to end-June 1972:	US$1.00 = Rs 7.27927 Rs 1.00 = US$0.1374
After end-June 1972:	floating rate
Spot rate (end-December 1978):	US$1.00 = Rs 8.188 Rs 1.00 = US$0.122

Rupee trade figures have been converted into dollars by using the prevailing exchange rate up to 1970/71. For subsequent years the following average IMF trade conversion factors/market rates have been used (rupees per US dollar):

1971/72	:	7.444
1972/73	:	7.706
1973/74	:	7.791
1974/75	:	7.976
1975/76	:	8.653
1976/77	:	8.939
1977/78	:	8.563

For 1978/79, the average market rate for the first nine months was Rs 8.211. For the year as a whole the rate of Rs 8.2 has been used.

Weights

Unless otherwise specified all weight measures are metric.

Years

The Indian fiscal year runs from April 1 through March 31.

Abbreviations Used

n.a.	=	not available
n.s.	=	not significant
(blank)	=	not applicable
-	=	nil

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ECONOMIC SITUATION AND PROSPECTS OF INDIA

Table of Contents

List of Text Tables and Graphs

List of Text Tables and Graphs (continued)

INDIA - SOCIAL INDICATORS DATA SHEET

	INDIA			REFERENCE GROUPS (ADJUSTED AVERAGES - MOST RECENT ESTIMATE) /a		
LAND AREA (THOUSAND SQ. KM.)						
TOTAL	3287.6					
AGRICULTURAL	1818.3					
	1960 /b	1970 /b	MOST RECENT ESTIMATE /b	SAME GEOGRAPHIC REGION /c	SAME INCOME GROUP /d	NEXT HIGHER INCOME GROUP /e
GNP PER CAPITA(US$)	60.0	90.0	150.0	167.4	182.9	432.3
ENERGY CONSUMPTION PER CAPITA (KILOGRAMS OF COAL EQUIVALENT)	142.0	181.0	218.0(76)	65.7	88.9	251.7
POPULATION AND VITAL STATISTICS						
TOTAL POPULATION, MID-YEAR (MILLIONS)	434.9	547.6	631.7 /f	.	.	.
URBAN POPULATION (PERCENT OF TOTAL)	17.6	19.5	20.6	12.8	15.0	24.2
POPULATION PROJECTIONS						
POPULATION IN YEAR 2000 (MILLIONS) 973.0						
STATIONARY POPULATION (MILLIONS) 1643.0						
YEAR STATIONARY POPULATION IS REACHED 2150						
POPULATION DENSITY						
PER SQ. KM.	132.0	167.0	192.0	85.2	46.8	42.7
PER SQ. KM. AGRICULTURAL LAND	247.0	308.0	347.0	322.6	254.1	95.0
POPULATION AGE STRUCTURE (PERCENT)						
0-14 YRS.	41.0	41.6	42.0(77)	44.0	43.6	44.9
15-64 YRS.	55.9	55.3	55.0(77)	52.9	53.3	52.8
65 YRS. AND ABOVE	3.1	3.1	3.0(77)	2.9	2.9	3.0
POPULATION GROWTH RATE (PERCENT)						
TOTAL	1.9	2.3	2.0	2.2	2.4	2.7
URBAN	2.5/g	3.4	3.5	4.2	4.0	8.8
CRUDE BIRTH RATE (PER THOUSAND)	44.0	40.0	35.0(77)	45.1	44.3	42.2
CRUDE DEATH RATE (PER THOUSAND)	21.0	17.0	14.0(77)	17.3	19.7	12.4
GROSS REPRODUCTION RATE	3.2	2.9	2.4(77)	3.2	2.9	3.2
FAMILY PLANNING						
ACCEPTORS, ANNUAL (THOUSANDS)	..	3768.0	4518.0	.	.	.
USERS (PERCENT OF MARRIED WOMEN)	..	12.0	11.2	13.7	14.6	14.2
FOOD AND NUTRITION						
INDEX OF FOOD PRODUCTION PER CAPITA (1969-71 = 100)	100.0	102.0	101.0	95.6	96.4	104.3
PER CAPITA SUPPLY OF CALORIES (PERCENT OF REQUIREMENTS)	95.0	92.0	89.0	91.1	92.3	99.5
PROTEINS (GRAMS PER DAY)	51.0	53.0	48.0	49.6	50.0	56.8
OF WHICH ANIMAL AND PULSE	19.0	16.0	12.6	12.6	13.9	17.5
CHILD (AGES 1-4) MORTALITY RATE	28.0	22.0	10.0	..	..	7.5
HEALTH						
LIFE EXPECTANCY AT BIRTH (YEARS)	41.7	48.0	51.0(77)	43.1	45.8	53.3
INFANT MORTALITY RATE (PER THOUSAND)	..	134.0	134.0	99.5	102.7	82.5
ACCESS TO SAFE WATER (PERCENT OF POPULATION)						
TOTAL	..	17.0	33.0	30.0	26.4	31.1
URBAN	..	60.0	83.0	66.3	63.5	68.5
RURAL	..	6.0	20.0	17.2	14.1	18.2
ACCESS TO EXCRETA DISPOSAL (PERCENT OF POPULATION)						
TOTAL	..	18.0	20.0	15.7	16.1	37.5
URBAN	..	85.0	87.0	66.9	65.9	69.5
RURAL	..	1.0	2.0	2.5	3.4	25.4
POPULATION PER PHYSICIAN	5840.0/h	4890.0	3135.0(77)	8830.8	13432.7	9359.2
POPULATION PER NURSING PERSON	11590.0/h	5220.0	6320.0(76)	8479.3	6983.3	2762.5
POPULATION PER HOSPITAL BED						
TOTAL	2590.0/i	2020.0	1231.0(77)	1624.5	1157.6	786.5
URBAN	..	..	..	..	183.3	278.4
RURAL	..	..	..	..	1348.8	1358.4
ADMISSIONS PER HOSPITAL BED	..	..	..	..	19.5	19.2
HOUSING						
AVERAGE SIZE OF HOUSEHOLD						
TOTAL	5.2	..	5.2	..	5.2	..
URBAN	5.2	..	4.8	..	4.8	..
RURAL	5.2	..	5.3	..	5.3	..
AVERAGE NUMBER OF PERSONS PER ROOM						
TOTAL	2.6	2.8	..	..	..	..
URBAN	..	..	..	..	1.8	2.3
RURAL	..	..	..	..	..	..
ACCESS TO ELECTRICITY (PERCENT OF DWELLINGS						
TOTAL	..	..	..	..	25.9	28.3
URBAN	..	..	..	..	..	..
RURAL	..	..	..	..	8.7	10.3

INDIA - SOCIAL INDICATORS DATA SHEET

	INDIA			REFERENCE GROUPS (ADJUSTED AVERAGES /a - MOST RECENT ESTIMATE)		
	1960 /b	1970 /b	MOST RECENT ESTIMATE /b	SAME GEOGRAPHIC REGION /c	SAME INCOME GROUP /d	NEXT HIGHER INCOME GROUP /e
EDUCATION						
ADJUSTED ENROLLMENT RATIOS						
PRIMARY: TOTAL	61.0	72.0	79.0(76)	59.1	62.9	75.8
FEMALE	40.0	55.0	63.0(76)	38.4	45.9	67.9
MALE	80.0	87.0	94.0(76)			
SECONDARY: TOTAL	20.0	29.0	28.0(76)	19.9	14.4	17.7
FEMALE	10.0	17.0	18.0(76)	9.9	8.8	12.9
MALE	30.0	39.0	38.0(76)			
VOCATIONAL (PERCENT OF SECONDARY)	8.0	6.0/j	..	1.5	6.6	7.4
PUPIL-TEACHER RATIO						
PRIMARY	29.0	38.0	40.0	38.2	38.5	34.3
SECONDARY	16.0	17.0	..	23.5	19.8	23.5
ADULT LITERACY RATE (PERCENT)	28.0	33.0	36.0	35.6	36.7	63.7
CONSUMPTION						
PASSENGER CARS PER THOUSAND POPULATION	0.7	1.0	1.2(76)	2.2	3.1	7.2
RADIO RECEIVERS PER THOUSAND POPULATION	5.0	21.0	24.0(76)	14.9	31.1	71.1
TV RECEIVERS PER THOUSAND POPULATION	..	0.1	0.5	..	2.8	14.1
NEWSPAPER ("DAILY GENERAL INTEREST") CIRCULATION PER THOUSAND POPULATION	11.0	16.0	16.0(75)	6.4	6.0	16.3
CINEMA ANNUAL ATTENDANCE PER CAPITA	4.0	6.3	3.8	..	1.4	1.6
EMPLOYMENT						
TOTAL LABOR FORCE (THOUSANDS)	175000.0	218000.0	261000.0/k	.	.	.
FEMALE (PERCENT)	31.3	32.6	32.2	21.3	24.2	28.0
AGRICULTURE (PERCENT)	73.0	73.8	72.5	62.8	60.7	54.1
INDUSTRY (PERCENT)	10.4	9.8	..	..	..	..
PARTICIPATION RATE (PERCENT)						
TOTAL	43.0	40.2	39.2	35.8	39.8	37.8
MALE	57.1	52.3	51.3	52.4	53.3	50.3
FEMALE	27.9	27.1	26.2	15.6	19.6	20.9
ECONOMIC DEPENDENCY RATIO	1.1	1.1	1.1	1.3	1.3	1.3
INCOME DISTRIBUTION						
PERCENT OF PRIVATE INCOME RECEIVED BY						
HIGHEST 5 PERCENT OF HOUSEHOLDS	26.7	25.0/1	..	18.6	20.3	19.5
HIGHEST 20 PERCENT OF HOUSEHOLDS	51.7	53.1/1	..	42.8	45.1	48.9
LOWEST 20 PERCENT OF HOUSEHOLDS	4.1	4.7/1	..	7.3	5.7	5.9
LOWEST 40 PERCENT OF HOUSEHOLDS	13.6	13.1/1	..	19.3	16.8	15.7
POVERTY TARGET GROUPS						
ESTIMATED ABSOLUTE POVERTY INCOME LEVEL (US$ PER CAPITA)						
URBAN	..	..	83.0(77)	80.2	88.5	155.9
RURAL	..	..	73.0(77)	67.2	71.9	97.9
ESTIMATED RELATIVE POVERTY INCOME LEVEL (US$ PER CAPITA)						
URBAN	..	..	80.0(75)	..	100.8	143.7
RURAL	..	..	50.0(77)	39.8	42.0	87.3
ESTIMATED POPULATION BELOW ABSOLUTE POVERTY INCOME LEVEL (PERCENT)						
URBAN	..	..	47.0(77)	50.3	46.0	22.9
RURAL	..	..	52.0(77)	44.6	48.0	36.7

.. Not available
. Not applicable

NOTES

/a The adjusted group averages for each indicator are population-weighted geometric means, excluding the extreme values of the indicator and the most populated country in each group. Coverage of countries among the indicators depends on availability of data and is not uniform.

/b Unless otherwise noted, data for 1960 refer to any year between 1959 and 1961; for 1970, between 1969 and 1971; and for Most Recent Estimate, between 1974 and 1977.

/c South Asia; /d Low Income ($280 or less per capita 1976); /e Lower Middle Income ($281-550 per capita, 1976); /f 1978 mid-year population is estimated at 640.4 million; /g 1951-60; /h 1962; /i 1958; /j 1967; /k 1978 mid-year labor force is estimated at 261 million; /1 1964-65.

March, 1979

DEFINITIONS OF SOCIAL INDICATORS

Notes: Although the data are drawn from sources generally judged the most authoritative and reliable, it should also be noted that they may not be internationally comparable because of the lack of standardized definitions and concepts used by different countries in collecting the data. The data are, nonetheless, useful to describe orders of magnitude, indicate trends, and characterize certain major differences between countries.

The adjusted group averages for each indicator are population-weighted geometric means, excluding the extreme values of the indicator and the most populated country in each group. Due to lack of data, group averages of all indicators for Capital Surplus Oil Exporters and of indicators of access to water and excreta disposal, Housing, Income distribution and Poverty for other country groups are population-weighted geometric means without exclusion of the extreme values and and most populated country. Since the coverage of countries among the indicators depends on availability of data and is not uniform, caution must be exercised in relating averages of one indicator to another. These averages are mostly useful as approximations of "expected" values when comparing the values of one indicator at a time among the country and reference groups.

LAND AREA (thousand sq. km)

Total - Total surface area comprising land area and inland waters.

Agricultural - Most recent estimate of agricultural area used temporarily or permanently for crops, pastures, market and kitchen gardens or to lie fallow.

GNP PER CAPITA (US$) - GNP per capita estimates at current market prices, calculated by same conversion method as World Bank Atlas (1975-77 basis); 1960, 1970, and 1977 data.

ENERGY CONSUMPTION PER CAPITA - Annual consumption of commercial energy (coal and lignite, petroleum, natural gas and hydro-, nuclear and geothermal electricity) in kilograms of coal equivalent per capita.

POPULATION AND VITAL STATISTICS

Total population, mid-year (millions) - As of July 1; 1960, 1970, and 1977 data.

Urban population (percent of total) - Ratio of urban to total population; different definitions of urban areas may affect comparability of data among countries.

Population Projections

Population in Year 2000 - Current population projections are based on 1975 total population by age and sex and their mortality and fertility rates. Projection parameters for mortality rates comprise of 3 levels assuming life expectancy at birth increasing with country's per capita income level, and female life expectancy stabilizing at 77.5 years. The parameters for fertility rate also have 3 levels assuming decline in fertility according to income level and past family planning performance. Each country is then assigned one of these 9 combinations of mortality and fertility trends for projection purposes.

Stationary Population - In a Stationary Population, there is no growth since the birth rate is equal to the death rate, and also the age structure remains constant. This is achieved only after fertility rates decline to the replacement level of unit net reproduction rate, when each generation of women replaces itself exactly. The Stationary Population size was estimated on the basis of the projected characteristics of the population in the year 2000, and the rate of decline of fertility rate to replacement level.

Year Stationary Population is Reached - The year when Stationary Population size has been reached.

Population density

Per sq. km. - Mid-year population per square kilometer (100 hectares) of total area.

Per sq. km. agricultural land - Computed as above for agricultural land only.

Population age structure (percent) - Children (0-14 years), working-age (15-64 years), and retired (65 years and over) as percentages of mid-year population.

Population growth rate (percent) - total, and urban - Compound annual growth rates of total and urban mid-year populations for 1950-60, 1960-70, and 1970-77.

Crude birth rate (per thousand) - Annual live births per thousand of mid-year population; 1960, 1970 and 1977 data.

Crude death rate (per thousand) - Annual deaths per thousand of mid-year population; 1960, 1970 and 1977 data.

Gross reproduction rate - Average number of daughters a woman will bear in her normal reproductive period if she experiences present age-specific fertility rates; usually five-year averages ending in 1960, 1970, and 1975.

Family planning - acceptors, annual (thousands) - Annual number of acceptors of birth-control devices under auspices of national family planning program.

Family planning - users (percent of married women) - Percentage of married women of child-bearing age (15-44 years) who use birth-control devices to all married women in same age group.

FOOD AND NUTRITION

Index of food production per capita (1969-71=100) - Index number of per capita annual production of all food commodities.

Per capita supply of calories (percent of requirements) - Computed from energy equivalent of net food supplies available in country per capita per day. Available supplies comprise domestic production, imports less exports, and changes in stock. Net supplies exclude animal feed, seeds, quantities used in food processing, and losses in distribution. Requirements were estimated by FAO based on physiological needs for normal activity and health considering environmental temperature, body weights, age and sex distributions of population, and allowing 10 percent for waste at household level.

Per capita supply of protein (grams per day) - Protein content of per capita net supply of food per day. Net supply of food is defined as above. Requirements for all countries established by USDA provide for a minimum allowance of 60 grams of total protein per day and 20 grams of animal and pulse protein, of which 10 grams should be animal protein. These standards are lower than those of 75 grams of total protein and 23 grams of animal protein as an average for the world, proposed by FAO in the Third World Food Survey.

Per capita protein supply from animal and pulse - Protein supply of food derived from animals and pulses in grams per day.

Child (ages 1-4) mortality rate (per thousand) - Annual deaths per thousand in age group 1-4 years, to children in this age group.

HEALTH

Life expectancy at birth (years) - Average number of years of life remaining at birth; 1960, 1970, and 1977 data.

Infant mortality rate (per thousand) - Annual deaths of infants under one year of age per thousand live births.

Access to safe water (percent of population) - total, urban, and rural - Number of people (total, urban, and rural) with reasonable access to safe water supply (includes treated surface waters or untreated but uncontaminated water such as that from protected boreholes, springs, and sanitary wells) as percentages of their respective populations. In an urban area a public fountain or standpost located not more than 200 meters from a house may be considered as being within reasonable access of that house. In rural areas reasonable access would imply that the housewife or members of the household do not have to spend a disproportionate part of the day in fetching the family's water needs.

Access to excreta disposal (percent of population) - total, urban, and rural - Number of people (total, urban, and rural) served by excreta disposal as percentages of their respective populations. Excreta disposal may include the collection and disposal, with or without treatment, of human excreta and waste-water by water-borne systems or the use of pit privies and similar installations.

Population per physician - Population divided by number of practicing physicians qualified from a medical school at university level.

Population per nursing person - Population divided by number of practicing male and female graduate nurses, practical nurses, and assistant nurses.

Population per hospital bed - total, urban, and rural - Population (total, urban, and rural) divided by their respective number of hospital beds available in public and private general and specialized hospital and rehabilitation centers. Hospitals are establishments permanently staffed by at least one physician. Establishments providing principally custodial care are not included. Rural hospitals, however, include health and medical centers not permanently staffed by a physician (but by a medical assistant, nurse, midwife, etc.) which offer in-patient accommodation and provide a limited range of medical facilities.

Admissions per hospital bed - Total number of admissions to or discharges from hospitals divided by the number of beds.

HOUSING

Average size of household (persons per household) - total, urban, and rural - A household consists of a group of individuals who share living quarters and their main meals. A boarder or lodger may or may not be included in the household for statistical purposes.

Average number of persons per room - total, urban, and rural - Average number of persons per room in all, urban, and rural occupied conventional dwellings, respectively. Dwellings exclude non-permanent structures and unoccupied parts.

Access to electricity (percent of dwellings) - total, urban, and rural - Conventional dwellings with electricity in living quarters as percentage of total, urban, and rural dwellings respectively.

EDUCATION

Adjusted enrollment ratios

Primary school - total, male and female - Gross total, male and female enrollment of all ages at the primary level as percentages of respective primary school-age populations; normally includes children aged 6-11 years but adjusted for different lengths of primary education; for countries with universal education enrollment may exceed 100 percent since some pupils are below or above the official school age.

Secondary school - total, male and female - Computed as above; secondary education requires at least four years of approved primary instruction; provides general vocational, or teacher training instruccions for pupils usually of 12 to 17 years of age; correspondence courses are generally excluded.

Vocational enrollment (percent of secondary) - Vocational institutions include technical, industrial, or other programs which operate independently or as departments of secondary institutions.

Pupil-teacher ratio - primary, and secondary - Total students enrolled in primary and secondary levels divided by numbers of teachers in the corresponding levels.

Adult literacy rate (percent) - Literate adults (able to read and write) as a percentage of total adult population aged 15 years and over.

CONSUMPTION

Passenger cars (per thousand population) - Passenger cars comprise motor cars seating less than eight persons; excludes ambulances, hearses and military vehicles.

Radio receivers (per thousand population) - All types of receivers for radio broadcasts to general public per thousand of population; excludes unlicensed receivers in countries and in years when registration of radio sets was in effect; data for recent years may not be comparable since most countries abolished licensing.

TV receivers (per thousand population) - TV receivers for broadcast to general public per thousand population; excludes unlicensed TV receivers in countries and in years when registration of TV sets was in effect.

Newspaper circulation (per thousand population) - Shows the average circulation of "daily general interest newspaper", defined as a periodical publication devoted primarily to recording general news. It is considered to be "daily" if it appears at least four times a week.

Cinema annual attendance per capita per year - Based on the number of tickets sold during the year, including admissions to drive-in cinemas and mobile units.

EMPLOYMENT

Total labor force (thousands) - Economically active persons, including armed forces and unemployed but excluding housewives, students, etc. Definitions in various countries are not comparable.

Female (percent) - Female labor force as percentage of total labor force.

Agriculture (percent) - Labor force in farming, forestry, hunting and fishing as percentage of total labor force.

Industry (percent) - Labor force in mining, construction, manufacturing and electricity, water and gas as percentage of total labor force.

Participation rate (percent) - total, male, and female - Total, male, and female labor force as percentages of their respective population; 1960, 1970 and 1975 data. These are ILO's adjusted participation rates reflecting age-sex structure of the population, and long time trend.

Economic dependency ratio - Ratio of population under 15 and 65 and over to the labor force in age group of 15-64 years.

INCOME DISTRIBUTION

Percentage of private income (both in cash and kind) received by richest 5 percent, richest 20 percent, poorest 20 percent, and poorest 40 percent of households.

POVERTY TARGET GROUPS

Estimated absolute poverty income level (US$ per capita) - urban and rural - Absolute poverty income level is that income level below which a minimal nutritionally adequate diet plus essential non-food requirements is not affordable.

Estimated relative poverty income level (US$ per capita) - urban and rural - Relative poverty income level is one-third of average per capita personal income of the country.

Estimated population below absolute poverty income level (percent) - urban and rural - Percent of population (urban and rural) who are "absolute poor".

Economic and Social Data Division
Economic Analysis and Projections Department
March, 1979

ECONOMIC DEVELOPMENT DATA

GNP PER CAPITA IN 1977: US$ 150 [a/]

GROSS NATIONAL PRODUCT IN 1977/78 [b/]

	US$ Bln.	%
GNP at Market Prices	101.47	100.0
Gross Domestic Investment	21.65	21.3
Gross National Saving	22.77	22.4
Current Account Balance [d/]	1.04	1.0
Resource Balance [d/]	- 0.31	- 0.3

ANNUAL RATE OF GROWTH (%, constant prices) [c/]

1960/61-1964/65	1965/66-1969/70	1970/71-1976/77
3.9	3.8	3.2

OUTPUT, LABOR FORCE AND PRODUCTIVITY IN 1971

	Value Added (at factor cost)		Labor Force		V.A. Per Worker	
	US$ Bln.	%	Mil.	%	US$	% of National Average
Agriculture	24.5	46.6	130.0	72.1	188	64
Industry	11.8	22.3	20.2	11.2	582	199
Services	16.3	31.1	30.2	16.7	542	186
Total/average	52.6	100.0	180.4	100.0	292	100

GOVERNMENT FINANCE [e/]

	General Government			Central Government		
	Rs. Bln	% of GDP		Rs Bln	% of GDP	
	1977/78	1977/78	1974/75-1977/78	1977/78	1977/78	1974/75-1977/78
Current Receipts	164.42	18.9	18.2	95.62	11.0	10.5
Current Expenditures	157.29	18.1	16.5	95.27	10.9	9.9
Current Surplus/Deficit	7.13	0.8	1.6	0.35	n.s.	0.6
Capital Expenditures [f/]	62.58	7.2	7.0	43.31	5.0	5.0
External Assistance (net) [g/]	9.82	1.1	1.6	9.82	1.1	1.6

MONEY, CREDIT AND PRICES	1970/71	1973/74	1974/75	1975/76	1976/77	1977/78	September 1977	September 1978
	(Rs Billion outstanding at end of period)							
Money and Quasi Money	121.4	198.4	220.3	254.7	308.9	365.1	334.8	395.8
Bank Credit to Government (net)	52.6	87.3	95.3	101.1	110.2	129.7	119.3	139.5
Bank Credit to Commercial Sector	64.6	107.0	126.7	153.9	185.1	210.0	195.3	223.5
	(Percentage or Index Numbers)						January 1978	January 1979
Money and Quasi Money as % of GDP	30.1	33.5	31.5	34.5	38.8	41.9		
Wholesale Price Index (1970/71 = 100)	100.0	139.7	174.9	173.0	176.6	185.8	184.5	184.6
Annual percentage changes in:								
Wholesale Price Index	7.7	20.2	25.2	- 1.1	2.1	5.2	3.2	0.1
Bank Credit to Government (net)	10.8	12.3	9.2	6.1	9.0	17.7	13.4	16.9
Bank Credit to Commercial Sector	19.4	22.6	18.4	21.5	20.3	13.5	16.6	14.4

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a/ The per capita GNP estimate is at market prices, calculated by the conversion technique used in the World Atlas. All other conversions to dollars in this table are at the average exchange rate prevailing during the period covered.
b/ Quick Estimates.
c/ Computed from trend line of GNP at factor cost series, including one observation before first year and one observation after last year of listed period.
d/ World Bank estimates; not necessarily consistent with official National Account Statistics.
e/ Transfers between Centre and States have been netted out.
f/ All loans and advances to third parties have been netted out.
g/ External grants and loans, less principal repayments, as recorded in the Central Budget.

BALANCE OF PAYMENTS	1975/76	1976/77	1977/78 h/	1978/79 h/
		(US$ million)		
Exports of Goods	4,672	5,753	6,276	6,800
Imports of Goods	-6,449	-5,928	-7,237	-8,400
Trade Balance	-1,777	- 175	- 961	-1,600
NFS (net)	310	360	650	700
Resource Balance	-1,467	185	- 311	- 900
Interest Payments (net) i/	- 216	- 180	- 50	-
Other Factor Payments (net)	-	-	-	-
Net Transfers j/	470	730	1,400	1,300
Balance on Current Account	-1,213	735	1,039	400
Official Aid				
Disbursements	2,341	1,953	1,628	1,805
Amortization	- 531	- 560	- 645	- 725
Transactions with IMF	242	- 337	- 330	- 158
All Other Items	- 45	- 216	384	205
Increase in Reserves (-)	- 794	-1,575	-2,076	-1,527
Gross Reserves (end year)	2,172	3,747	5,823	7,350
Net Reserves (end year) k/	1,365	3,276	5,668	7,350
Fuel and Related Materials				
Imports	1,417	1,581	1,817	1,980
of which: Petroleum	1,417	1,581	1,817	1,980
Exports	43	37	33	n.a.
of which: Petroleum	22	21	18	n.a.

RATE OF EXCHANGE

June 1966 to mid-December 1971	:	US$1.00 = Rs 7.5 Rs 1.00 = US$0.133333
Mid-December 1971 to end-June 1972	:	US$1.00 = Rs 7.27927 Rs 1.00 = US$0.137376
After end-June 1972	:	Floating Rate
Spot Rate end-December 1978	:	US$1.00 = Rs 8.188 US$1.00 = Rs 0.122

MERCHANDISE EXPORTS (AVERAGE 1975/76 - 1977/78)	US$ Mln.	%
Engineering Goods	610	11
Tea	417	7
Gems	377	7
Clothing	331	6
Leather and Leather Products	278	5
Jute Manufactures	267	5
Iron Ore	265	5
Cotton Textiles	248	4
Sugar	244	4
Others	2,530	45
Total	5,567	100

EXTERNAL DEBT, MARCH 31, 1978 h/	US$ billion
Outstanding and Disbursed	14.8
Undisbursed	4.3
Outstanding, including Undisbursed	19.1

DEBT SERVICE RATIO FOR 1977/78 h/1/	15.0 percent

IBRD/IDA LENDING, DECEMBER 31, 1978

	US$ million	
	IBRD	IDA
Outstanding and Disbursed	613	3,864
Undisbursed	615	1,992
Outstanding, including Undisbursed m/	1,228	5,856

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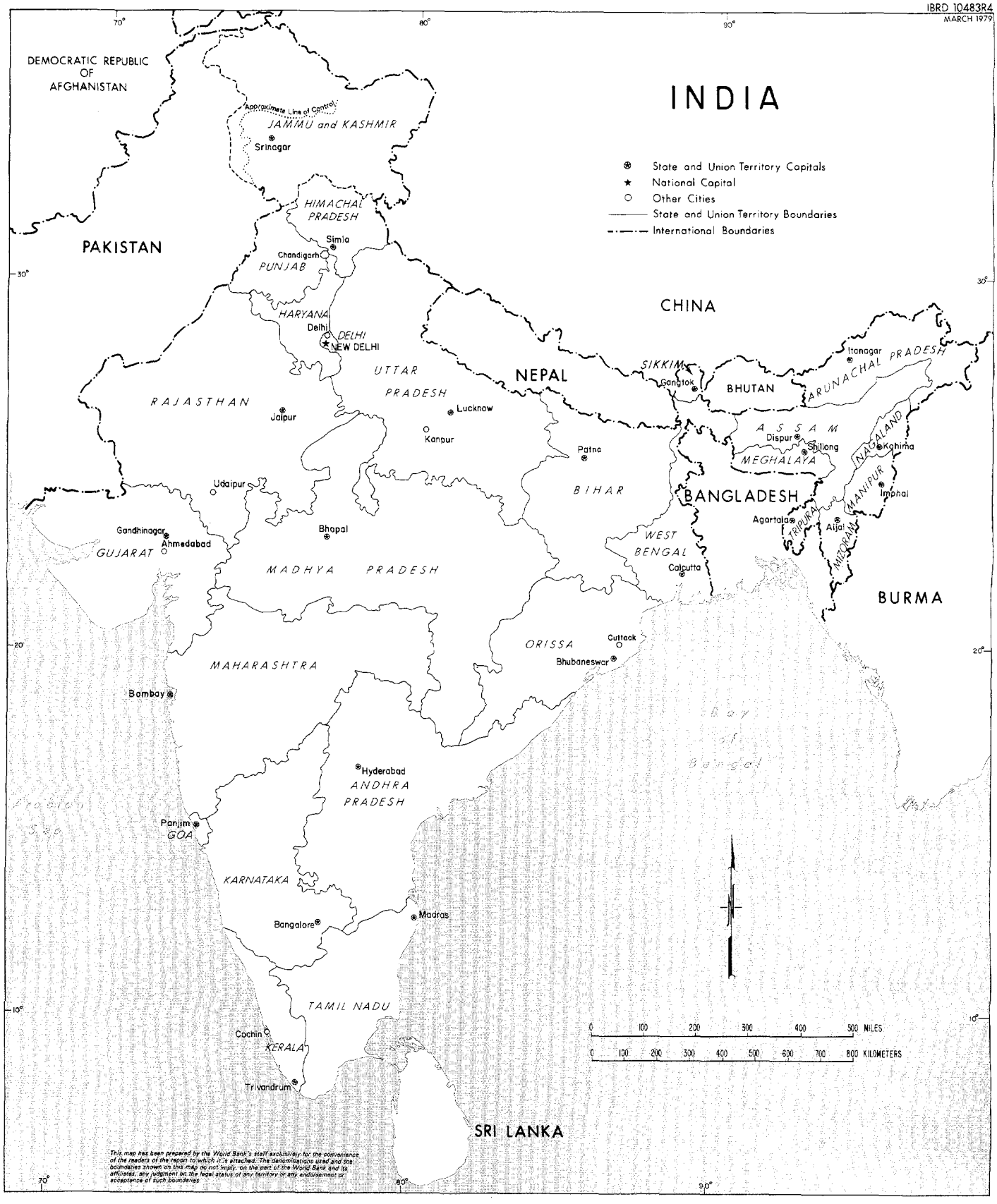
h/ Estimated.
i/ Figures given cover all investment income (net). Major payments are interest on foreign loans and charges paid to IMF, and major receipt is interest earned on foreign assets.
j/ Figures given include workers' remittances but exclude official grant assistance, which is included within official aid disbursements.
k/ Excludes net use of IMF credit.
l/ Amortization and interest payments on foreign loans as a percentage of merchandise exports.
m/ Excludes exchange adjustment, but includes US$ 22 million due to third parties.

IBRD 10483R4
MARCH 1979



SUMMARY AND CONCLUSIONS

Current Developments

i. The Indian economy made further gains last year. Preliminary estimates indicate that following a year of record crops in 1977/78, agricultural output again increased by 1.3%. Although agriculture thus acted as a drag on the annual growth rate, this was a favorable outcome since the impressive peak of 1977/78 was exceeded, though marginally, despite widespread flooding. Industrial production recovered from the previous year's sluggish performance so that growth of industrial output is expected to be around 8%-10%. Production would have recorded still higher levels but for the recurring shortages in basic inputs such as steel and coal, and inadequate availability of infrastructure requirements such as railway wagons and electric power. According to these preliminary estimates, overall growth of the economy will probably be around 3%-4% thus yielding a 1%-2% rise in per capita incomes.

ii. Not only were agricultural and industrial supplies comfortable, but there was also a revival of demand. The long awaited stimulus from rising incomes and public investments started to emerge and reflate the markets. Consumer goods sales as well as household investments were buoyant and even corporate investments might be coming out of their stagnation. Although some shortages appeared as a result, overall price stability was maintained. And thanks to continuing invisible and aid receipts, the balance of payments again yielded a surplus despite a growing trade deficit. The import bill increased by more than 16% but export earnings rose by only 8%. The relatively poor export performance was due to increased domestic demand and some erosion of export incentives, and to a lesser extent, stagnant demand and growing protectionism in world markets for some commodities. On the other hand rising imports followed the pickup in domestic markets and further liberalization of the import policy. While the slow export growth was disappointing the rise in imports following the 22% increase of the previous year was a positive development reflecting the growing absorption of external resources.

iii. Economic policy developments reflected, in general, the priority attached to agriculture and the trend towards piecemeal liberalization in industry. The Budget for 1979/80, like the Budget before it, allocated increasing outlays for agricultural programs. The incentives for farmers were reinforced by higher rice and wheat procurement prices, by extending price support to other crops as well and, more recently, by reducing fertilizer prices and agricultural interest rates. In industry, the exemption limit from licensing was raised to Rs 30 million, cement and steel prices were adjusted to accommodate cost increases, textile mills were relieved of the "cheap cloth" obligation and sugar prices were decontrolled. Further steps towards trade liberalization were also adopted; import and export procedures were simplified and importation of more items and at larger quantities was allowed.

iv. Given the favorable conditions, particularly regarding resources, the important questions of Indian economic policy centered, as they have for the last two years, on how the continuing opportunity was being utilized to

improve the longer-term prospects of the economy. The first set of longer-term issues discussed in Chapter 2 relate to India's overall development strategy as reflected in the outlays and programs of the new Plan, namely the realism of the growth targets, the feasibility of the investment programs, the sectoral priorities and the means of financing. In the subsequent chapters we discuss the prospects in agriculture, industry and power.

Plan Strategy

v. The achievements of the earlier plans had consistently fallen short of the plan targets due to a number of exogenous factors but the shortfalls also reflected the ambitious targets set, poor project design and implementation, and financial constraints. For the new Plan the aggregate availability of resources is unlikely to be a major constraint. The projected economic growth rate is more realistic than in the past and while in our view the expected increase in the domestic savings rate is over optimistic, shortfalls in this can be offset by improving the utilization of foreign resources. However, the other constraints which have hampered plan implementation in the past will be more difficult to overcome. The targets for certain key sectors such as power generation, irrigation and cement, fertilizer and coal production remain ambitious but feasible. On the other hand, the principal objectives relating to the reduction of unemployment and poverty will be far more difficult to attain and will require fundamental institutional reforms which go beyond the purview of plan outlays and programs.

vi. The proposed increase in the share of plan outlays allocated to irrigation constitutes the most visible sign of the priority attached to agricultural development. This emphasis is commendable as by all indications, surface irrigation and development of groundwater potential hold the key to the spread of the new agricultural technology and the associated increase and greater stability of yields. Regarding projected allocations for the industrial sector the Draft Plan steers a middle course. The relatively small amount allocated for small-scale industries in itself does not indicate any lack of commitment on the part of the Government, as the role of the public sector will be more to provide institutional support and organization rather than direct investment. While the total share of outlays allocated for large and medium industries is only marginally less than during earlier plans, a significant portion of this is for the crucial energy sectors of coal and petroleum development; the outlays allocated to the traditional core sectors of steel, fertilizers, non-ferrous metals and heavy engineering have all been cut to a minimum. In infrastructure allocations the shift continues from transport and communications to power investments which will constitute 23% of total plan outlays.

vii. Given the Draft Plan's emphasis on the reduction of poverty and unemployment, it is surprising that no major increase is projected in the share allocated for agriculture and allied programs and the share allocated for social services is projected to fall. However, in interpreting these allocations, which basically represent a continuation of past trends, it

should be borne in mind that a number of expenditure categories in these areas fall under other headings in the Plan -- such as rural electrification, rural roads and village industries -- and also that the binding constraint in both agricultural and social services is at present the development of effective programs and the administrative organization to carry them out, rather than the availability of financial resources.

viii. The new Plan is expected to be financed by a rapid rise in domestic savings. We have some reservations as to whether this ambitious domestic savings effort can in fact be realized, even though the savings rate has risen sharply in recent years so that the level for 1977/78 is higher than what was estimated in the Draft Plan. Nevertheless, the financing requirements of the Plan can still be met by larger recourse to foreign savings. There is already evidence that the required adjustment in the balance of payments that we had projected in last year's Economic Report is taking place: the current account showed a surplus of only US$400 million in 1978/79 and is projected to turn into deficit in 1979/80. Given the present aid pipeline, and provided that new aid commitments are at least maintained at the present level in real terms, a substantial increase in the draft on foreign savings can be financed without reducing external reserves to inadequate levels. This would not imply an unduly large dependence on foreign savings either since the share of domestic investment financed by foreign savings over the five years of the new Plan would still be less than 5%.

ix. The accumulation of external resources by the Indian economy is a temporary phenomenon and is likely to disappear by the end of the new Plan. This date could be advanced to 1981/82 or even to 1980/81 by adverse developments such as a decline in the inflow of remittances, successive crop failures or a deterioration in India's terms of trade. On the other hand, the excess resource situation could continue longer than indicated in our projections if imports increase at a slower pace for reasons such as a domestic recession or reversal of the present trade policy liberalization, or if there is an increase above expected trends of export or invisible earnings.

x. The evidence suggests, however, that the foreign exchange requirements of the Indian economy will continue to increase rapidly and, even for balance of payments reasons, sustained growth of the Indian economy will require a rising volume of aid. It is, therefore, important that the aid momentum to India should not be relaxed since it takes time to build up this momentum. At the same time, in view of the uncertainty about the future trends, it is imperative that export growth should be high and should accelerate in the medium term so that, after the period of adjustment, the increase in export earnings can cover most of the further increase required in the import bill.

xi. The share of the States and Union Territories in total plan outlays is expected to rise to 56% as compared to just less than 50% in the Fifth Plan and an average of around 45% in earlier plans. This is the reflection of the higher priority given to irrigation, power, rural development and basic needs which are all primarily the responsibility of the State Governments. With the

proposed shift in plan outlays towards the States the issues related to fiscal transfers from the Center to the States have once again come into focus. To accommodate the larger plan outlays by the States the Seventh Finance Commission has recommended a substantial increase in the share of the States in national tax revenues. The transfers through plan allocations have also been raised substantially. While the States appear to be generally satisfied with the increase in Central transfers proposed for the five years of the new Plan, the allocations of these transfers among the States led to prolonged discussions before a compromise was reached. Although the new system of allocation will favor poorer States, it is likely to have only a marginal impact on correcting regional imbalances. Thus, the success of the poorer States in improving their relative income levels will continue to depend largely on their own efforts both to mobilize resources and implement effective projects and programs.

Prospects in Agriculture

xii. A crucial element in achieving the economic and social objectives of the Plan will be the future growth of agriculture. Agriculture supplies 45% of the national product, and greatly affects the performance in other sectors through demand and supply linkages. Moreover, the future of about 250 million people who live in absolute poverty in rural areas also depends directly or indirectly on the growth of agricultural production. The Draft Plan anticipates agricultural output to grow by 4% per annum with foodgrains growing at close to 3% per annum and non-foodgrain production at higher rates. These rates are higher than the historical long-term trends though they are below the average growth rate of the last four years. Increased inputs such as accelerated irrigation and tubewell development and the rapidly rising use of fertilizer undoubtedly account for part of the recent surge in foodgrain output. There are also several other indications that support the view that the prospects for agricultural growth have improved compared to the pre-1975 trend: area planted to high yielding varieties has grown steadily, foodgrain cropping patterns have shifted, and the extension system has improved significantly in many areas.

xiii. It therefore seems likely that the foodgrain targets will be met if the input programs projected in the Draft Plan -- especially for irrigation and fertilizer -- can be fully implemented and if the momentum in extension programs is sustained. Achieving the irrigation potential is a matter of fully funding and carrying through the existing programs, but the actual utilization of this potential needs to be emphasized. In most irrigation projects in India, the area actually irrigated is significantly smaller than the potential created by the irrigation system. This is due both to water loss before the water reaches the outlet and to the inefficient systems of distributing water below the outlets to the individual farmgates. The efficiency of water conveyance to the outlets must be improved by upgrading the engineering designs and standards. Progress under Command Area Development schemes has been very slow and the other approaches to on-farm water distribution and management have not yet gained momentum. Waterlogging due to lack of drainage is potentially a major problem that needs increasing attention.

xiv. Fertilizer consumption has grown on average by 21% per annum over the past three years to reach 5 million nutrient tons in 1978/79 and it now appears that the rate of growth of fertilizer consumption has recovered from the slump in the mid-1970s. With the expansion of irrigation and the development of more effective extension services in many States, the profitability of using fertilizer is likely to rise. The Planning Commission projections and the projections by the Fertilizer Association of India imply a growth rate of fertilizer consumption of about 9% per year. These projections seem reasonable and achievable but would require considerable effort to develop markets in areas where the present consumption of fertilizer is low. An ambitious investment program is underway in the fertilizer industry which will hopefully keep the gap between domestic production and demand to manageable limits. The present comfortable foreign exchange situation suggests ample capacity for importing fertilizers should this gap grow.

Reducing Rural Poverty

xv. More than one-third of the world's poor live in India and more than 80% of the Indian poor belong to the rural households of landless laborers and small farmers. The improvements in living standards of these people will depend to a large extent on the overall growth of the economy, mainly on the productivity increases in agriculture but also on the expansion of employment opportunities in urban areas. However, it is also true that, at least in the Indian context, production growth at targeted rates will at best absorb the new entrants to the rural work force and will leave the backlog of unemployment intact. This highlights the importance of direct programs for creating employment and reducing poverty -- e.g., land reform, agricultural credit, rural development and public works.

xvi. Against the background of increasing land hunger, the scope for agrarian reform in India is not wide relative to the numbers of the landless and small peasants, but is certainly more than indicated by what has been achieved so far or the official estimates of surplus land. The absence of any progress in distributing even the modest areas declared surplus or taken over is a regrettable indication that the agrarian reform has lost even the little momentum that it had. This is unfortunate since it is extremely unlikely that the rate of growth of income of the poorer half of the rural population will come up to the average growth rate of income in rural areas in the absence of larger availability of land for the poor.

xvii. The efforts by the Government to raise the share of institutional credit flowing to agriculture and within this, the share of the poorer sections of the rural population, are commendable. To channel agricultural credit to the poorer classes and regions has, however, proven difficult. Of the estimated 77 million rural households in India in 1976 the agriculture credit societies had a membership of 40 million, but the number of borrowing members was only 15 million; the share of credit going for non-farm rural activities is still very low. Furthermore, the regional distribution of agricultural credit is skewed against the poorer States. Over the last decade many problems in the delivery of credit for rural activities and poorer households have been identified and some institutional improvements

have been accomplished. However, much remains to be done especially in restructuring the primary cooperatives so that they can function as efficient agents to serve the needs of the rural poor.

xviii. Reaching the rural poor through the credit mechanism depends, as in the case of most anti-poverty programs, on the success of rural development schemes which are more often constrained by problems of organization than merely the availability of finance. In the new Plan an integrated approach is proposed which is distinguished from previous efforts by its emphasis on the formulation of area specific plans at the grassroots level. But the new program has been fairly slow to get off the ground. At the end of the first year of the new Plan, the contribution of the new approach is not yet evident and the ideas about integrated or area-based planning have not been translated into action. Other than the Food for Work Program which was initiated in response to the rise in food stocks, efforts for direct intervention consist of either the continuation of the old public schemes such as the Small Farmer Development/Marginal Farmer and Agricultural Labor Agencies (SFDA/MFAL) and the Drought Prone Areas Program (DPAP), or the isolated cases of successful programs launched by some States; i.e. The Maharashtra Employment Guarantee Scheme, the Antyodhya scheme in Rajasthan, Operation Flood in Gujarat and the Comprehensive Area Development program in West Bengal.

Industrial Growth and Investment

xix. India's sluggish record for industrial production and expansion since the early 1960s can be explained in part by the context in which industry must operate. India is an agricultural country with 80% of its consumers living in the countryside, most of them at low incomes and out of reach of markets for most manufactured goods. Between 1965/66 and 1975/76 the average growth of agricultural production was only about 3% per annum, or little more than population growth. For the economy as a whole, the growth in this period was not much better and per capita gain was a bare 1-1/2% per annum. This creeping pace of income growth with about half the population living on less than US$100 a year, can go part of the way towards explaining industrial lethargy although other factors such as import bottlenecks and input shortages also contributed to a slow growth of industrial production.

xx. The industrial environment of the last few years has taken a considerable turn for the better with good agricultural crops, increased incomes from remittances and an easy foreign exchange situation. There was a jump in industrial production by 9.5% in 1976/77 but then the growth rate fell back to only 3.9% in 1977/78 and in 1978/79 revived to about 8%-10%. Within industry most capital and consumer durable goods responded briskly, but non-durable consumer goods and especially textiles and clothing remained surprisingly slow. The period since 1975 can be characterized as moderately buoyant for industry as a whole in contrast to the fairly static industrial situation of the earlier 1970s, especially during 1973-75.

xxi. The improved industrial demand and the higher than average level of output growth have raised hopes that a surge of industrial investment may be forthcoming in the near future with accelerator effects on industrial growth

similar to the government and private import substituting investments of the early post-Independence period. In some sub-sectors -- cement, petroleum, petro-chemicals, fertilizers, power -- a long period of rapid expansion and high utilization of capacity is clearly feasible. In the bulk of the industrial sector, however, the prospects are less clear and the pace and the pattern of investment will be determined largely by the decisions of entrepreneurs reacting to profitability signals and government policies. So far the response of private industrial investors has been understandably slow and hesitant. In real terms private corporate fixed investment fell from 1972/73 to 1976/77 and finally began to turn up only in 1977/78. As yet, however, it is not clear that this revival has produced investment in real terms above the levels of the early 1970s.

xxii. In spite of the improved industrial performance, investment prospects still appear to be viewed in private industrial circles with some ambivalence, combining many aspects of optimism, caution, and hesitancy. Among the reasons for private investment hesitation there seems to be uncertainty over the outlook for the economy and for policies affecting private industry. It appears that some investors have doubts that a favorable demand situation and rising public investment levels can be sustained considering the vagaries of Indian weather and harvests and conviction appears lacking so far that India has moved permanently up to a new and higher longer-term economic growth path. Beyond this rather general hesitation about long-term prospects, an ill-defined element of uncertainty about the course of policies, especially as it would affect the respective domains of the private and public sectors appears to have a restraining influence on some investment decisions.

xxiii. The other reasons usually cited as restraining private investments -- shortages of essential inputs, unsatisfactory labor relations, investment financing difficulties, declining profitability and rising taxes, government restrictions, cost and price dislocations and dilemmas about modernization -- can be important at certain times and for some sub-sectors but do not seem to be major obstacles which the industrialists could not surmount if the long-term expectations for growing markets were firmly established. For example, the principal financial obstacle to private investment appears to be the sagging level of real profits and of internal financing capacity which would improve if the markets were buoyant. Regulations and other licensing procedures also seem to be manageable hurdles so long as they are not administered more rigidly than has been the case so far. Similarly, investors who would consider modernizing their equipment are handicapped by the uncertainty about future markets and government policies. If the present optimism about agricultural growth is sustained under less favorable conditions and if industrialists gain confidence in the stability of industrial policies, then many factors which now appear to be restraining investments would be relegated to a secondary place and the dynamism in the markets would help the investors to overcome these less important hurdles.

Small-Scale and Tiny Sectors

xxiv. The policy of the present Government and the targets of the Draft Plan place heavy emphasis on the importance of the small-scale and tiny sectors in achieving industrial dynamism, particularly in labor absorption.

The village and small-scale industries program has a target of 6.8 million full-time jobs created during the planning period. For handlooms and small-scale industries, these targets imply employment increases of 81% and 108% respectively, by 1982/83. Government emphasis on small-scale and tiny firms is not new. The current policy and the Draft Plan expand on this long-term emphasis by adding to the list of industries where further investment in new capacity is to be made only by small firms, by increasing the funding of small-scale industry programs, and by attempting to strengthen and streamline the institutional support for small-scale industries.

xxv. In addition to employment generation, small-scale industries are encouraged because of their assumed low capital-output ratio. Although this may generally apply to traditional and cottage industries, it is not so clear in the case of the factory sector where fixed capital-output ratios are not always lower in the smaller units. Even in the case of the traditional and cottage industries, the future expansion has to be seen within the constraints imposed by the markets for their products, and their own competitiveness.

xxvi. One of the major plan programs for small-scale industries is in the handloom sub-sector. In addition to fiscal and control devices, the Handloom Commission and several of the State handloom boards are undertaking major new programs to upgrade the productivity of handlooms and the quality of output, aiming at new markets, primarily for exports. If the quality control and marketing problems can be solved, the possibility of opening major avenues of employment appear good. Similar potential for exports exists in the leather industry and a wide range of small-scale engineering industries.

xxvii. The institutional organization of all major small-scale industry programs is weak. This is partly the result of many parallel programs with the chain of command stretching from villages to a central institution in Delhi; each organization is generally too thin on the ground to be fully effective. To solve the general problem of weak and overlapping institutions with poor local knowledge, a major new program, the District Industries Center (DIC) Program has been started as from 1978/79. These Centers, in addition to their promotional and marketing functions are expected to operate as clearing houses for government programs so that by contacting the DIC the small entrepreneurs can get clearances, approvals, financing, technical assistance etc. from one institution. This would imply considerable delegation of authority from pre-existing institutions or, at a minimum, very close and effective communication of all these through the DIC and the ultimate success of the DICs will depend on how well they perform this function.

Power Sector

xxviii. The largest allocation for any one sector in the Draft Plan is for power investments, which are expected to amount to 23% of the total plan outlays -- a rise of 4 percentage points over the Fourth and the Fifth Plans. In view of the need to eliminate chronic power shortages that cripple industrial production and in view of the role that electricity supply plays in

exploiting the minor irrigation potential for agriculture, power investments no doubt deserve high priority. Since 1970/71, growth of generating capacity has not kept pace with demand. Investment in transmission and distribution has also lagged. On the other hand, a contributing factor to the present situation has been the high rate of growth of demand for electricity in relation to the growth of the economy. Between 1970 and 1975 electricity demand has increased 2.7 times as fast as the growth of GDP. This is much faster than in most other countries. The electricity intensity of the economy -- KWh per value added -- is also very high, almost comparable to that of the developed countries. This high rate of increase and high level of power intensity reflects the rapid rate at which electricity has been substituted for other forms of energy as well as the pattern of development and choices of technology that have been adopted in India, which is probably not unrelated to the low level of electricity tariffs.

xxix. The plan projection of demand for electricity -- averaging 8.4% per year over the next five years -- is below the observed long-run trend of 10.3% per year. While this no doubt reflects in part the structural change envisaged in the Plan, the potential demand for electricity could well grow more rapidly than projected in the Plan, and correspondingly, a higher than planned rate of capacity creation may be necessary. Even the planned capacity creation represents a substantial increase over past levels of investment and would tax the implementation capacity of the State Electricity Boards. Financial resources would also be a constraint unless the efficiency with which resources are used is improved.

xxx. The issues of the power sector in the long term evolve around the need to organize and integrate the physical and human resources in the sector more efficiently, to improve the management of the sector, to emphasize hydel generation and transmission development and to raise and rationalize the tariffs. For the States, power investments absorb on the average 35% of total plan outlays, and in certain large States the share is as large as 40%. An outlay of Rs 157 billion in five years is substantial in almost any context. If yet more is to be invested in the power sector, internal resource generation will have to rise from its present very low levels and, while to a limited extent this may be achieved through greater operational efficiency, it will undoubtedly call for increased tariffs. Real tariff increases should also contribute to more rational use of electricity in the economy.

Chapter 1

CURRENT DEVELOPMENTS 1/

A. Growth

1.1 1978/79 was the fourth consecutive year of above average performance for the Indian economy. Preliminary estimates indicate that following a year of record output in 1977/78, agricultural output again increased. Although the growth in agriculture was only about 1.3%, and thus acted as a drag on the overall growth rate, this was a very favorable outcome, particularly in view of the widespread flooding during the year. With industrial output increasing by about 8%-10%, overall growth of the economy will probably be around 3%-4%, yielding about a 1%-2% rise in per capita incomes.

1.2 Monsoon rains came in time and in adequate quantities. Weather conditions for winter cultivation were also favorable. Rice and wheat production were roughly at last year's levels, with a slight decline in rice output and a marginal increase in wheat output. Agricultural growth was concentrated in commercial crops such as oilseeds, sugarcane, cotton and jute and some coarse grains. In spite of the slow growth, the overall performance in agriculture tended to confirm that the good harvests of 1975/76 and 1977/78 were not simply isolated peaks. At a minimum, the 1977/78 peak has been sustained for one more year and it appears that, but for flooding which hurt the rice crop, the record harvests of 1977/78 would have been superseded by a larger margin. Foodgrain stocks remained at high levels, and are expected to reach 20 million tons by the end of the agricultural year.

1.3 The basic inputs into agriculture have continued to grow rapidly. Area under irrigation, which had grown at less than 1.5 million hectares a year in the period before 1975/76, has grown by 2.6 million hectares in both 1977/78 and 1978/79. About half of this increase has come from major and medium surface irrigation and the other half from minor irrigation, mainly private groundwater development. Fertilizer consumption is expected to exceed 5 million tons of nutrients in 1978/79, an increase of about 18% over the previous year. This substantial growth is particularly notable since it follows two successive years of very high growth -- 18% in 1976/77 and 26% in 1977/78 -- so that fertilizer consumption is now about 75% higher than it was in 1975/76.

1.4 Industrial growth in 1977/78 at about 3.9%, though not markedly below the historical trend, had fallen short of expectations in view of the improved input supplies and rising agricultural incomes. In 1978/79, growth of industrial output is expected to reach 8%-10% over the previous year, reflecting the response of the industrial sector to the lagged pickup

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1/ The discussion of economic developments during 1978/79 has been kept to a minimum in this report; for more details, see the Government of India's Economic Survey, 1978/79.

in market demand. The growth in industry came from a sharp rise in the output of food industries (sugar), a modest increase in textiles, important improvements in the hitherto depressed engineering sector, and the revival of demand for consumer durables. Production would have recorded still higher levels but for recurring shortages in basic inputs such as steel and coal, and inadequate availability of infrastructure requirements such as railway wagons and electric power.

1.5 At the crux of the input bottlenecks was the inadequate coal production due to the shortage of explosives, prolonged strikes and floods. This necessitated large diversions of coal transport which, together with the devastations of floods and the strikes at the docks and refineries, contributed to the mounting pressure on wagon capacity. The combined impact of reduced coal production in the early months of 1978/79 and non-availability of wagons was most keenly felt in power and the steel and fertilizer industries. In steel, production during the first eight months of the fiscal year had to be curtailed by 5%-6% as coking coal supplies dwindled to precariously low levels. Towards the last quarter of the fiscal year, the situation took a more encouraging turn and the eventual decline in steel output was expected to be around 2%-3%. Although power generation increased by 12%-13%, shortages in many States necessitated the imposition of power cuts and curbs on new demand.

1.6 Other relatively minor factors which affected overall output adversely were capacity constraints in particular industries and labor unrest. Examples of capacity constraints were seen in the production of nitrogenous fertilizer, cement, vegetable oils, and petroleum products. Labor unrest was particularly marked in the jute, cotton textile and steel industries and mining and quarrying. Judging by the provisional figures for the first 11 months of the year, it would appear that as compared to 1977, there were fewer disputes and workers involved in disputes during 1978. But with prolonged unrest in a number of units, the total number of mandays lost probably rose by about 10% over the level of 25 million in 1977. Only in 1974, has a higher number of mandays lost been recorded.

B. Policies

1.7 Now that an agreement has been reached on the allocation of resources between the Central Government and the States, and among the States, the new Plan is expected to be finalized soon. In any event, the Budgets of 1978/79 and 1979/80 by and large reflect the sectoral priorities stipulated in the Draft Plan (see paragraphs 1.16 and 1.17). On the other hand, only limited progress was made in implementing the new or expanded programs indicated in the Draft Plan to reduce poverty and increase employment.

1.8 As discussed in Chapter 3, the most visible progress in agriculture during 1978/79 was in increasing inputs. At the same time, agricultural incentives were strengthened by enlarging the scope of support prices and raising the support prices by a small amount. The procurement price for wheat was raised by about 2% and for paddy by about 10% in spite of abundant stocks and marketable surpluses of both. Procurement prices for oilseeds and pulses which were introduced for the first time in 1977 were also raised.

1.9 The Janata Party election manifesto, followed by the Janata Party Economic Policy Statement in November 1977 and the Government's Statement on Industrial Policy in December 1977, had raised expectations in some quarters and fears in others that a major overhaul of the industrial policy was in the offing. Such a change has not taken place so far. In general, looking at what has actually happened, the continuity with past industrial policy is more evident. Although the discussion regarding the shift in favor of village and small-scale industries and indigenous and appropriate technologies has intensified, and some new programs have been designed, a major change has not occurred in the effective policy framework. Ways of curbing the expansion of "large houses" and the pros and cons of nationalizing the private steel, aluminum and automobile industries have been discussed at the ministerial level but no decisions have as yet been taken.

1.10 On the other hand, motivated and supported by the comfortable foreign exchange situation, the trend towards piecemeal liberalization which was evident in the past few years has continued. Consequently there has been further easing of controls on licensing, production, pricing and imports. The liberalization of the import policy is discussed subsequently in paragraphs 1.23 and 1.24. As regards industrial licensing, the criteria for approving new capacity of firms owned by large houses was made more restrictive, while the rules were liberalized for small enterprises. The recommendation of the Ramakrishna Committee on Industrial Regulations and Procedures to increase the exemption limit of industrial licensing from Rs 10 million to Rs 30 million was accepted by the Government.

1.11 For at least four major industries -- cement, steel, textiles and sugar -- the price or production controls have been abolished or the regulated prices have been adjusted to conform better with market conditions. In the recent past, there had been a virtual stagnation in cement capacity as producers found the controlled ex-factory "retention" prices to be unremunerative in the wake of high investment costs. After the prices were adjusted, the private sector has responded with great enthusiasm and a number of licenses have since been requested and granted. Steel prices were adjusted upwards -- for the first time since 1973 -- and the dual price system which favored large units was abolished. The new textile policy did away with the obligation of the private cotton mills to produce quotas of "cheap cloth" to be sold at regulated prices. The dual price system for sugar -- under which over 60% of the production was reserved for distribution through the fair price shops at a regulated price and the rest was sold in the free market -- was abolished so that producers could sell their entire output in the free market. It appears that the new policies have strengthened market forces and removed some obvious inefficiencies.

1.12 Population policy continues to aim at reaching a birth rate of 30 per thousand by March 1983, from the officially estimated level of about 33 per thousand at present. Efforts to achieve this are based on the Statement of Policy on the Family Welfare Program, which follows the National Population Policy laid down by the previous Government in 1976 but with three major changes. Firstly, acceptance of any fertility control method must be completely voluntary. Secondly, activities to promote family planning, now

re-labelled as "family welfare", are being increasingly integrated with services for basic health, maternal/child health and nutrition, with the longer-term aim of linking them with economic and social development programs as well. And thirdly, a major effort has been launched to accelerate the improvement of health and fertility control services for the lower income groups particularly in the rural areas, involving a significant shift in the urban/rural pattern of expenditure on such programs.

1.13 During 1977/78 acceptor achievement was only 4.5 million against an expectation of 10 million. This performance was equalled or surpassed in the early 1970s, and of course falls far short of the 12.5 million acceptors of the 1976/77 intensive drive. Overall, the 1977/78 results were some 50% below the level needed to bring the birth rate down to 30 per thousand by the end of 1983. That goal had originally been set for 1979 but was recently deferred by four years in view of the program's depressed performance. The picture looks somewhat better for 1978/79: three quarters through the fiscal year, though only 52% of the 8.5 million target set for the year, total acceptances were about 29% above the level for the same period a year ago. Acceptances as a whole, and for each method, are comparable to the levels achieved in 1973/74, possibly indicating that national performance is gradually returning to the gently rising trend which was discernible before it was disrupted by the intensive drive of 1976/77.

C. Expenditures and Resources

1.14 The excess of savings over investment which first appeared in 1975/76 still continues to characterize the overall resource balance of the Indian economy. During 1976/77 and 1977/78, total savings exceeded total investment by more than 1% of GDP. The increase in savings was probably due to larger agricultural incomes and the increasing inflow of remittances from migrant workers. Investment seems to have responded with a lag to the resource availabilities. The excess of savings in 1977/78 was smaller than in 1976/77 as a percentage of GDP and there are indications that it has narrowed further in 1978/79.

1.15 The public sector's response to the availability of resources was substantial and timely. Excluding changes in stocks which blur the picture, the ratio of public fixed investment to GDP rose from 6.9% in 1975/76 to 8.3% in 1977/78. The household sector also increased its investments (from 7.8% to 10.9% of GDP). Unfortunately the private corporate sector did not participate in this boom: their investments in both fixed assets and stocks declined, even in current prices, over this period.

1.16 Evidence on household and corporate investment in 1978/79, and its probable development in 1979/80, is indirect and partial. Nevertheless buoyant household investment (especially in construction and transport equipment) and a slow recovery of corporate investment from the recent depressed levels are indicated by the finance data as well as by input statistics. Similarly, for the public sector, 1978/79 was a year of planned acceleration of investment: plan outlays were projected to rise by 17% in current prices over the previous year's level. However, the recent estimates of the Central

Budget show that the actual expenditures will fall short of this target in some important sectors. The major shortfalls are expected in petroleum, fertilizers and telecommunications. A shortfall of Rs 250 million is also anticipated in outlays on agricultural schemes, other than for irrigation and other programs financed by the States, for which data are not yet available.

1.17 After adjusting for the transfer of current expenditures from plan to non-plan account, the total plan expenditure of the Centre and the States is projected to grow by about 16% in current prices during 1979/80. 1/ Major increases in plan expenditures by the Centre will be for thermal power, coal, shipping, rural development, village industries and dairying. The increases for irrigation, transport, and water supply will be reflected in the State budgets.

1.18 During 1978/79, the tax revenue collected by the Central administration increased by 13%. The Budget for 1979/80 projects tax revenues to increase at a similar rate. About half of the increase will accrue from the normal growth of tax proceeds and the other half as the net result of the tax amendments introduced in the new Budget. Changes in excise duties are expected to bring Rs 4.6 billion, in customs duties Rs 1.5 billion and in direct taxes Rs 0.5 billion. The major revenue efforts consist of increases in excise duties on petroleum products, various increases of indirect taxes on consumer goods and increases in individual and corporate surtax rates. Several tax concessions on capital gains, for new investments in priority areas, and those benefiting long-term institutional savings have been withdrawn. On the other hand new tax concessions have been introduced in favor of agricultural credit institutions.

1.19 The share of the States in the revenues collected by the Centre will be higher following the recent Finance Commission recommendation. But as far as the Central Budget is concerned, this larger transfer of funds to the States will be compensated by smaller grants and loans from the Centre. Though the tax revenue accruing to the Central Budget will be less than the amount in 1978/79, the plan outlay by the Central Government will increase by 13%. In addition to lower grants and loans to the States, this increase is made possible partly by an increase in external loans expected to amount to Rs 6 billion, and also through increased receipts expected from internal generation of funds by public enterprises. For example, the internal resources of iron and steel units are expected to rise from Rs 60 million to Rs 2,350 million, railways from Rs 1,960 million to Rs 2,550 million and

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1/ The unadjusted increase in plan outlays is 8.5%. However, in the accounting system used in Indian planning the current expenditures associated with plan investments are kept in the plan account during the five-year plan periods and at the end of each plan period transferred to the non-plan account. Since for Budget purposes the Fifth Plan came to an end on March 31, 1979, Rs 8.33 billion were transferred from the plan to the non-plan account in the new Budget. If this sum is subtracted from the plan expenditure for 1978/79 to provide comparabity with 1979/80, then the increase in plan expenditure comes to about 16%.

post and telegraph from Rs 2,640 million to Rs 3,190 million. The last item reflects the recent increases in postal fees. But the others may be difficult to achieve in view of the poor financial performance of these enterprises in 1978/79.

1.20 The increased deficit in the new Budget--Rs 13,350 million--is lower than the actual deficit of Rs 15,900 million in 1978/79 and is not likely to generate inflationary pressures. The Indian economy is still enjoying price stability--prices during 1978/79 were only 1% above the level three years earlier in 1975/76--and there is no immediate risk of serious inflation. On the supply side, food is still plentiful and the Government's readiness to import the commodities which are in short supply would, as in the past two years, forestall price increases, although the cost of living in urban areas would rise marginally as a result of upward adjustments in regulated prices (e.g. for petroleum products). On the demand side, the pressure exerted by the rising foreign exchange reserves--through increases in the money supply--has weakened and is expected to be even less of an expansionary factor next year.

1.21 The excess of domestic resources in the economy over the past three years has been reflected in a comfortable balance of payments position (see Table 2.2 on page 27). As shown in Graph 1.1, the recent improvement in India's balance of payments started in the last quarter of 1975/76, when the monthly trade balance, which had averaged a deficit of US$160 million over the previous nine months, turned into a surplus. The trade account remained close to balance or in surplus through the first quarter of 1977/78. However, subsequently, with stagnant export earnings and a jump in the import bill, the monthly trade deficit has widened once again to average US$100 million over the past 20 months. Correspondingly the annual trade deficit has widened from US$175 million in 1976/77 to US$961 million in 1977/78 and an estimated US$1,600 million in 1978/79. 1/

1.22 Despite the widening trade deficit over the past two years, the current account has remained in surplus thanks to the net inflow of invisible receipts, which has risen from a negligible amount in 1974/75 to an estimated US$2,000 million in both 1977/78 and 1978/79. The major items accounting for this sharp increase have been remittances from Indians working abroad, interest earned on foreign exchange reserves and receipts from tourism. Even though net aid disbursements have fallen from the peak they reached in 1975/76 and India repaid all of its outstanding obligations to the IMF, the level of external reserves has continued to rise, on average by US$1,700 million per annum over the past three years, and by the end of 1978/79, stood at US$7,350 million, equivalent to 11 months imports.

1.23 India's imports had been severely constrained through 1976/77. Indeed the import volume in 1976/77 was no higher than a decade earlier and excluding the three major items of foodgrains, petroleum and fertilizers,

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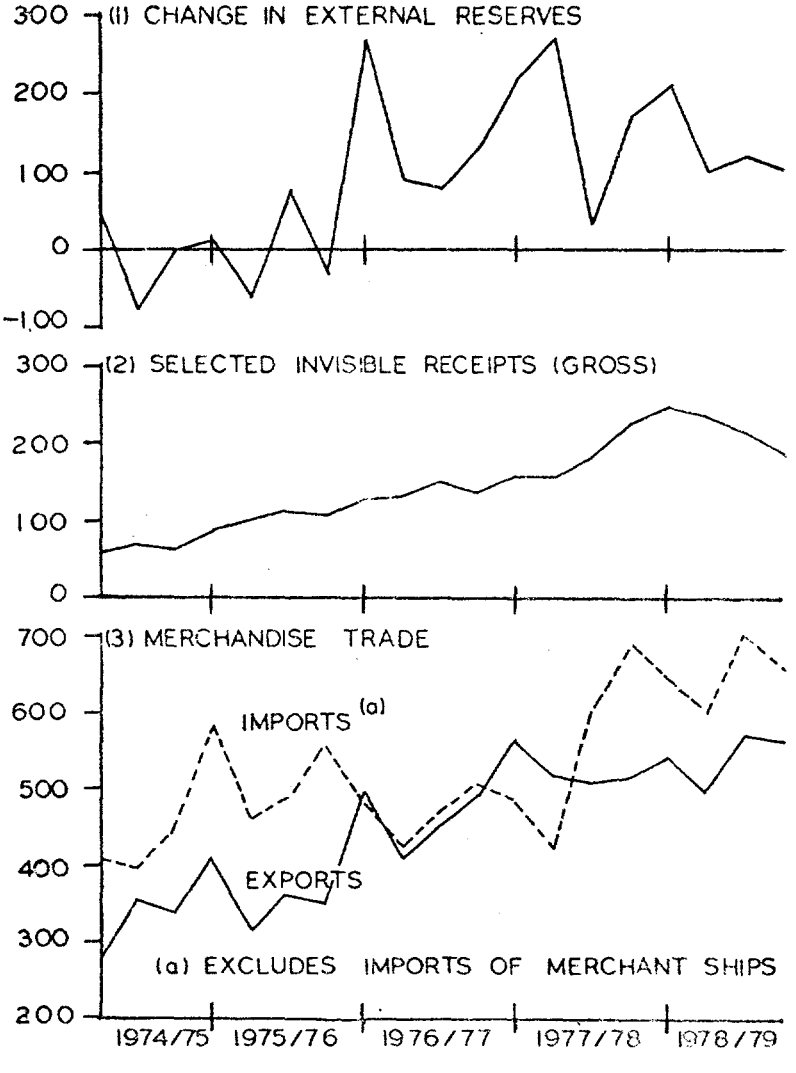
1/ The annual import data have been adjusted to include imports of merchant ships.

GRAPH I·1

BALANCE OF PAYMENTS

(MONTHLY AVERAGES BY QUARTERS IN US$ MILLION)



SOURCES: 1. IMF, INTERNATIONAL FINANCIAL STATISTICS.
2. ANSWERS TO PARLIAMENTARY QUESTIONS.
3. MINISTRY OF COMMERCE.

had actually fallen by 25% from 1973/74 to 1976/77. Following the improvement in the availability of foreign exchange, the Government has liberalized the import policy during the last two years. Import procedures have been simplified, the range and volume of items which can be imported has been expanded, 1/ and tariffs have been selectively reduced. To date, most of the import liberalization has been for raw materials and intermediate goods. Since most consumer good imports are still banned and capital good imports are permitted only on a selective basis, it is unlikely that the liberalization has as yet reached a level where it can have a significantly positive impact on the efficiency of domestic industry. However, the improved supply of imported raw materials and intermediate goods has no doubt helped to improve capacity utilization.

1.24 Although the potential impact of these changes continues to depend to a large extent on the interpretation and implementation of the import policy by the authorities, it is clear from the trends in the import bill that a significant liberalization has indeed taken place. Excluding imports of foodgrains, which fell substantially after 1976/77, the import bill has risen on average by 29% per annum over the past two years. The major contributions to this rise have come from edible oils, petroleum, iron and steel, synthetic fibers, fertilizers, and uncut diamonds for re-export. However, the broad-based nature of the increase in imports is indicated by the fact that the import bill for the remaining non-foodgrain items has also risen on average by more than 20% per annum over the past two years. Some of the important fast-growing items included in these "other" imports are chemicals, pulp and paper and precision instruments and the new import items of coal, cement, rubber and soda ash. Provisional data indicate that the value of capital good imports during the first half of 1978/79 was 19% higher than during the same period of 1977/78. Even so, it is unlikely that the full impact of the recent liberalization for imports of capital goods has as yet been reflected in the import bill.

1.25 Export earnings had risen sharply by 12% in 1975/76 and 23% in 1976/77, and virtually all of this increase had been due to volume growth. This apparently strong performance led to optimism that an export volume growth rate of 7%-8% per annum could be sustained in subsequent years, but this optimism has proven to be somewhat premature. On a disaggregated basis, the volume growth during 1975/76 and 1976/77 was largely limited to a few items, which were exported temporarily to take advantage of high world prices (e.g., sugar in 1975/76) or to provide an outlet for domestic

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1/ The most important of the changes in the 1978/79 policy were: (i) apart from banned, restricted and canalized items, actual users (industrial) can now import their requirements of raw materials, components and spare parts under Open General License; (ii) automatic licenses for imports of restricted raw materials and components are now issued on the basis of past consumption plus 10% (previously, the additional allowance was 20% for small-scale units and zero for others); and (iii) 14 specific industries may invite global tenders for capital goods; an official committee will scrutinize bids received for these tenders and approve appropriate purchases.

surpluses (e.g., iron and steel in 1976/77); exports of these items have been substantially reduced over the past two years. Partly as a result of this, export earnings rose by only 9% in 1977/78 and an estimated 8% in 1978/79. Although volume indices for these two years are not yet available, it would seem that the volume of exports probably fell in 1977/78, but then recovered again in 1978/79. The major sustained export growth in recent years has come from a range of manufactures such as engineering goods, gems, garments, handicrafts, finished leather and drugs and pharmaceuticals. These non-traditional exports potentially provide the core for a more dynamic export sector in the future.

1.26 Although the somewhat disappointing export performance of the past two years has been partly due to adverse overseas developments -- for example, fluctuating prices for tea and coffee, recessionary demand for iron ore, growing protectionism against textiles and garments, and the depreciation of the US dollar -- the more basic constraints are related to the domestic economy and policy environment. In India, exporting has generally been a marginal activity to provide an outlet for domestic surpluses and finance necessary imports. Therefore, with the recent revival of the domestic market and the comfortable foreign exchange position, the export imperative, both from the point of view of the exporter and the Government, was initially reduced. In this environment, the priority attached to export development became uncertain, and the incentive to export was reduced. To some extent the incentive to export was also unintentionally reduced by the recent liberalization, which extended the special import facilities, previously available only to exporters, to all actual users. In particular, for Replenishment Licences, rates have generally been reduced, shopping lists reintroduced, and premia have all but disappeared. In this situation, there is need for an increase in other export incentives, but this does not seem to have occurred as yet. Indeed for cash assistance the trend appears to have been in the other direction, especially for a number of the newer items (e.g., garments, some engineering goods and leather products) where India's comparative advantage lies. And although the Government has announced that the export policy will be maintained for a three-year period, the implications of this have been clouded by the statement that the rates and coverage of cash assistance will still be subject to periodic review. The Government has also imposed export bans at various times during the past two years on commodities in short domestic supply (e.g., fruit, vegetables, meat and HPS groundnuts); these bans have hindered the development of overseas markets and probably adversely affected the medium-term supply prospects within India.

1.27 To provide the balance of payments security required to sustain a more liberal import policy over the medium term, it is essential that the policy environment for exports is improved. This has been recognized by the Government and the renewed priority for exports is reflected in the 1978/79 Economic Survey. "It is therefore necessary that efforts are concentrated on a strategy which will promote the continued growth of manufactured items and not rely on a boom in commodities like sugar, tea and coffee. It is important that the regime of export assistance evolved in the past is continued with modifications only where excessive assistance has been granted. It is also essential that such a regime is stable over a fair period of time. The manoeuvrability with regard to import policy enjoyed in the last couple of

years shows the importance of having a policy which will promote a continuous and large growth in exports. While a policy of export-led growth may not be appropriate for a country of India's size and endowments there is little doubt that a growing export sector has an important role to play in domestic development. It is therefore necessary that instead of looking upon exports as a residual, they are looked upon as an integral part of the strategy of development." 1/

1.28 With comfortable external reserves, and the change in the composition of aid commitments from food, debt relief and other program aid to project aid, the level of net aid disbursements fell from a peak of US$1,810 million in 1975/76 to US$983 million in 1977/78. In 1978/79, the level of net aid disbursements rose back to an estimated US$1,080 million. This, together with the rapid increase in imports during the past two years, reflects the growing absorption of external resources by the Indian economy. In Section C of Chapter 2, we will discuss the medium-term balance of payments prospects and aid requirements of the Indian economy, in the context of the development strategy of the new Plan.

1/ Government of India, Economic Survey, 1978/79, p. 57.

Chapter 2

INDIA'S DEVELOPMENT STRATEGY: THE NEW PLAN

2.1 The Draft Plan, which was released in March 1978 and is expected to be finalized and approved by the National Development Council later this year, sets out India's development strategy for the five years 1978/79 to 1982/83. 1/ The principal objectives of the Draft Plan are to achieve within a period of ten years: (i) the removal of unemployment and significant under-employment; (ii) an appreciable rise in the standard of living of the poorest sections of the population; and (iii) provision by the Government of some of the basic needs of the people in these low income groups. While the Plan recognizes the importance of achieving more rapid expansion of the economy than in the past to meet the employment and welfare objectives, the targeted rate of growth at 4.7% per annum is lower than projected in most earlier plans. According to the planners, this reflects in part the increased emphasis given to the distribution rather than the level of income generation, and in part the need for greater realism in the macro-economic assumptions underlying the Plan. While the trade off between growth and distribution is not immediately obvious from the plan model, the adoption of a more realistic growth target is in itself well justified. Even at 4.7% per annum, the targeted growth rate is higher than actually achieved during any of the previous plan periods, and is substantially above the trend growth rate of 3.2% per annum achieved to date during the 1970s.

2.2 To help attain its principal objectives, the Draft Plan proposes a four-pronged strategy: (i) a rapid expansion of investment, especially in the public sector; (ii) an increase in the employment content of production through sectoral planning and the choice of appropriate technologies; (iii) the provision of essential infrastructure and social services through the revised Minimum Needs Program; and (iv) comprehensive area development at the block level. While all of the components of this strategy are discussed in the Plan, the major function that the planning exercise serves is to determine the amount of resources expected to be available for the public sector, and how these resources should be allocated among various sectors and programs. In this chapter, we will review the prospects and priorities of the public sector programs proposed in the Draft Plan, in light of the historical record of plan achievements and the projected availability of resources in the economy. The development prospects in the three key sectors of agriculture, industry and power will be discussed in more detail in the subsequent three chapters.

1/ Apart from the allocation of outlays between the Centre and the States, and the up-dating of the macro-economic projections, the Draft Plan is not expected to be substantialy modified before finalization.

A. Targets and Achievements

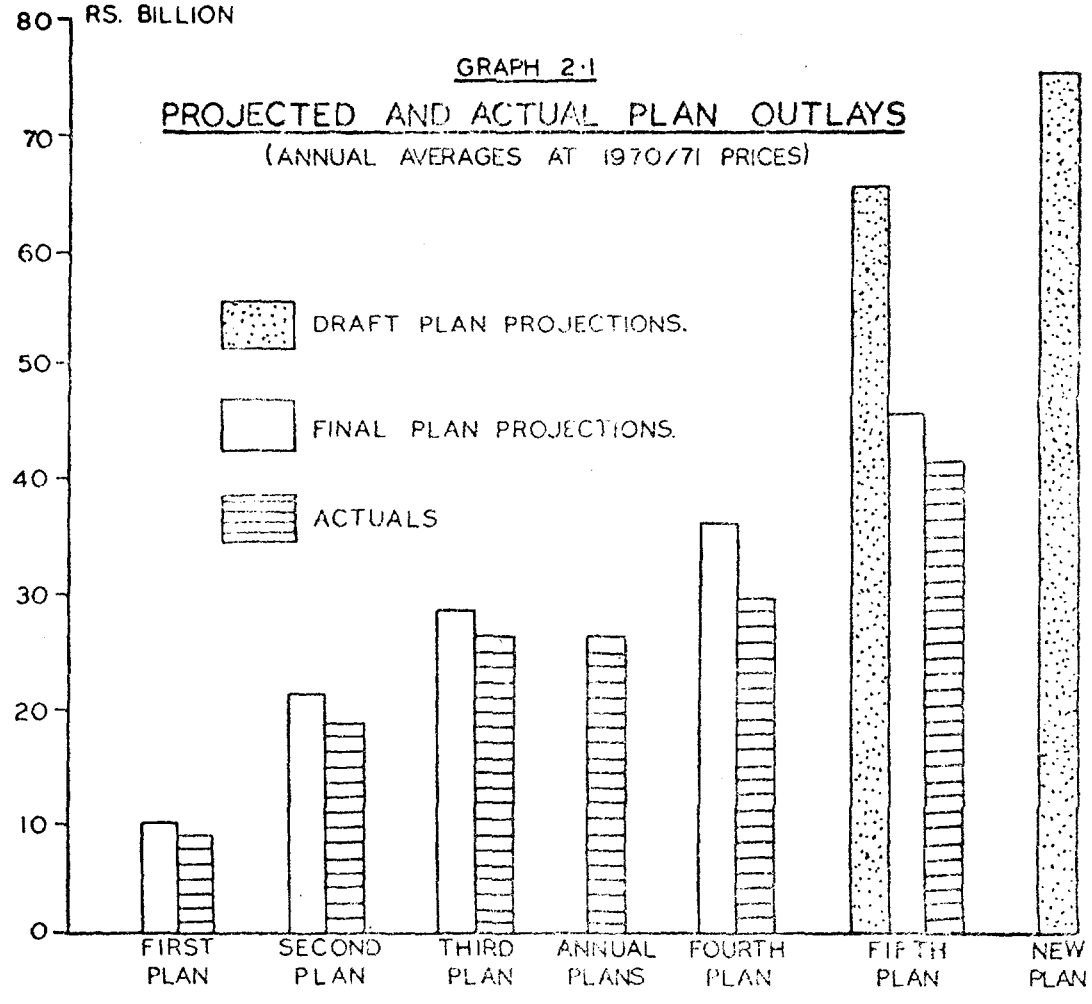
2.3 Plan outlays basically represent the developmental expenditure of the public sector on fixed investment and current expenditure on ongoing plan schemes. 1/ In 1977/78 prices, plan outlays over the five years of the Draft Plan are projected to total Rs 693.8 billion, of which Rs 591.3 billion (85%) is for investment. On an annual average basis and in constant prices, this represents a sharp rise of 84% over the estimated level of plan outlays during the Fifth Plan. 2/ Only during the Second Plan, when India embarked on an extensive program of public sector industrialization, has a more rapid increase in outlays been achieved, and then over the very small base of the First Plan; in no subsequent plan has the actual increase in outlays exceeded 50% (see Graph 2.1). Similarly, for all sectors other than industry and railways the increase in outlays projected in the Draft Plan is more rapid than achieved during any previous plan period.

2.4 In the past, the actual level of plan outlays in constant prices has always been less than projected; the shortfall ranges from 6% in the Third Plan to 20% in the Fourth Plan. As compared to the final plan document, the shortfall during the Fifth Plan was only about 10%. However, this is not surprising given that the final plan document took into account the actual or anticipated level of outlays during the first three years of the Plan. As compared to the Draft Fifth Plan projections, the shortfall was as much as 38%. 3/ Among the sectors, the shortfalls have generally been more marked for agriculture and social services. But, for any sector it has been rare for the projected outlays to be achieved.

1/ The coverage of outlays has varied from plan to plan. One important change in concept has been that the investment component of plan outlays was recorded on a net basis for the First through Fourth Plans, and on a gross basis for the Fifth and new Plans.

2/ Outlays as projected in the plans are normally in base-year prices, while data on actual outlays are only available in current prices. To permit comparisons, we have therefore converted all projected and actual plan outlays to 1970/71 prices, using the implicit price deflator for gross domestic capital formation from the National Accounts.

3/ As the Fifth Plan was terminated one year early, these comparisons of projected and actual outlays have been made on an annual average basis. Given that plan outlays are expected to have risen in constant prices during 1978/79, the shortfalls over the full five-year period would be somewhat less.



SOURCE: APPENDIX TABLE 5·9

2.5 While shortfalls in terms of outlays have been quite large, shortfalls in terms of physical targets have been even larger (see Statistical Appendix Table 5.10). 1/ This is perhaps most striking for those sectors where actual outlays have been sustained at or near the projected levels. For example, during the first three plans, outlays for irrigation averaged around 92% of the plan projections, but in terms of the additional area brought under irrigation, less than 40% of the plan targets were achieved. Subsequently, the progress on extending the irrigated area has been somewhat closer to the targets, with the additional hectares added per annum rising from 0.8 million in the Third Plan to 1.3 million in the Fourth Plan (the improvement being entirely for minor irrigation) and 1.8 million in the Fifth Plan (when progress on major and medium irrigation also improved). For power, the actual outlays have averaged about 96% of projections during the five plans to date, but the additions to the installed capacity have on average been only about 60% of the plan targets. Once again, the progress on extending the power

1/ Physical targets are usually set for the public and private sectors combined, and therefore, are not strictly related to plan outlays. Nevertheless, given that plan outlays indicate the broad priorities of the Government and are intended to give a lead to developments in the private sector as well, there is still a fairly close correspondence between the priorities implied in the projected outlays and physical targets.

capacity did improve substantially during the Fifth Plan, when about 1.9 million KW were added per annum, more than double the achievement during the Fourth Plan. But in relation to the targets -- which given the recent power shortages were clearly not unnecessarily high -- this progress was only 57% of what was projected in the Draft Fifth Plan and 75% of the final Fifth Plan projections.

2.6 The most severe and persistent shortfalls in performance have occurred in the industrial sector. These shortfalls were particularly marked during the Second through Fourth Plans when apart from some industries growing from a small base (e.g. petroleum refining), the additions to capacity fell well short of target. And, with lower than expected capacity utilization, the production performance was even more disappointing. For the key items of coal, steel and cement, the increases in production during those three plans were all at least 50% short of the targets. These shortages, together with the power shortfalls noted above, constrained growth in other areas of the industrial sector. The increase in fertilizer production was less than 20% of the targets for these three plans, with the result that fertilizer consumption was also sharply curtailed. In contrast to the persistent shortfalls in the performance of the industrial sector, the fortunes of agriculture have fluctuated depending to a large extent on the vagaries of the weather. Nevertheless, the trend growth rate of agriculture could no doubt have been improved if the expansion of irrigation and fertilizer consumption had kept pace with plan targets. The growth of the residual sectors -- electricity, construction, transportation and services -- has been generally steady and apart from the Fourth Plan, exceeded the plan targets. However, in aggregate, the growth rate of domestic product has exceeded the plan targets in only the First and Fifth Plans: plans which set very modest targets and were blessed with good weather.

2.7 There have been a number of exogenous factors which have contributed to this disappointing performance. All plans have been adversely affected to a greater or lesser extent by the impact of droughts on agricultural production and electricity generation. During the Third and Annual Plans, border disputes resulted in a diversion of the available resources towards defense and refugee rehabilitation, and dislocated the transport and industrial base of the country. India's ability to finance imports was also constrained during the Second Plan and early years of the Fifth Plan by a sharp deterioration in the terms of trade. However, while these exogenous factors have been important, it remains true, and this has been repeatedly recognized by the Planning Commission in its review of plan performance, that the shortfalls in achievement also reflect the over-ambitious targets set (especially for the Second and Third Plans) and poor project design and implementation. For virtually all plans, the domestic resources mobilized for investment have fallen short of requirements, due to the lower than expected economic growth and savings rates. Correspondingly, the impact of the plans on the balance of payments has been underestimated. As evidenced by the larger shortfalls for physical achievement than for outlays, cost overruns have been common. Progress on the building and commissioning of basic infrastructure (especially irrigation and power) and large-scale industry projects has generally fallen behind schedule, and capacity utilization has been well below expectations.

2.8 For the new Plan, as discussed in Section C of this chapter, the aggregate availabililty of resources is unlikely to be a major constraint. The projected economic growth rate is more realistic than in earlier plans, and while in our view the expected increase in the domestic savings rate is once again over optimistic, shortfalls in this can be offset by improving the utilization of foreign resources. However, the other constraints which have hampered plan implementation in the past will be more difficult to overcome. We will discuss some of these problems as they relate to specific sectors and programs in the subsequent chapters, but some general points can be made here. Firstly, while the projected economic growth rate is more realistic than in earlier plans, the targets for certain key sectors remain ambitious; as compared to the annual achievements during the Fifth Plan, the projected increases for the new Plan are almost double for electricity capacity and generation, and more than 50% higher for area irrigated and cement, coal and fertilizer production. Failure to realize these key targets could lead to shortages which will restrain growth in other sectors of the economy.

2.9 Secondly, while the projected outlays generally seem to be adequate to finance the proposed public sector programs in constant prices, the eroding impact of inflation cannot be ignored. Even at a moderate rate of 5% per annum, inflation would reduce the real purchasing power of the projected outlays by over 15%. Although the nominal revenues of the public sector should also rise with inflation so that the real level of outlays could be maintained, such adjustments have rarely been made in the past. This has not only resulted in shortfalls in the level of plan outlays in constant prices, but also distorted the balance of the plans, with ongoing schemes making first claim on the available resources at the expense of new schemes and current expenditures. As noted in paragraph 2.26, cutbacks in current expenditures fall most heavily on the sectors of agriculture and social services. But even in the power sector, the eroding impact of inflation in recent years has meant that with funds locked into long-gestation generation projects, too little investment has been made for transmission and distribution.

2.10 Thirdly, the institutional and administrative requirements for plan implementation -- including the political will of the Government and the people, and the effective design, execution, management and monitoring of projects -- will now become even more crucial with the shift in plan priorities towards rural development, and the reduction of unemployment and poverty. The Draft Plan includes several proposals intended to help meet these requirements: the introduction of the rolling plan system to add "realism and flexibility" to the planning process; 1/ the inclusion of a ten-year perspective to permit more effective investment planning

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1/ The features of the rolling plan system are: "(i) year to year targets will be set for sectoral outlays and output for major sectors within the Five Year Plan; (ii) the horizon of the Five Year Plan will be extended by working out these selected sectoral targets for one additional year at the end of each year." (Planning Commission, Draft Five Year Plan 1978-83, p. 119).

for long-gestation projects and programs in such areas as land use, power, and the development of water and mineral resources; and, greater emphasis on the planning and implementation of programs at the block level, to help make the plan more relevant to local conditions. Whether these proposals can be effectively implemented, and be adequate to overcome the problems experienced in the past, remains to be seen.

2.11 Finally, many of the potential gains from the expansion of infrastructure and production capacity have in the past been lost due to inefficiencies. In recent years, the efficiency of water use in irrigation has been only half of what could be reasonably expected under Indian conditions; the rate of capacity utilization in thermal power generation has been just over 50% with additional losses in transmission of about 20%; in industry, despite recent improvements, capacity utilization is still less than 80%; and, capital-output ratios have continued to rise. To realize the full potential from the assets of the economy, it is therefore important that the efficiency of capital use be raised and that high standards be set for new schemes. In many respects, this requires better management and organization rather than additional resources.

2.12 Given the available resources, and with a concerted effort to overcome the institutional and administrative constraints which have hampered plan implementation in the past, the economic growth rate and investment programs proposed in the Draft Plan can be achieved. However, the principal objectives relating to the reduction of unemployment and poverty will be far more difficult to attain, and will require fundamental institutional reforms which go beyond the purview of plan outlays and programs. As regards unemployment, the Draft Plan has targeted for an increase in employment by 49 million man years over the next five years; this is expected to not only fully absorb the new entrants to the labor force but also reduce the backlog of unemployment and under-employment from 41 million man years in 1977/78 to 16 million man years in 1982/83. On the basis of past trends, the projected rate of economic growth will by itself be inadequate to provide this increase in employment. However, the Draft Plan expresses optimism that the additional employment required can be generated by: (a) a shift in purchasing power towards the poorer sections of society, whose consumption is expected to be more oriented towards labor-intensive goods; (b) redirection of public expenditures towards rural infrastructure which is not only labor intensive in construction but can also increase the labor absorption of agricultural production; and (c) encouraging the use of more labor-intensive technologies.

2.13 While we welcome the enhanced awareness of the unemployment problem in the Draft Plan, and fully endorse the proposed emphasis on income redistribution and rural development, the anticipated expansion of employment opportunities over the next five years is unrealistically large. In the past, shifting the distribution of income has proved to be very difficult in India as elsewhere, and the policies and programs described in the Draft Plan do not appear to be adequate in themselves to drastically change this record in the near future. As regards the use of labor-intensive technologies, only one industry, sugar, has been discussed in the Draft Plan, and as yet, the technological changes required to achieve the ambitious employment

targets for the non-farm sector as a whole do not seem to have been fully worked out. Undoubtedly, selected areas of Indian industry can adopt more appropriate technologies which, while they might reduce output per worker, would create additional employment. However, in so far as this further depresses returns to new investment, the final impact on employment could well be less than expected, and at the cost of a substantial loss in productivity. Some small-scale industries do potentially provide an efficient opportunity for expanding employment. But, by nature these are often fragmented and difficult to organize, and for some of the traditional small-scale industries excess supply conditions already exist. While some progress on these problems has already been made (see Chapter 4, Section C), it will be several years before an appreciable impact on employment can be expected.

2.14 The basic objective of the emphasis on employment in the Draft Plan is to reduce poverty. Defining the poverty line on the basis of recommended nutritional requirements, the Draft Plan estimates that 46% of the population was below the poverty line in 1977/78; by the end of the Plan, it is hoped to reduce this proportion to 38%. In addition to raising employment, the measures suggested in the Plan for alleviating poverty include land reform, the improved supply of credit for weaker sections of society, public distribution of essential goods and special programs to assist backward areas and to provide for basic needs. The progress to date on some of these programs and their likely impact on rural poverty over the next five years is reviewed in Section C of Chapter 3. But, it is perhaps appropriate here to discuss briefly the provision of basic needs, as this forms an integral and important part of the strategy of the Draft Plan.

2.15 Recognizing the importance of a coordinated approach to the provision of basic needs, the Minimum Needs Program was first introduced in the Draft Fifth Plan. 1/ This program set targeted outlays and norms to be achieved during the period of the Plan for elementary education, rural health, rural water supply, rural roads, rural electrification, house sites for landless labor, slum improvement and nutrition. However, as compared to the targeted annual outlays on the Minimum Needs Program of Rs 9,100 million, actual annual outlays averaged only about Rs 2,570 million over the four years of the Fifth Plan, or about Rs 4 per capita (all outlays converted to 1977/78 prices). Actual annual outlays were less than 40% of the Draft Fifth Plan projections for all components of the program, and fell below 10% of the projections for nutrition. Physical progress towards meeting the norms of the program was probably equally disappointing.

2.16 In the new Draft Plan, the coverage of the Minimum Needs Program has been extended to include adult education, and revised norms have been set for the next five and ten years. Annual outlays on the Revised Minimum Needs Program are projected to average Rs 8,360 million in 1977/78 prices, which is less than projected for the Fifth Plan but over three times higher

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1/ The Minimum Needs Program was not reviewed or revised in the final Fifth Plan.

than actually achieved. Within the program, 22% of the outlays are for elementary education, 19% for rural roads, 16% for rural water supply and 12% each for rural health and housing sites for landless labor. In general, the revised norms and outlays proposed for the Minimum Needs Program in the Draft Plan appear to be far more realistic than attempted during the Fifth Plan although problems with per capita costs and replicability could still arise in the programs for rural housing, rural water supply and rural roads. The projected allocation for rural electrification, which is one of the basic requirements for improving both rural living standards and agricultural production, is also disappointingly low at only Rs 500 million per annum. However, as in the past, the basic constraint on the achievement of the proposed norms of the Minimum Needs Program will not be resources as much as the administrative capacity to construct and maintain rural infrastructure and to provide a cost-effective delivery system for rural services, especially in the areas of public health and nutrition.

2.17 The family planning program, although not included in the Minimum Needs Program, is one of the most crucial components of India's development strategy, both to ensure that the benefits of economic growth are not entirely dissipated over a larger population, and to contribute directly to the reduction of unemployment and poverty. Unfortunately, as already noted in Chapter 1, the progress of the family planning program over the past two years has been somewhat disappointing and the present acceptance rate is well below what is required to reduce the birth rate by three per thousand as envisaged in the Draft Plan. Although the leaders of the Janata Government have continuously stressed the importance of fertility reduction, the Draft Plan omits any discussion of its strategic role. The family planning program itself is discussed towards the end of the Plan, and while it is stated that it "will continue to be afforded a higher priority in the socio-economic development plan," 1/ this is simply followed by a brief description of the program components and the outlays planned for them. No doubt this apparent reluctance to bring the population problem into the central discussion of development strategy reflects the popular reaction and political sensitivity to the fertility reduction efforts at the time the Draft Plan was prepared. However, it is to be hoped that the priority attached to the family planning program will be strengthened in the final plan document to encourage confidence that the demographic results, which the Government insists are urgently needed, can in fact be realized. That this may happen was indicated at the meeting of the National Development Council at the end of February, in which the slow pace of the fertility reduction effort was noted. The country's total commitment to the program was reaffirmed, and all-out efforts were urged to intensify its implementation.

B. Sectoral Priorities

2.18 As already noted, one of the major functions of the Planning Commission is to allocate public resources among various sectors and programs.

1/ Planning Commission, Draft Five Year Plan 1978-83, p. 235.

To provide some norms for evaluating the sectoral priorities reflected in the outlays of the new Draft Plan, we have prepared an historical series on sectoral allocations. Of course, any sectoral classification is bound to be somewhat arbitrary, and with the reclassification of outlays between plans, changes in priorities can be easily obscured. However, using a format dictated by the availability of data, we have attempted as far as is possible to reclassify outlays on a consistent sectoral basis. The resultant shares of the major sectors in actual outlays for the First through Fifth Plans, and as projected in the new Draft Plan, are shown in Table 2.1.

2.19 For the first three plans, the pattern of sectoral allocations reflected the broad priorities of India's development strategy. In the First Plan, priority was given to the construction of basic infrastructure and correspondingly, the share of irrigation, power and railways in outlays was as high as 43%. The Second Plan marked the beginning of the Indian strategy of development through rapid industrialization (the so-called Mahalanobis model), with the public sector to give the lead in the establishment of key and basic industries. Reflecting this, the share of industry in plan outlays rose from less than 5% in the First Plan to 24% in the Second Plan and 23% in the Third Plan. To accommodate these increases, the shares of irrigation, power and social services in outlays were sharply curtailed.

2.20 While industrial investment, and to a lesser extent industrial production, made dramatic progress during the Second and Third Plans, the overall growth of the economy, especially in the agricultural sector, remained below expectations. By the end of the Third Plan, this strategy had started to show signs of strain, with inadequate demand for the output of the industrial sector on the one hand, and shortages of agricultural commodities which put pressure on the balance of payments and domestic prices on the other. Unfavorable weather conditions and other exogenous factors aggravated the imbalances. To overcome these problems, the Fourth Plan proposed a more broad-based development strategy, recognizing the key role of the agricultural sector in ensuring a stable environment for economic growth. However, this change in strategy is not immediately obvious from the pattern of the plan outlays. Apart from some shift from railways to power, the sectoral allocation of outlays in the Fourth Plan was somewhat similar to that in the Third Plan, 1/ with the share of agriculture and irrigation being increased only marginally from 21% to 23%.

2.21 A similar broad-based development strategy was proposed in the Draft Fifth Plan. In addition, a modest attempt was to be made to directly improve the lot of the poor through the Minimum Needs Program. Unfortunately, the implementation of this strategy was disrupted by the impact of the oil crisis and poor harvests on the balance of payments and domestic prices. As a result, the sectoral allocation of outlays was substantially revised when

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1/ Because of the dislocation caused by the 1965 border dispute and consecutive bad harvests, there was a three-year gap between the Third and Fourth Plans. However, as there was no coordinated plan strategy during this period, the sectoral allocations in the annual plans for 1966/67 to 1968/69 are not discussed here.

Table 2.1

SECTORAL ALLOCATION OF PLAN OUTLAYS
(% of total)

	Actuals					Estimates	Projections
	First Plan (1951/52-1955/56)	Second Plan (1956/57-1960/61)	Third Plan (1961/62-1965/66)	Annual Plans (1966/67-1968/69)	Fourth Plan (1969/70-1973/74)	Fifth Plan (1974/75-1977/78)	New Plan (1978/79-1982/83)
Agriculture and Allied Programs	12.0	9.7	10.0	10.2	10.7	10.3	12.4
Irrigation and Flood Control	19.3	11.2	10.9	11.9	11.8	11.9	13.9
Industry and Minerals	4.9	24.1	22.9	24.7	19.7	25.4	21.2
Village and Small-Scale	2.1	4.0	2.8	1.9	1.5	1.3	1.9
Large and Medium	2.8	20.1	20.1	22.8	18.2	24.1	19.2
Power	13.3	9.7	14.6	18.3	18.6	18.7	22.7
Transport and Communications	26.4	27.0	24.6	18.4	19.5	18.0	15.2
Railways	11.1	15.5	15.4	7.7	5.9	5.4	4.8
Other	15.3	11.5	9.2	10.7	13.6	12.6	10.4
Social Services	21.0	16.2	15.1	12.9	15.4	13.1	12.9
Other	3.1	2.1	1.9	3.6	4.3	2.5	1.6
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Source: Statistical Appendix Table 5.8.

the Fifth Plan was finalized in September 1976. In particular, the share allocated for energy development -- power, coal and petroleum (the last two are included in the industry and minerals sector in our classification) -- was raised from 21% in the Draft Fifth Plan to 27% in the final Fifth Plan, with corresponding reductions in the shares of other sectors, especially social services. Once again, agriculture and irrigation were projected to account for about 22% of total outlays. Not surprisingly, given that the actual outlays for half of the plan period were already known when the Fifth Plan was finalized, the actual pattern of sectoral allocations was basically

as projected. 1/ However, the Minimum Needs Program, which was not formally revised in the final Fifth Plan, accounted for only about 3.4% of total outlays, less than half the share projected in the Draft Fifth Plan.

2.22 In determining the sectoral allocation of outlays for the new Draft Plan, "the highest priority has been given to the sectors which generate the maximum employment and which have a significant impact on the standard of living of the poorest, like agriculture and allied activities, village, cottage and small industries and inputs like irrigation, fertilizers and power which are required to sustain them." 2/ These priorities are generally reflected in the trends shown in Table 2.1. Most striking is the proposed share of total outlays allocated for power which is projected to rise to 22.7% as compared to 18.7% during the Fifth Plan. Taken together, agriculture and irrigation have accounted for a remarkably constant 21%-23% of both projected and actual outlays since the First Plan; in the new Draft Plan, it is proposed to increase this share to 26.3%. The bulk of this increase is accounted for by the share of irrigation which is projected to rise from 11.9% in the Fifth Plan to 13.9% in the new Draft Plan. Other agricultural programs are projected to account for just over 12% of the Draft Plan's outlays. While this is higher than actually achieved in the past, it is in line with the projections of earlier plans. Outlays on village and small-scale industries have also been expanded substantially in the Draft Plan, although they remain small in absolute terms and account for less than 2% of the total proposed outlays. Contrary to the stated priorities of the Draft Plan, the proportion of plan outlays allocated for complementary investment in fertilizer production seems to have been reduced substantially. In part, this no doubt reflects the low priority given to large and medium industries in general. Excluding coal and petroleum development, both of which have received greater emphasis since the oil crisis, the share of large and medium industries in total outlays is less than 13%, far lower than in any period since the First Plan. Similarly, the share of outlays allocated for transport and communications and social services, which had already been cut back during the Fifth Plan, have been reduced further in the new Draft Plan.

2.23 This brief outline of the sectoral allocations in the Draft Plan highlights the main thrust of the present strategy as well as the difficult choices which have to be made in the coming years. The proposed increase in the share of outlays allocated to irrigation constitutes the most visible sign of the priority attached to agricultural growth. This emphasis is commendable as by all indications, surface irrigation and development of the

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1/ Comparisons between the Fourth and Fifth Plans could be distorted to some extent by the change from net to gross investment in the computation of plan outlays. According to the Planning Commission, the major adjustments resulting from this change were in the outlays for transport and communications (especially railways) and industry. However, in practice, the amounts of the adjustments seem to have been small and as can be seen from Table 2.1, have been inadequate to fully offset the reduced priority given to these sectors after the Fourth Plan.

2/ Planning Commission, Draft Five Year Plan 1978-83, p. 17.

groundwater potential hold the key to the spread of the new agricultural technology and the associated increase and greater stability of yields. Since India already has a developed capability for executing irrigation projects, implementation, even at the ambitious rate projected in the Plan, should be technically feasible. However, to be effective, the expansion of the irrigation system will have to be accompanied by major efforts in two key areas: (a) on-farm programs, for conveying the water to the farms and ensuring it is used efficiently, will have to be substantially speeded up and improved; and (b) the supply of other inputs, including rural electrification to run pump sets and fertilizers, will also have to be expanded. As already noted, it may be necessary to increase the size of the programs for these two inputs above the levels projected in the Draft Plan.

2.24 In the midst of the present controversy regarding the role of heavy industry, the Draft Plan steers a middle course in the projected allocations for the industrial sector. The relatively small amount allocated for small-scale industries in itself does not indicate any lack of commitment on the part of the Government, as the role of the public sector will be more to provide institutional support and organization, rather than direct investment. While the total share of outlays allocated for large and medium industries is only marginally less than during earlier plans, a significant portion of this is for the crucial energy sectors of coal and petroleum development; the outlays allocated to the traditional core sectors of steel, fertilizers, non-ferrous metals and heavy engineering have all been cut to a minimum.

2.25 The continuing shift in the allocations for basic infrastructure, away from transport and communications and towards power, is only indirectly related to the strategy of the present Government. Power demand has risen rapidly in recent years and the economy suffers from frequent and acute power shortages. And, even the ambitious expansion of power capacity proposed in the Draft Plan may be inadequate to fully provide for the needs of the economy over the next five years (see Chapter 5). While bottlenecks in transport and communications may be less evident, and related more to the quality of the service provided rather than any clear-cut shortages, they have also been a major factor in limiting the growth of the economy and the spread of social services to isolated and backward areas. In roads and ports, upgrading and expansion of the present network would not only help relieve existing congestion, but also generate important external economies for agriculture and industry, and provide opportunities to embark on labor-intensive public works programs. At present, the brunt of the dislocation caused by bottlenecks at the ports and in road transport is being borne by the railways, and the resultant difficulties in managing the supply and distribution of wagons will probably not be satisfactorily resolved until the present investments in other transport sub-sectors reach fruition towards the end of the new Plan. For all sub-sectors of transport and communications, there is an urgent need for complementary investment in associated industries -- such as railway wagons and post and telegraph equipment -- to ensure that the available infrastructure is used to its full potential.

2.26 Given the Draft Plan's emphasis on the reduction of poverty and unemployment, it may appear surprising that within plan outlays, no major increase is projected (as compared to the projections of earlier plans) in the share allocated for agriculture and allied programs, and the share allocated for social services is projected to fall. However, in interpreting these allocations, which basically represent a continuation of past trends, three qualifications should be borne in mind. In the first place, the public sector programs for agriculture and social services include a relatively large current expenditure component on both plan and non-plan account, and as a result, the plan outlays for these sectors are indicative of neither public investment nor total public expenditure. 1/ Secondly, there are many plan programs outside the specific allocations for agriculture which have an impact on agricultural production and rural development in general. In addition to irrigation discussed above, there are other programs elsewhere in the plan, such as for rural electrification and rural roads, which are vital for improving the performance of the agricultural sector. More generally, a large portion of the programs for village and small-scale industries and social services will benefit the development of the rural areas. Taken together, the proposed share of these rural development programs in outlays has been increased from 33.6% in the final Fifth Plan to 40.3% in the new Draft Plan. 2/ Similarly, the falling share of social services in plan outlays does not imply a low priority for the Minimum Needs Program. With the proposed reorientation of the social service programs towards the provision of basic needs and the expansion of the basic needs programs in other sectors (e.g. rural roads and rural electrification), the share of the Minimum Needs Program in plan outlays is projected to rise to 6.0%, from only 3.4% in the Fifth Plan.

2.27 Finally and perhaps most importantly, the binding constraint at present in both agricultural and social services is the development of effective programs and the administrative organization to carry them out, rather than the availability of financial resources. Although the share of these

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1/ Unfortunately, no sectoral breakdown of the investment and current expenditure components of outlays is given in the new Draft Plan. However, judging from the Draft Fifth Plan, the proportion of current expenditures in plan outlays probably ranges from about one-half for social services and one-third for agriculture to only 1% for power and transport and communications. This range reflects both the relative level of current expenditures within total public expenditures on these sectors, as well as differences in the method of calculating the plan share in those current expenditures. For broadly-defined programs, such as in agriculture and social services, all current expenditures during the plan period on extending the coverage of the programs are included in the plans. However, for more specific plan projects, such as in power, only those current expenditures incurred prior to the completion and commissioning of the projects are included.

2/ The rural development programs included in this comparison are as given on p. 18 of the Draft Five Year Plan 1978-83, except that outlays on fertilizers and pesticides, and telecommunications and postal services have been excluded.

two sectors in plan outlays is not projected to rise over the next five years, the percentage increase in outlays projected is still substantial and indeed, larger than achieved during any previous plan period. Therefore, unless a concerted effort is made to implement effective programs in these sectors, their share in plan outlays could well fall lower than projected, as in fact has consistently happened in the past.

C. Resources

2.28 Domestic and Foreign Resources. In the Draft Plan, domestic investment is projected to rise by 10.7% per annum over the five years to 1982/83. 1/ This growth rate is substantially higher than achieved during any previous plan period, and more than double the growth rate achieved to date during the 1970s. As in the past, the bulk of the resources for this investment is to come from domestic savings, which are projected to rise by 9.1% per annum. With GNP at market prices projected to grow by 5.6% per annum, 2/ this implies a marginal savings rate of 35%. The draft on foreign savings (i.e. net capital inflow from abroad and use of external reserves), which had been negative in 1977/78, is projected to gradually rise over the plan period, as the level of domestic investment eventually absorbs and then exceeds the resources saved domestically. 3/

2.29 As we discussed briefly in last year's Economic Report, we have some reservations as to whether the ambitious domestic savings effort proposed in the Draft Plan can and should in fact be realized. No doubt, the planners were encouraged to be optimistic by the experience during the four years of the Fifth Plan, when a marginal savings rate of 32% was achieved. However, it is unlikely that such a high marginal savings rate can be sustained over the medium term. In the first place, the opportunity and inducement to save during the Fifth Plan were enhanced by a number of exceptional developments:

1/ Unless specified otherwise, all trends discussed in this section are in constant prices.

2/ The difference between the growth rates of GNP at market prices (5.6% per annum) and at factor cost (4.7% per annum) is accounted for by the sharp increase in net indirect taxes projected in the Plan.

3/ It should be noted that these plan projections were prepared prior to the release by the Central Statistical Office (CSO) of the preliminary estimates of the National Accounts for 1977/78. While these are not strictly comparable with the plan estimates -- as the latter exclude an unspecified amount of construction by family labor -- it seems relatively certain that the levels of both domestic savings and investment in 1977/78 were substantially higher (by at least 10% and probably more) than allowed for in the Draft Plan. Correspondingly, the additional savings effort required to finance the level of domestic investment proposed in the Draft Plan is reduced. However, given the Plan's assumptions on the transfer of foreign resources, the marginal savings rate required to achieve the projected growth rate of domestic investment, would still be at least 35%.

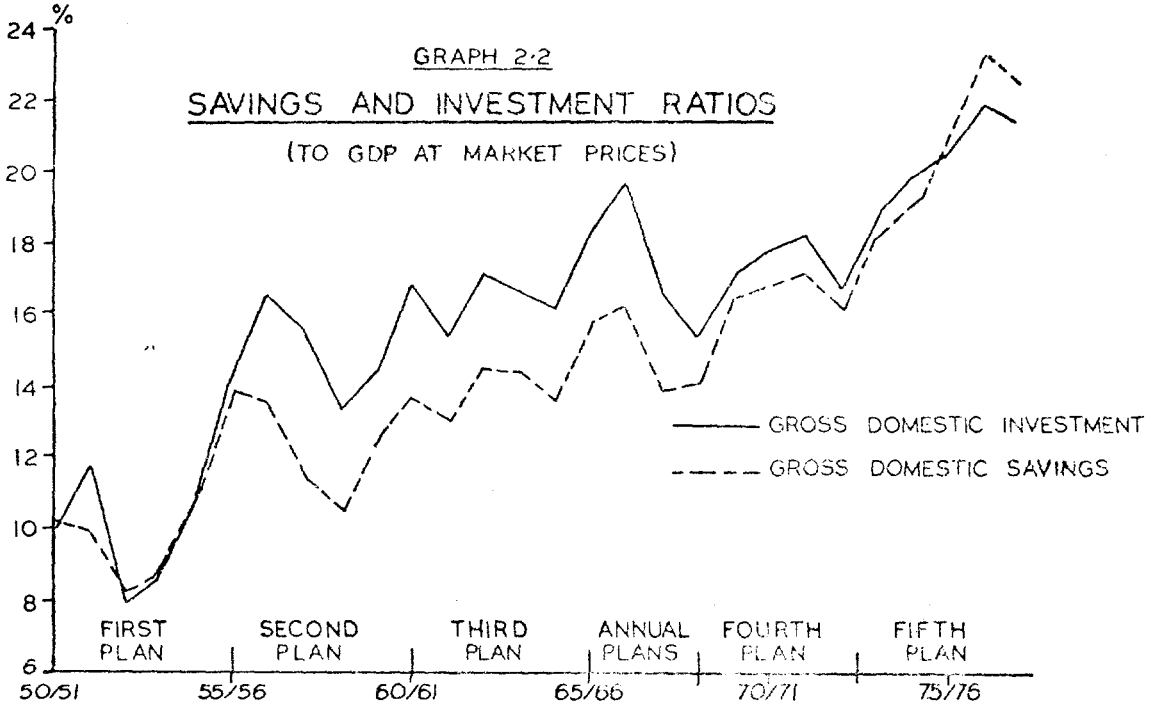
the fall in prices between September 1974 and March 1976, the rapidly rising inflow of private remittances from abroad, the clamp-down on black market operations both before and during the Emergency, and the freezing of incremental incomes through the Compulsory Deposit Scheme. Already during 1977/78, the positive impact of some of these factors had begun to weaken, and correspondingly, the marginal savings rate fell substantially. Secondly, as compared to other countries, India has already achieved a very creditable level of domestic savings. At 22% of GDP, India's savings rate is substantially higher than for most countries with similar per capita incomes (e.g. Bangladesh, Pakistan and Indonesia), and compares favorably with the savings rates in some of the more developed countries. Finally, the new Plan's objectives of income redistribution and poverty alleviation, though commendable in themselves, will probably have a depressing effect on the average savings rate for the economy as a whole. While the Draft Plan expresses optimism that the negative impact of income redistribution can be offset by higher public savings, there are obvious limits on the scope for this, beyond which the level of household and corporate savings, and the incentive for investment in the private sector, will be adversely affected. For these reasons, we consider it unrealistic and indeed unwise to attempt to push the marginal savings rate up to 35% as envisaged in the Draft Plan.

2.30 Some developing countries which have not achieved as high a savings rate as India, have still been able to sustain a high investment rate by augmenting their domestic resources from overseas. For India, on the other hand, the bulk of resources for investment has always come from domestic savings (see Graph 2.2). The share of domestic investment financed from the draft on foreign savings reached its highest level of 20% during the Second Plan, when the sharp increase in investment had an unexpectedly large impact on the balance of payments. However, subsequently, this share fell to 15% in the Third Plan and 5% in the Fourth Plan. For the Fifth Plan as a whole, the level of domestic savings proved more than adequate to finance all of domestic investment, leaving India, rather paradoxically, a net investor overseas.

GRAPH 2.2

SAVINGS AND INVESTMENT RATIOS

(TO GDP AT MARKET PRICES)



SOURCE: CENTRAL STATISTICAL ORGANISATION.

2.31 The relatively low share of domestic investment financed by foreign savings is perhaps inevitable in such a large country as India. The declining trend over time also reflects the limited and uncertain availability of external assistance, which compelled India to severely restrict imports during the Third through Fourth Plans. In the early years of the Fifth Plan, aid commitments and to a lesser extent aid disbursements were increased in response to the balance of payments difficulties created by domestic crop failures and the deterioration in India's terms of trade following the oil crisis. However, with the subsequent sequence of good harvests, and the spin-off benefits from the development boom in the Middle East -- i.e., an expanding market for India's exports and the rising inflow of remittances from Indians working overseas -- India was able to withstand these pressures, and indeed, ended up with a current account surplus in both 1976/77 and 1977/78. In other words, the net aid disbursements in these two years were more than offset by the accumulation of external reserves, leaving a negative draft on foreign savings.

2.32 With the limited scope that now exists for a further rise in the domestic savings rate, a substantial increase in the draft on foreign savings will be required, if the ambitious investment programs of the Draft Plan are to be realized. Given the present aid pipeline of US$5.8 billion and provided new aid commitments are at least maintained at present levels in real terms, such an increase in the draft on foreign savings could be met without reducing external reserves to an inadequate level or jeopardizing the viability of India's balance of payments. Nor does the required adjustment in the balance of payments imply an unduly large dependence on foreign savings; given our revised projections discussed below, the share of domestic investment financed by foreign savings over the five years of the new Plan would still be less than 5% 1/. However, the proposed draft on foreign savings would make an important contribution to the financing of the increase in domestic investment during the Plan, reducing the required marginal savings rate to 29%.

2.33 Table 2.2 and Graph 2.3 summarize our updated balance of payments projections for the period of the new Plan. These are not meant to be predictions--since actual trends will depend on factors such as domestic policies, weather conditions and developments in world markets--but are intended to provide a frame of reference for illustrating some important points in connection with the absorption of external resources by the Indian economy and aid flows over the medium term. As compared to the projections presented in last year's Economic Report, the major revisions are related to the adjustments for the base years, 1977/78 and 1978/79, when the imports turned out to

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1/ This is in fact consistent with the draft on foreign savings--which covers 4.8% of the projected domestic investment--included in the five-year savings and investment and balance of payments projections of the Draft Plan. But, in the macro-estimates for the base and end years of the Plan, the implied draft on foreign savings as a percentage of domestic investment is projected to rise from -4.8% in 1977/78 to only 2.4% in 1982/83; this is clearly inconsistent with the projections for the full five years of the Plan.

Table 2.2

BALANCE OF PAYMENTS
(at current prices - in US$ million)

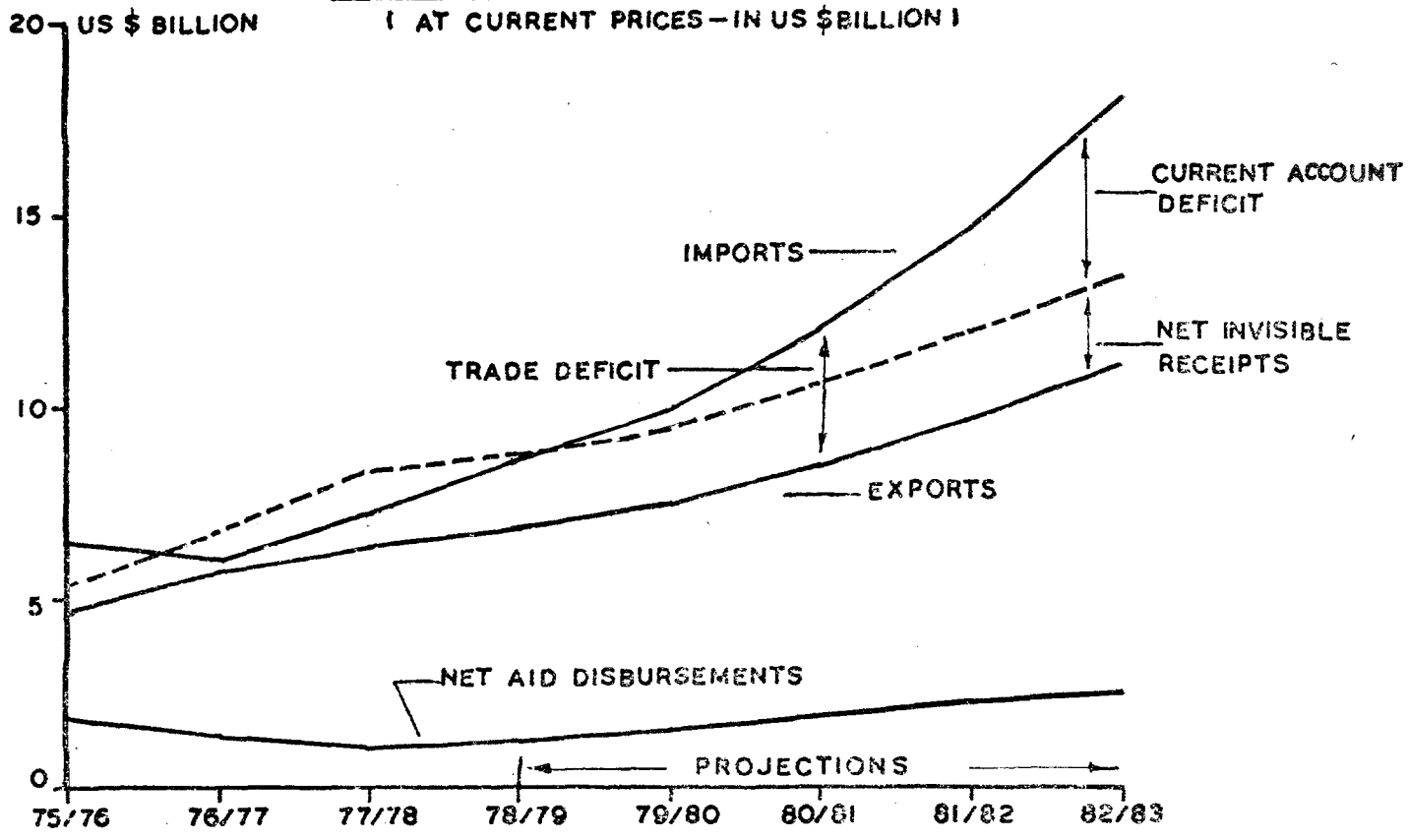
			Estimates		Projections			
	1975/76	1976/77	1977/78	1978/79	1979/80	1980/81	1981/82	1982/83
Merchandise Exports (f.o.b.)	4,672	5,753	6,276	6,800	7,500	8,600	9,850	11,250
Merchandise Imports (c.i.f.)a/	-6,449	-5,928	-7,237	-8,400	-9,600	-12,050	-14,650	-18,000
Trade Balance	-1,777	- 175	- 961	-1,600	-2,100	- 3,450	-4,800	- 6,750
Net Invisible Receipts	564	910	2,000b/	2,000b/	2,000	2,100	2,200	2,300
Current Account Balance	-1,213	735	1,039	400	- 100	-1,350	-2,600	-4,450
Net Aid Disbursements	1,810	1,393	983	1,080	1,400	1,800	2,250	2,440
- Gross Disbursements	(2,341)	(1,953)	(1,628)	(1,805)	(2,050)	(2,500)	(3,000)	(3,240)
- Principal Repayments	(- 531)	(- 560)	(- 645)	(- 725)	(- 650)	(- 700)	(- 750)	(- 800)
Use of IMF Credit	242	- 337	- 330	- 158	-	-	-	-
Errors and Omissions	- 45	- 216	384	205	- 300	- 300	- 300	- 300
Use of Reserves (- = increase)	- 794	-1,575	-2,076	-1,527	-1,000	- 150	650	2,310
Reserve Level (end of year)	2,172	3,747	5,823	7,350	8,350	8,500	7,850	5,540
No. of Months of Imports Covered	(4)	(8)	(10)	(11)	(10)	(8)	(6)	(4)

a/ Includes imports of merchant ships, not recorded in the official import statistics.
b/ Net invisible receipts in 1977/78 and 1978/79 have been estimated as a residual, after allowance for a small "errors and omissions" item based on past trends and known book value and exchange rate adjustments.

Sources: 1. Statistical Appendix Table 3.9
2. World Bank estimates.

GRAPH 2.3

BALANCE OF PAYMENTS PROJECTIONS



SOURCES :– 1. STATISTICAL APPENDIX TABLE 3.9
2. WORLD BANK ESTIMATES

be much higher than the preliminary estimates. 1/ For 1979/80, it is expected that, for the current account of the balance of payments, the trends of the

1/ The balance of payments data for 1977/78 and 1978/79 were revised as follows: (a) the preliminary import figures on which we had based our import estimate for 1977/78 were drastically revised upward at the end of the year, resulting in a higher import bill; (b) aid disbursements in 1977/78 were lower than estimated last year; (c) as a result of these two adjustments, net invisible receipts, which we calculate as a residual, turned out to have been substantially higher in 1977/78 than shown in last year's report; and (d) in 1978/79, both export receipts and aid disbursements are now estimated to have been lower than was anticipated while the import bill was higher, and as a result, the increase in external reserves was over US$800 million less than projected last year.

past year will continue. Export growth is not likely to accelerate significantly unless there is an improvement in the domestic policy environment and world market conditions. However, with full implementation of the recent changes in the import policy and with further liberalization expected in 1979/80, the import bill will continue to rise. Therefore, assuming that the net inflow of invisible receipts will remain around its present high level, the current account, which had shown a surplus of US$1,039 million in 1977/78 and an estimated US$400 million in 1978/79, will turn into deficit in 1979/80. Offsetting this, there is potential for a rise in net aid disbursements (given the large pipeline available and continuing gap between new commitments and disbursements), and no further repayments are to be made to the IMF. Consequently, the level of external reserves is expected to continue rising, but at a somewhat slower rate than in 1978/79.

2.34 For the final three years of the new Plan, 1980/81 to 1982/83, we have provided illustrative projections for the medium-term trends in the balance of payments, using basically the same assumptions as in last year's exercise. 1/ The following observations are suggested by this illustration.

(a) As already noted in Chapter 1, there is evidence that the desirable adjustment in the balance of payments--in response to available foreign resources--is taking place, indeed, at a faster rate than we could anticipate in last year's report. The import bill in 1978/79 is expected to reach US$8.4 billion which would bring the rate of increase since 1976/77 to 19% per annum. As a result of this, and the deceleration in export growth the trade deficit has risen from US$175 million in 1976/77 to an estimated US$1.6 billion in 1978/79. And with the apparent stabilization of net invisible receipts, the current account surplus in 1978/79 was smaller than in the previous two years.

(b) The utilization of external resources will increase rapidly provided imports continue to grow at a high rate during the rest of the new plan period. Our new projections show that the date when the current account deficit will exceed the level of net aid disbursements may be reached even earlier than 1982/83.

(c) In the next one or two years before this stage is reached, there will be further rises in the level of external reserves, but as a proportion of annual imports, they are likely to decline. Subsequently, the level of external reserves and

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1/ These assumptions are: (a) the volume of exports will grow by 7% per annum; (b) the average volume growth of imports, after providing a contingency for foodgrain imports, will be 15% per annum; (c) both export and import prices will rise by 7% per annum; (d) net invisible receipts will rise by US$100 million per annum in nominal terms; and (e) gross aid disbursements will continue to rise and return to the trend projected last year.

the aid pipeline can provide only a marginal cushion for a further widening of the current account deficit. In our illustration, the level of external reserves falls steeply in the last year of the new Plan to a level equivalent to only four months' imports. Therefore, even with a concerted aid effort, the import and export trends must be geared to this eventuality--to yield a current account deficit no larger than the expected aid flows in the long run--rather than continuing to grow exponentially as we have assumed.

2.35 These observations lead to the following conclusions.

(a) The under-utilization of external resources by the Indian economy is a temporary phenomenon and is likely to disappear by the end of the new Plan. This date could be advanced to 1981/82 or even to 1980/81 by adverse developments such as a sharp decline in the inflow of remittances, successive crop failures or a deterioration in India's terms of trade. On the other hand, the excess resource situation could continue longer than indicated in our projections if imports increase at slower pace for reasons such as a domestic recession or reversal of the present trade policy liberalization, or if there is an increase above expected trends in export or invisible earnings.

(b) After this adjustment of the economy (to the projected external resource availability), the foreign exchange requirements will continue to increase rapidly and, even for balance of payments reasons, sustained growth of the Indian economy will require a rising volume of aid. Indeed, even with a movement towards more rapidly disbursing forms of aid and an improvement in disbursement rates, the achievement of disbursements at the levels projected in Table 2.2 will require a real increase in the level of new commitments. Therefore, bearing in mind the present increase in absorption of external resources, it is important that the aid momentum to India should not be relaxed since it takes time to build up this momentum.

(c) At the same time, in view of the uncertainty about the future trends, it is imperative that export growth should be high and should accelerate in the medium term so that, after the period of adjustment, the increase in export earnings can cover as much of the further increase in the import bill as is possible.

2.36 Public and Private Resources. As projected in the Draft Plan, the public sector is expected to account for 56% of total plan investment over the five years to 1982/83. Including construction by family labor in private

investment, this ratio might be reduced somewhat to about 52%. 1/ But even at this level, the share of the public sector in total investment would exceed the previous peak of 50% reached at the end of the Third Plan, and be substantially higher than the averge for the Fifth plan of 43%. This projected increase in the public sector's share in total investment reflects the ambitious public investment programs proposed in the Draft Plan and the resultant small residual of investible resources available to the private sector. Even allowing for the under-estimated base level of investment in the Draft plan, the implied growth rate of private investment could be no more than 4% per annum, and probably even less.

2.37 To finance the proposed public sector investment programs the Draft Plan suggests a range of measures including: (a) restraint on the growth of non-plan expenditure; (b) selective increases in commodity taxation and reductions in subsidies; (c) reduced avoidance and evasion and greater progressivity in the direct tax system; and (d) increased prices and rates for goods and services supplied by the public sector (e.g. railways, postal services, electricity and irrigation schemes). As a result of these measures, the share of public sector savings in GNP is projected to rise from 4.1% in 1977/78 to 7.4% in 1982/83. Yet, despite this increase, the projected public savings will be adequate to finance only about one-half of the public sector investment programs included in the Draft Plan, leaving a sizeable residual to be covered by market borrowings, the utilization of external assistance, and possibly, deficit financing.

2.38 The pattern of public financing proposed in the Draft Plan is not necessarily inflationary. During the Fifth Plan, the proportion of public investment financed by domestic and foreign borrowing had also been around one-half; yet, despite the additional expansion of the money supply caused by the rising foreign exchange reserves over this period, the average rate of inflation was held to a very moderate 3.8% per annum. Similarly, during the new Plan, it should be possible to partially offset the potential inflationary impact of public borrowing by prudent use of the available foreign exchange to import goods in short supply domestically. However, the total transfer of resources from the private to the public sector -- through both taxation and borrowing -- proposed in the Draft Plan does appear to be somewhat excessive, and we doubt whether the implied restraint on private investment is either feasible or desirable. As discussed in Chapter 4, there has already been a moderate revival in private investment over the past few years, and, with the added demand expected to be generated by the proposed public investment programs and the improved supply of inputs and capital goods facilitated by the recent import liberalization, the prospects for a sustained growth in private investment now appear better than for quite some time. Fortunately, given that the availability of investible resources

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1/ In the plan format, private investment financed out of transfers from the public sector is included in public investment, while public investment for non-developmental purposes or in stocks are apparently excluded altogether. No adjustments have been made for these factors in the above calculation of the projected share of the public sector in total investment.

in 1977/78 was substantially higher than allowed for in the Draft Plan, it should now be possible to accommodate the proposed public sector programs without restricting private investment to the extent originally envisaged. Correspondingly, it is to be hoped that the projected share of the private sector in total investment will be raised in the final version of the new Plan. This will be important to indicate the priority attached to the development of the private sector by the Government, and help restore confidence that the policy environment for private investment will not be restrictive.

2.39 Centre and State Resources. 1/ The sectors given priority in the Draft Plan -- power, irrigation, rural development and basic needs -- are all primarily the responsibility of the State Governments. As a result, the share of the States and Union Territories in total plan outlays is expected to rise to 56% as compared to just less than 50% in the Fifth Plan and an average of around 45% in earlier plans. The Central Government is also involved to some extent in these priority sectors, both directly and through the financing of Centrally Sponsored Schemes. These schemes, while implemented by the States, are financed by the Central Government to ensure that national objectives and uniform standards of staffing and organization are met. In recent months, the States have once again expressed their dissatisfaction with the growing number of Centrally Sponsored Schemes, considering them to be an unnecessary and unwanted intrusion into their own responsibilities. Therefore, it has been proposed that for the new Plan, the expenditure on Centrally Sponsored Schemes should be limited to Rs 33.5 billion; this is less than 5% of projected plan outlays as compared to 5.9% in the Fifth Plan and 7.6% in the Fourth Plan. With the reduced emphasis on heavy industry and transport and communications, the share of the Central Sector proper in plan outlays is expected to fall below 40%, substantially lower than in any previous plan.

2.40 In the past, the revenues of most States have been inadequate to provide a surplus to help finance plan outlays. The balance has largely been made good by transfers from the Central Government, which have on average financed about one-half of total State expenditures since Independence (see Graph 2.4). With the proposed shift in plan outlays towards the States, the issues related to these transfers have once again come into focus.

2.41 The transfer of funds from the Centre to the States is governed by a number of institutions. Firstly, there are the periodic Finance Commissions which make recommendations to the Central Government -- which are usually accepted -- regarding the sharing of divisible taxes with the States, the provision of grants-in-aid to cover the projected revenue gaps of the States, and more recently, special assistance for debt relief and to cover expenditures arising from natural calamities. The Seventh Finance Commission, which submitted its report in October 1978, has recommended transfers totalling

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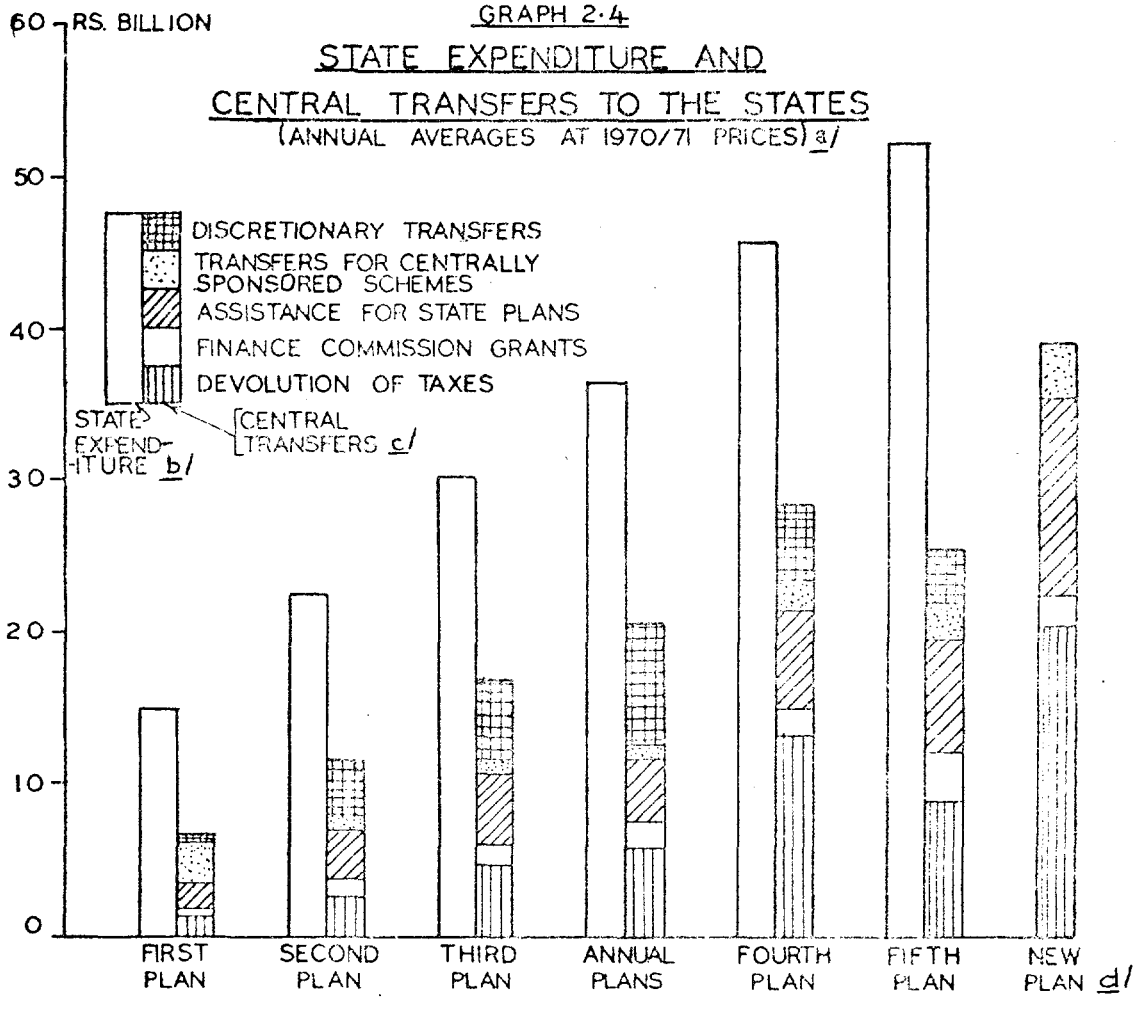
1/ The Draft Plan does not include any details on the allocation of plan outlays between the Centre and the States, or of the level of Central assistance for State plans. These paragraphs are therefore based on the discussions and agreement reached at the meeting of the National Development Council in February 1979.

GRAPH 2·4

STATE EXPENDITURE AND CENTRAL TRANSFERS TO THE STATES

(ANNUAL AVERAGES AT 1970/71 PRICES) a/



a/ Expenditures and transfers have been converted to 1970/71 prices using the implicit price deflator for gross domestic capital formation in the National Accounts.

b/ Total revenue and capital expenditure as defined in State budgets; excludes expenditure of State enterprises, appropriations for reduction or avoidance of debt, and transfers to funds.

c/ Gross Central transfers to the States i.e. no allowance has been made for interest or principal repayments.

d/ Recommended transfers -- other than to cover net interest liability on new borrowings, debt relief, provisions for natural calamities, compensation for prohibition, and discretionary transfers -- for period of new Plan. In converting to 1970/71 prices, no allowance has been made for inflation after 1977/78.

Sources: 1. Ministry of Finance
2. Report of the Finance Commission 1978
3. World Bank estimates

Rs 209 billion over the five years of the new Plan, 1/ more than double the level originally proposed for the Fifth Plan. Taking these transfers into account, all States are projected to be left with a revenue surplus -- aggregating to Rs 140 billion for all 22 States as a whole -- which can be used to finance part of their plan outlays. Secondly, the Planning Commission provides additional assistance in the form of grants and loans to contribute to the financing of the State plans. For the New Plan, it has been proposed that this plan assistance should total Rs 124 billion; this would cover about one-third of the plan outlays of the States and, on an annual average basis, be 60% higher than provided during the Fifth Plan. Finally, there are various discretionary transfers, including ways and means advances, loans to clear overdrafts with the Reserve Bank, and small savings loans. On the basis of past trends, this discretionary assistance could total about Rs 50 billion over the five years of the new Plan.

2.42 The total transfer of resources from the Centre to the States during the new Plan, including those for Centrally Sponsored Schemes, can therefore be expected to be over Rs 400 billion. On the basis of the projections made by the Finance and Planning Commissions, these transfers will cover about 47% of State expenditures during these five years. The adequacy of these transfers will depend to a large extent on whether or not the States can restrain non-plan expenditures and improve tax collections and the performance of public sector undertakings to the extent assumed in the Finance and Planning Commissions' projections.

2.43 The States appear to be generally satisfied with the increase in Central transfers proposed for the five years of the new Plan. While the allocation of these transfers among the States has now also been decided, the basic principles governing this allocation remain a matter of contention. Understandably, the poorer States argue for a larger share of the transfers to offset their limited resource base, while the richer States argue that this would unduly penalize them for what they consider to be better fiscal management in the mobilization of resources. In the past, there has been no clear indication that Central transfers have helped to offset regional imbalances in the availability of resources. Indeed, some of the poorer States -- Bihar, Uttar Pradesh and Madhya Pradesh -- have consistently received less than the national average of per capita transfers from the Centre while some of the richer States -- Punjab and Haryana -- have received above average transfers.

2.44 The Seventh Finance Commission has made some attempt to offset regional imbalances in its recent award, largely by giving greater weight to the criterion of backwardness in the devolution of excise taxes, and increasing the share of exise taxes within the total transfers recommended. This emphasis will be weakened to some extent by the continued devolution of other taxes on the basis of collections -- which clearly favors the richer States -- and the greater reliance on the devolution of taxes within total

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1/ Figure of Rs 209 billion excludes debt relief and transfers to cover net interest liability on new borrowings, expenditures on natural calamities, and compensation for prohibition.

Finance Commission transfers, which has increased the surpluses of the richer States and reduced the equalizing impact of grants-in-aid. Nevertheless, the overall allocation of transfers as recommended by the Finance Commission seems to be consistent with the objective of reducing regional imbalances; the annual average transfer to the five poorest States is Rs 74 per capita as compared to Rs 63 per capita for the five richest States.

2.45 The criteria for allocating Central plan assistance among the States during the new Plan have now also been decided. For 1978/79, and the bulk of the plan assistance in the remaining four years of the Plan, the so-called Gadgil Formula will be retained. Under this formula, a proportion of the plan assistance is earmarked for the hill States, for States with foreign-aided projects, and for States fulfilling family planning targets. The balance is allocated among the States on the basis of population (60%), tax effort (10%), outlays on irrigation and power projects (10%), below average per capita income (10%) and special problems (10%). Only the last two of these criteria accounting for a weight of 20% within the formula take into account the backwardness of the States and this is largely offset by the better performance of the richer States in tax effort and implementation of irrigation and power projects. As a result, the allocation of plan assistance under this formula is unlikely to have any significant impact on correcting regional imbalances. The additional plan assistance of Rs 20 billion, to be provided in lieu of the Centrally Sponsored Schemes which have been transfered to the State plans, will be allocated on the basis of population multiplied by the inverse of per capita income. While the amount of funds involved is relatively small, the allocation of this additional assistance will certainly favor the more backward States.

2.46 Overall, the allocation of Central Transfers is likely to have a moderate impact on correcting regional imbalances during the five years of the new Plan, especially due to the increased weight given to backwardness by the Finance Commission, and the revised formula to be used for the additional plan assistance. However, this impact is only at the margin, and the success of the poorer States in improving their income levels will continue to depend largely on their own efforts, both to mobilize resources and implement effective projects and programs.

Chapter 3

AGRICULTURE

3.1 The Draft Plan anticipates that total agricultural output will increase at the rate of 4% per annum over the period from 1977/78 to 1982/83 (see Table 3.1) with value added in the sector growing at 2.8% per annum.

Table 3.1

AGRICULTURAL OUTPUTS AND INPUTS: PAST AND PLANNED

	Actual 1973/74	Estimated 1977/78	Target 1982/83	Average Annual Compound Growth Rate (%) 1973/74-1977/78	1977/78-1982/83
Agricultural Production Index /a	112.4	132.7	161.8	4.32	3.98
Foodgrains (million tons)	104.7	125.6	145.1	4.65	2.93
Five Major Oilseeds (million tons)	8.9	8.9	11.2	0.0	4.7
Sugarcane (million tons of gur equivalent)	14.4	18.8	22.5	6.9	3.7
Cotton (million bales of 170 kg)	6.3	7.1	8.2	3.1	2.9
Fertilizer (million tons)	2.8	4.3	7.9	11.0	12.8
Irrigated Area (million hectares)	42	49	64	3.8	5.6
Gross Cropped Area (million hectares)	169	174	180	0.7	0.7
Area under HYV (million hectares)	26	38	50	10.0	5.7

/a Triennium ending 1969/70=100.

Sources: 1. Government of India, Economic Survey, 1978/79.
2. Planning Commission, Draft Five Year Plan 1978-83.
3. World Bank estimates.

The use of purchased inputs is to be deepened, particularly in the cases of fertilizer and irrigation, whose growth is expected to accelerate, even over their fairly rapid rates in the Fifth Plan period. Foodgrain output is expected to grow at just below 3% per annum and non-foodgrain crops at higher rates. 1/

3.2 The planned growth rates of output are below those actually achieved in the four years of the Fifth Plan (except for cotton and oilseeds) and the targets for input growth are only marginally above their recent rates. However, the last four years has been a period of remarkable growth at a considerably higher rate than the longer-term trend. Evaluating the feasibility of the plan targets requires some perspective on past growth, both in the last few years and in the longer term.

3.3 From the growth rates shown in Table 3.2, the long-term trend rate of growth of agricultural production appears to lie in the vicinity of 2.5% per annum, with non-foodgrain output tending to grow at a slightly higher rate and foodgrain production growth at a slightly lower rate than this. These rates are substantially lower than the plan targets. Although agricultural production has grown at a considerably higher rate over the past four years, particularly so in the case of foodgrains, weather--bad weather in the previous period and good weather in the recent period--undoubtedly played a part. The pertinent question is how much of the increased output should be ascribed to weather and how much to a changed trend.

Table 3.2

GROWTH RATES IN AGRICULTURAL OUTPUT
(% per annum)

	1949/50-1977/78	1949/50-1966/67	1967/68-1977/78	1973/74-1977/78
Agricultural Production	2.56	2.41	2.42	4.32
Non-foodgrains	2.66	3.02	2.56	3.18
Foodgrains	2.52	2.13	2.36	4.65

Source: Ministry of Agriculture and Irrigation.

1/ The Draft Plan, prepared before the final estimate of the 1977/78 harvest was made, uses 121 million tons as the base for 1977/78 and estimates foodgrain production will grow by 19.5-23.5 million tons to reach 140.5-144.5 million tons by 1982/83. This gives an average compound rate of growth of 3.03% per annum using the lower target. Adding 19.5 million tons to the final estimate for 1977/78 (125.6 million tons) gives 145.1 million tons and a 2.93% per annum growth rate. A similar method was used for calculating the growth rates of other crops.

A. Foodgrain Production and Prospects

3.4 The bulk of the increase in foodgrain output over the last three years is explained by increased use of inputs. While it is impossible to separate out completely the effect of weather on production, it is possible to calculate how much the growth of input use has contributed based on estimated input/output relations, or "yardsticks" of production, such as those adopted by the National Commission on Agriculture. 1/ Applying these input/output coefficients to the actual increase in cropped area, irrigated area, fertilizer consumption and cropping pattern gives estimates of input-induced growth in foodgrain production which then can be compared to actual growth in production as in Table 3.3. 2/ Both the level and efficiency of each of these inputs are influenced by the weather as well as by other factors which influence the farmers' response. The basic comparisons are made using three-year averages rather than individual years for both inputs and outputs as one step toward factoring out the influence of weather.

Table 3.3

GROWTH IN FOODGRAIN PRODUCTION AND ITS DETERMINANTS

	Triennium Average					
	1967/68-1969/70 to 1975/76-1977/78		1973/74-1975/76 to 1975/76-1977/78		1976/77 to 1977/78	
	M. tons	% p.a.	M. tons	% p.a.	M tons	%
Actual Increase in Output	23.0	2.7	10.8	4.9	14.4	13.0
Input - Induced Increase	22.4	2.7	8.5	3.8	9.5	8.5
of which contributed by:						
Gross Cropped Area	(2.2)	0.5	(0.6)	0.5	(1.3)	2.2
Irrigation	(3.4)	2.7	(1.2)	3.8	(0.9)	4.9
Fertilizer	(14.4)	10.2	(5.8)	13.3	(6.7)	27.3
Cropping Patern Shift	(2.4)	1.8	(0.9)	2.1	(0.6)	3.0
Unexplained Residual	0.6	-	2.3	-	4.9	-

Source: World Bank estimates.

1/ The input/output coefficients are based on the assumption that the effect of each input is separate from others when in fact the use of one increases the productivity of the others; and there are factors influencing production other than those for which there are yardsticks.

2/ The yardsticks adopted are: adding 1 hectare to foodgrain cropped area adds 0.45 tons to foodgrain production; adding irrigation to 1 hectare adds an additional 0.5 tons; applying 1 nutrient ton of fertilizer to foodgrain crops adds 10 tons to production; a shift of 1 hectare from pulse and coarse grain cropping to either rice or wheat adds 0.33 tons to production.

3.5 There is very little difference in the growth in actual output in the last three years and that estimated on the basis of input/output relationships when the point of reference is the three year period, 1967/68 to 1969/70. When later dates are used as points of reference, the unexplained residual is larger as a proportion of total growth, indicating that other factors, such as weather, are also influencing output. 1/ Using the input/output coefficients as given by the National Commission on Agriculture, most of the increased output can be explained by increased use of land, increased irrigation and most importantly, increased fertilizer use.

3.6 These same comparisons but in percentage terms give an indication of the acceleration in foodgrain output which can be explained by rising input use according to the input/output coefficients. The growth of output attributed to irrigated area and fertilizer consumption both accelerated significantly in the recent period. Both of these grew particularly fast in the last year. It is possible to argue that the acceleration in the use of fertilizer is indirectly influenced by weather; farmers may apply more fertilizer on crops that are benefiting from adequate moisture. This may be part of the answer, but it seems likely that the main cause is the Government's accelerated program of surface irrigation development, the accelerated pace of tubewell development in the large Eastern Region and rising farm incomes that allow greater investment in fertilizer.

3.7 Other indicators also suggest that prospects for agricultural growth have improved. These are the steady growth in area under both wheat and rice planted to high yielding varieties (HYV), a regional shift in foodgrain cropping patterns, the growth in private groundwater development in the Eastern Region and a much improved extension system taking hold in a growing number of districts.

3.8 Area planted under high yielding varieties is a factor very closely identified with the growth of irrigation and fertilizer. It is heartening that the area under HYV, both for rice and wheat, has continued to grow, putting to rest fears expressed by some in the early 1970s that the HYV growth was mostly confined to wheat and that even this was coming to an end. As shown in Graph 3.1, growth in wheat cropped area under HYV did grow quite rapidly during the first few years after its introduction, paused a bit and then continued to grow quite rapidly until now almost 70% of the area planted to wheat is under HYV. Rice area under HYV grew much more slowly and perhaps for that reason, has been often ignored in discussions of prospects for productivity growth in foodgrains. But in fact area under HYV rice has grown steadily as varieties adopted to local conditions have been identified and as rice cropping has extended into areas such as Punjab and Haryana where farmers

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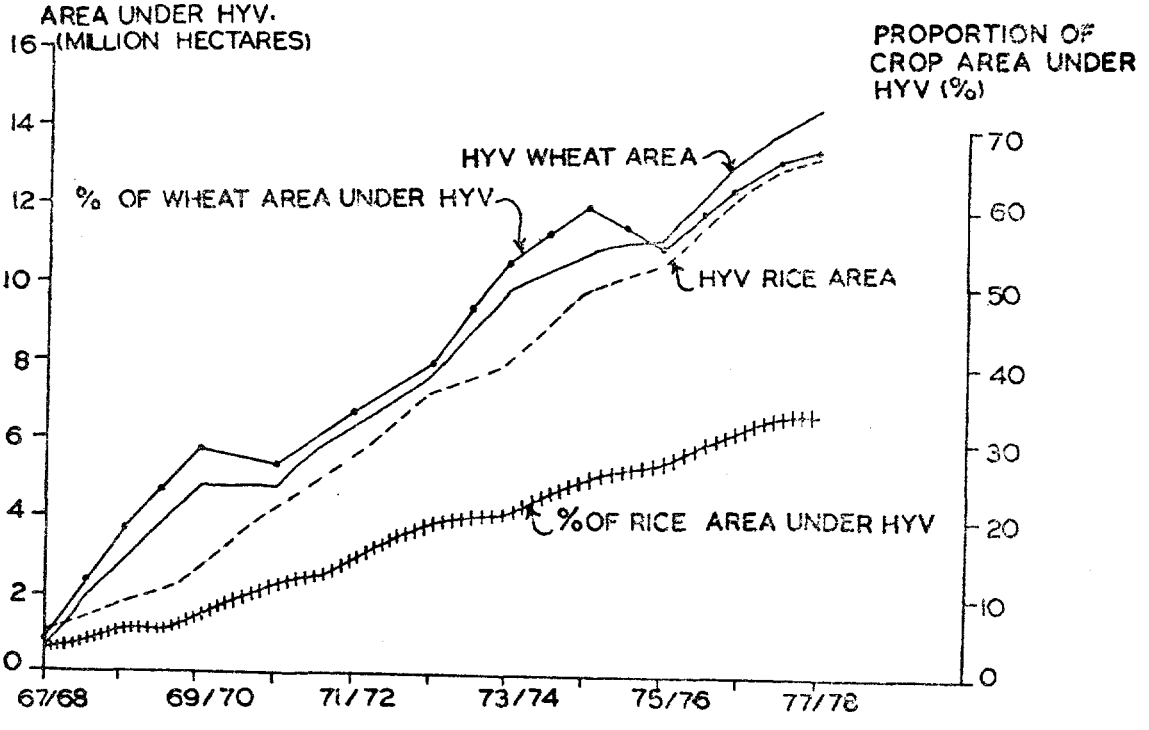
1/ The input/output coefficients themselves are subject to error in their estimation and in their use in the crude model. Their use is intended simply to give a rough quantitative estimate of the effects of the input growth achieved. Their use is not intended to be a complete explanation of past trends, much less to suggest a production strategy.

are familiar with the advantages of HYV and have the irrigation facilities to provide water control. Although the proportion of rice cropped area under HYV is currently just half of the proportion of wheat area under HYV, its steady growth should continue to provide for increasing productivity from rice. Rice production in the last two years has grown particularly rapidly.

GRAPH 3.1

AREA UNDER HIGH YIELDING VARIETIES



SOURCE: MINISTRY OF AGRICULTURE AND IRRIGATION

3.9 Another phenomenon gaining momentum is the addition of summer rice cropping to the cropping pattern in the winter wheat belt and a similar addition of winter wheat cropping in the traditionally rice growing States of the Eastern Region, i.e. West Bengal, Orissa and Assam. This shift has accelerated in the past few years and now amounts to significant absolute quantities in addition to high percentage growth rates, as can be seen in Table 3.4. A large part of the explanation for both the shift and the higher yields in rice in Punjab and Haryana is that the adoption of the non-traditional crop is taking place on the more progressive farms that have the water control and management skills to make the adoption of the new crop profitable. In the traditional wheat belt, the adoption of the highly profitable HYV wheat and fertilizer technology coincided with the rapid spread of private tubewells needed to obtain the full benefits from the technology. This development left

farmers with the means to provide the good water control in the summer months needed to make the high yielding rice varieties pay off. These farmers easily transferred their management skills learnt growing HYV wheat to HYV rice resulting in high yields.

Table 3.4

WHEAT AND RICE PRODUCTION BY REGION

	Wheat			Rice		
	1967/68-1969/70	1972/73-1974/75	1975/76-1977/78	1967/68-1969/70	1972/73-1974/75	1975/76-1977/78
Production (annual average in 000 tons)						
Punjab and Haryana	5,927	7,282	8,911	790	1,573	2,795
West Bengal, Orissa and Assam	280	898	1,279	11,412	11,946	13,033
Rest of India	12,221	15,360	19,538	27,066	27,439	31,950
All-India	18,428	23,539	29,728	39,268	40,958	47,778
Growth Rate of Production (% per annum over previous period)						
Punjab and Haryana		4.2	7.0		14.8	21.1
West Bengal, Orissa and Assam		26.2	12.5		0.9	2.9
Rest of India		4.7	8.4		0.3	5.2
All-India		5.0	8.1		0.8	5.3
Yield (annual average in kg per hectare)						
Punjab and Haryana	2,018	2,076	2,309	1,381	1,943	2,726
West Bengal, Orissa and Assam	1,557	1,805	1,941	929	1,008	1,077
Rest of India	959	1,046	1,196	1,120	1,099	1,219
All-India	1,162	1,260	1,425	1,060	1,089	1,215

Source: Ministry of Agriculture and Irrigation.

3.10 The growth of wheat cropping in the Eastern Region is somewhat different. Rather than being the easy transfer from one HYV crop to another under already existing irrigation and good management, the introduction of wheat in rice areas often brings with it the tubewell development, fertilizer use and management skills that HYV wheat first brought to the Northwest ten

years ago. There is some wheat cropping on residual moisture from the summer monsoon and intermittent winter rains in the wetter parts of the Eastern Region; but a large part of the wheat crop is under some form of irrigation. In a sense, the wheat revolution is just coming to the Eastern Region. It has proceeded much more slowly because the basic conditions were not as favorable to adopting the wheat technology as in Punjab and Haryana. The agroclimatic conditions, with somewhat warmer winter nights, are not as favorable and the rural infrastructure--rural electrification, cooperative credit, fertilizer distribution and surface irrigation--is not as well developed. Nevertheless, there are many areas in the Eastern Region (which is much larger than Punjab and Haryana) where the agroclimatic conditions are favorable enough to allow profitable wheat production; rural infrastructure is slowly improving and farmers are learning how to handle the crop with profit. As was the case in the Northwest, it is the most progressive farmers who are first adopting and they are getting fairly high yields.

3.11 The foodgrain output targets in the Draft Plan appear quite conservative compared to the input targets. Assuming that the input/output coefficients discussed above are approximately correct and the weather is normal, the targeted growth in inputs would produce about 35% faster growth of foodgrain output than targeted. Slippage of this order of magnitude could easily result from comparatively poor weather, from slippage in the ambitious input targets, or from an inaccurate estimate in the input/output coefficients themselves. Concerning the last point, it is widely recognized that agricultural growth is a far more complicated phenomenon than simply a linear function of inputs, and that any standard input/output coefficients could easily fail when, as in the current plan period, input growth is accelerated well beyond that of the base period. Bearing in mind these reservations, the prospects for medium-term growth will still depend quite heavily on meeting the input growth targets, and if these are met, the targets for foodgrain output will probably be realized.

3.12 Achieving the input targets is largely a matter of achieving the irrigation and fertilizer targets. All growth in gross cropped area is expected to result from an increase in double cropping brought about by access to irrigation water. The shift in the cropping pattern to rice and wheat follows fairly directly from an increase in irrigation. Also, most fertilizer is used on irrigated land and, as the Draft Plan suggests, the expansion of irrigated area itself will induce significant growth in fertilizer consumption, although some deepening of fertilizer use on area currently being fertilized and some broadening to unirrigated area is expected as well. Consequently, the irrigation target takes on a significance beyond the increased output attributed to it alone.

3.13 Irrigation. The prospects for achieving the plan target of 17 million hectares of irrigation potential (15 million hectares of utilization) to be created over the five-year period, were discussed extensively in last year's report and will only be briefly summarized here. Of the 17 million hectare target, 8 million hectares is to be met by major and medium surface irrigation development and 9 million hectares by minor irrigation, comprised of 7 million hectares of (mainly private) groundwater development and 2 million hectares of (mainly public) minor surface irrigation development. This,

if achieved, will represent a significant acceleration in irrigation development when viewed over the longer term. But most of the step-up has already occurred in the recent past and the plan targets can be met by a relatively minor further acceleration. Table 3.5 compares the new plan targets with achievements in the past.

Table 3.5

ANNUAL ADDITIONS TO IRRIGATED AREA
(in million hectares)

	Major and Medium (potential)	Minor	Total
1950/51 to 1973/74	0.5	0.5	1.0
1974/75	0.8	0.8	1.6
1975/76	1.0	0.9	1.9
1976/77	1.0	1.0	2.0
1977/78	1.5	1.1	2.6
1978/79 (anticipated)	1.4	1.5	2.8
1978/79 to 1982/83 (target)	1.6	1.8	3.4

Source: Statistical Appendix Table 7.7.

3.14 Achieving the major and medium surface irrigation targets for potential creation is a matter of fully funding and otherwise carrying through on the existing plans of State Departments of Irrigation. In the past, achievements fell short of targets because of inadequate funds allocated to irrigation expenditure (after inflation had taken its toll) and because of a proliferation of projects causing available funds to be spread too thinly. The recently much improved performance is a result of progress in overcoming these two problems. The proliferation of projects seems under control. The Draft Plan and the policy statements of the Government give priority to irrigation development in the form not only of large increases in real outlays but also of an increase in the proportion of plan outlays and of GDP allocated to irrigation to provide the US$9-10 billion required.

3.15 At the start of 1978/79, projects sanctioned and under implementation constituted an ultimate potential of 12 million hectares. Some of these projects have been under implementation for a long time, some for even 10 to 20 years. All of these should be completed by 1982/83. Including these old schemes, there were 75 major and 155 medium schemes which were ongoing at the beginning of the Fifth Plan (1974/75); of these, 59 major and 65 medium schemes are still ongoing in 1978/79. The current target is to complete most of these schemes, contributing a large part of the target for major and medium potential. In addition to these, 46 major and 246 medium schemes were initiated during the Fifth Plan period; these projects contributed little of their potential during the Fifth Plan itself and will be ready to contribute a considerable amount in the next five years. Altogether, the ongoing

major and medium schemes at the start of 1978/79 are expected to contribute 6 million of the 8 million hectare target. The Draft Plan contains an ambitious program of new major and medium projects; these are expected to add 1.5 million hectares of irrigation potential during the plan period. The remainder is expected to come mainly from modernization of existing projects.

3.16 The issues relating to the actual utilization of the additional irrigation potential are more complex. One indication of this difficulty is the lag in the farmers' utilization of the irrigation potential created each year by the Irrigation Departments, as presented in Table 3.6. But, the basic problems are greater than indicated by these planning numbers. In most irrigation projects in India, the actually irrigated areas are significantly smaller than the potential created by the irrigated system. This is due both to water loss before the water reaches the outlets and the inefficient systems of distributing water below the outlets to the individual farmgates. Present practice -- outside the Northwestern States -- is for Irrigation Departments to be responsible for the conveyance of water from the source to the irrigation outlets. In some outlets this means a water supply for up to 100 farmers. To date as soon as the conveyance system to the irrigation outlets has been completed, the potential for irrigation is said to have been created. Below the outlets it is left to the farmers to organize the distribution of water to their fields.

Table 3.6

MAJOR AND MEDIUM IRRIGATION POTENTIAL AND UTILIZATION
(in million hectares)

	Potential Available /a	Utilization	Absolute Difference	Utilization as a % of Potential
1974/75	20.7	19.4	1.3	94
1975/76	21.5	20.1	1.4	93
1976/77	22.5	20.7	1.8	92
1977/78	23.5	22.2	1.3	94
1978/79	25.0	23.3	1.7	93
1982/83 (target)	31.2	28.2	3.0	90

/a Potential created by the end of the previous year is conventionally reported in that previous year; i.e. 20.7 million hectares shown here against 1974/75 is usually shown against 1973/74 as being the total potential created by the end of that year.

Source: Statistical Appendix Table 7.7.

3.17 A review of a number of major and medium projects has indicated that the actual utilization of irrigation potential ranged between 30% and 65%. The effect of this apparent underutilization is that the cost of the scheme, per actually irrigated hectare, is about twice the cost assumed for

creating the theoretical potential. This underutilization is caused by water waste above the outlets as well as below the outlets. Above the outlets, conveyance losses arising from excessive seepage and unsuitable operational practices, are much higher than what has been assumed for the design of the canals. It is impossible for projects designed and constructed to present engineering standards to effectively serve the area that they have been assumed to irrigate. Similarly, water allocation and canal operation procedures, which had been originally designed to provide "insurance" against droughts and famines do not respond to the needs of modern agriculture. The inefficiency in water conveyance to the outlets does not only limit the water available to the farms, but also reduces the confidence of the farmers in a steady supply. Such confidence is essential before the farmers are ready to develop their land and participate in the construction and operation of the water distribution systems as conceived in the command areas.

3.18 Improvement of water use below the irrigation outlets has been entrusted to the Command Area Development Program (CAD). Progress under this program has been disappointingly slow. Works below the outlets are divided into two parts, communal works (the water distribution system to each farmholding), and works on the farmers' fields (leveling, construction of farm channels, etc.). Works on farmers' fields are not started before communal works are completed; farmers do not level their land until they are sure that water will reach their holdings. Communal works are slow because agreements for financing and constructing these works have to be negotiated by the CAD Authorities with a large number of farmers whose motivation for constructing these works is not equally strong. One approach to speed up communal works is by having the Irrigation Departments assume the responsibility for conveying water much closer to the individual fields than before. Ideally in an area where the farmholdings are large the irrigation system should deliver water to the individual farmgates and no doubt this is going to happen in the future in large parts of central India. In the interim a reduction of the number of consumers (which have to be organized into irrigation groups) will greatly speed up the construction of communal works. This approach is being tried out extensively now in Gujarat, Maharashtra, Karnataka, Andhra Pradesh and Tamil Nadu. Under this approach, the government designs, constructs and maintains distribution channels which reach down to 8 to 10 hectare blocks instead of the traditional 40 hectare blocks. The cost of the works is initially financed from budgetary resources and, after completion, recovered as arrears of land revenue. Water is delivered to the farmer groups at these outlets. The distance the farmers have to carry the water in a communal channel to their farmgates is greatly reduced. Delivery of water to smaller groups of farmers coupled with improved technologies in planning, design and implementing the conveyance system, increases the cost of the irrigation system by about 15%-20%. Expressed in areas actually irrigated however, the real cost may be considerably lower than today. A clearer view of the basic economics of this approach requires more experience and additional data collection which are underway now in a number of States. A limitation of this approach is of course that it must be built into the basic design of an irrigation system and therefore can only be used for projects constructed in the future.

3.19 Distributing water from the smallest outlet in the new or the old system will generally require some cooperation among the farmers themselves to share water on a rotational basis and will also require channels and maintenance of channels. It is traditional in India to assume that a system of collective farmer responsibility will lead to efficient sharing, implying efficient joint investment in channels and their maintenance, and in a few areas of the country this assumption appears to be warranted. But by and large the sharing system is chaotic and unfair over most of the irrigation systems. In several projects now being executed (in Andhra Pradesh, Maharashtra, Gujarat and Uttar Pradesh) serious attention is being paid to implementing a well-defined system of water sharing, whereby each farmer's rights to the complete flow of water from the lowest irrigation outlet is specified and then enforced by an organization of the farmers using that outlet. The period of access is proportional to the land area, and each farmer knows when his turn comes each week. In the experiments noted above, the group pressure of farmers seems to be adequate to overcome the obvious problem of the farmers closest to the outlet, or those with most local influence, depriving others of their water rights.

3.20 In the Draft Plan, funding of the major and medium schemes is worked out on the basis of the Government financing the construction of the major and medium irrigation systems down to the 40 hectare outlets and not beyond. Irrigated yields for foodgrains are assumed not to rise and for other crops to rise only by modest amounts. The plan targets provide for an increase in the lag of irrigation utilization behind potential from 1.6 million hectares to 3.3 million hectares, which is realistic given the rapid acceleration in potential creation. So any progress from the above schemes in improving the actual utilization of irrigation over the present standard simply increases the likelihood of meeting plan targets.

3.21 The emphasis in the plans for irrigation is always on the water supply side, while the drainage system -- in many cases an essential and integral part of such projects -- is treated as a secondary item. Drainage problems usually develop as a consequence of irrigation, caused by the following main factors:

(a) the tendency of farmers to apply too much water, in spite of built-in regulation facilities in the irrigation systems;

(b) appreciable losses in bringing the water down to each field and each plant; and

(c) the necessity sometimes to use excessive water for leaching in order to maintain a desired salt balance in the root zone of the crop.

The occurrence of fine textured soils, which normally are difficult to drain, also aggravate the drainage problems.

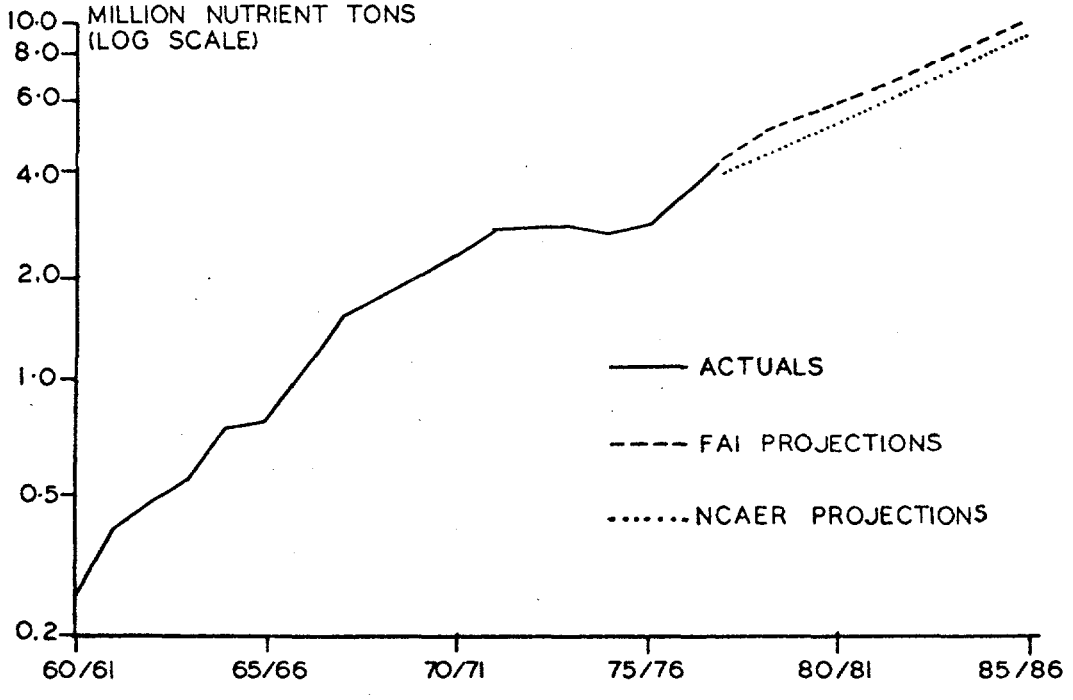
3.22 It is difficult to assess the magnitude of existing drainage problems in irrigated areas in India. Some seemingly good irrigation schemes have failed or been weakened because of the subsequent development of drainage

problems. Particularly in areas where water was imported (like in the Chambal projects in Madhya Pradesh and Rajasthan) the natural regime was disrupted and waterlogging developed rapidly. In areas where irrigation water is obtained from wells, however, a low groundwater table is usually maintained and drainage problems are minimized. Although the effects of poor drainage on the Plan's goals of effective irrigation cannot be estimated, it is clear that drainage problems do constitute a real threat to the value of these investments.

3.23 Fertilizer. With fertilizer consumption growing on average by 21% per annum over the past three years to reach 5 million nutrient tons in 1978/79, it now appears that the rate of growth of fertilizer consumption has recovered from the slump in the mid-1970s and is now returning to its historical trend. Graph 3.2 shows the growth in fertilizer consumption since the early 1960s. Evaluating the prospects for future growth requires some understanding of why fertilizer consumption has behaved the way it has in the past.

GRAPH 3·2

FERTILIZER CONSUMPTION



SOURCES: 1. FAI, FERTILIZER STATISTICS, 1977/78 AND FERTILIZER SITUATION IN INDIA, NOV. 1978.

2. NCAER, FERTILIZER DEMAND STUDY, 1978.

3.24 The 2.17 million ton increase in nutrient consumption since 1975/76 is a major achievement even in purely logistical terms. In terms of movement of materials it means the transportation and distribution through the supply

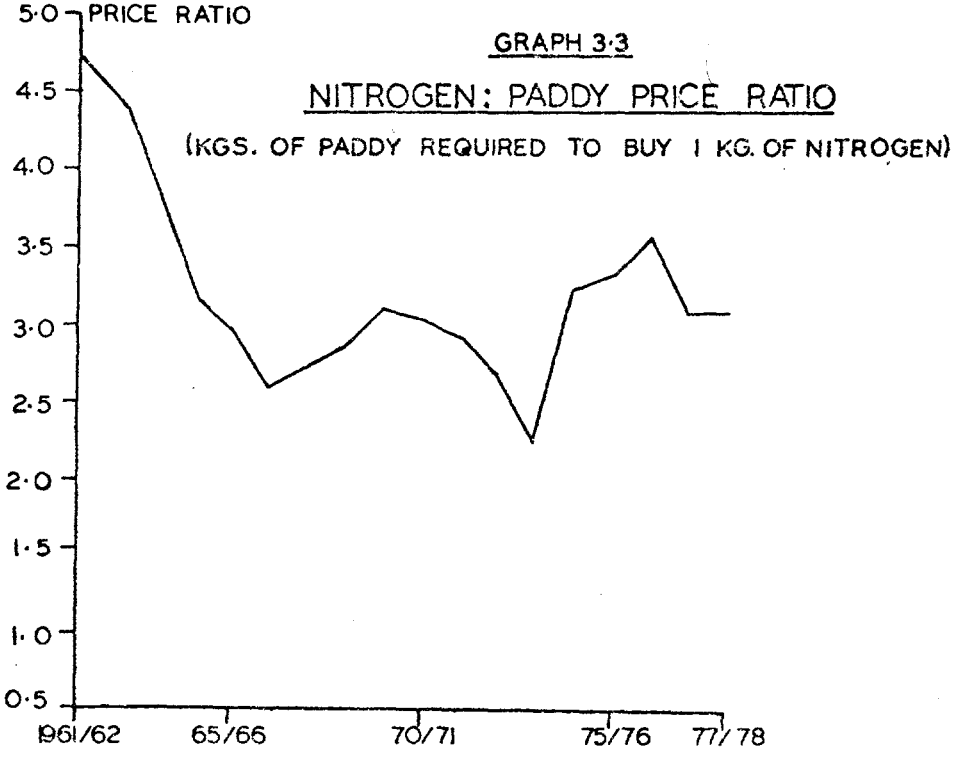
system of nearly 5 million additional tons of fertilizer materials per year. This achievement suggests a fairly strong and flexible fertilizer distribution network. In financial terms the increase in fertilizer consumption means an increase in farmers' annual expenditures on fertilizers of over Rs 6.7 billion. This suggests that the farmers' own resources, combined with the flow of short-term credit, have been adequate to support a major increase in fertilizer use. Management of the all-India supply situation in terms of relating stocks, indigenous production and imports to current and projected demand has improved enormously over the past several years. Occasional shortages have developed but only in limited areas and for brief periods. Strains have begun to emerge in the transportation infrastructure, however, as the ports and the railroads have had difficulty in coping with the increased demand. An increasing proportion of fertilizer has therefore been moved by truck, with the Government of India providing a newly introduced subsidy to cover the difference between road and rail transport for distances up to 1,000 km.

3.25 The continued recovery of demand is especially encouraging given the slowdown in demand growth during the mid-1970s. At that time, there was considerable concern that fertilizer demand might be reaching a saturation point. While average fertilizer use per unit of cropped area was quite low (17.3 kg per hectare), it was unevenly distributed, with 15% of the districts consuming 50% of the total fertilizer in India in 1973/74. The fear was that these well-developed markets were becoming saturated and that unless the demand base was expanded in districts with relatively low consumption, fertilizer demand could not be expected to grow rapidly. Over the past few years of rapid growth in fertilizer consumption, however, the use of fertilizer has become only slightly less concentrated (16% of the districts now consume 50% of the fertilizer). This suggests the rate of growth in both the high consumption and lower consumption districts was about equal. This in turn implies both that the high consumption districts were not near their saturation point and that considerable market expansion has taken place in the lower consumption districts.

3.26 It is not clear what the main force behind the recent increase in fertilizer demand has been. Weather has been very favorable in 1978/79, but it was also excellent in 1977/78 and 1975/76, so weather alone is not an adequate explanation for the growth in consumption. Since farmers tend to use more fertilizer where water is more abundant and assured, the expansion of irrigation since 1975/76 provides a partial explanation for the growth in fertilizer consumption. The 6.5 million hectares additional irrigation developed since 1975/76, however, would account for only about 16% of the increase in fertilizer use since then. Since the mid-1970s, fertilizer prices have fallen which, ceteris paribus, could be expected to stimulate fertilizer demand. At the same time, however, prices of a number of major crops have fallen, offsetting to a substantial degree the reduction in fertilizer prices. As an example, Graph 3.3 shows the change in the ratio of the price of nitrogen (the major chemical fertilizer nutrient) to the price of paddy. While the relative prices are a bit more favorable than they were in 1976/77, they are generally less favorable than they were in the late 1960s and early 1970s.

3.27 The continued relative prosperity of the farming sector following four years of excellent or at least average crops, coupled with easy availability of fertilizer, is probably a major factor sustaining the growth in

demand. Even at existing fertilizer:crop price ratios, fertilizer use remains profitable. With the development of more effective extension services in many States, the profitability of using fertilizer is likely to rise as farmers learn better how to get the most out of their expenditures on fertilizer. By ensuring a full stand of plants and a weed-free field, by applying fertilizer at the right time, by placing it in the root zone and by spreading it evenly, the efficiency of fertilizer use can be raised considerably. Some Indian agronomists have indicated that fertilizer efficiency, i.e., the additional output from a given quantity of fertilizer, could be double what farmers now achieve.



GRAPH 3.3

NITROGEN: PADDY PRICE RATIO

(KGS. OF PADDY REQUIRED TO BUY 1 KG. OF NITROGEN)

SOURCE: FERTILIZER PRICES ARE FROM FAI, FERTILIZER STATISTICS 1977/78. CROP PRICES ARE DERIVED FROM THE WHOLESALE PRICE INDEX, MAKING ADJUSTMENTS FOR MILLING AND MARKETING TO ARRIVE AT ESTIMATED FARM GATE PRICES.

3.28 Against the impressive increases in fertilizer consumption in recent years, what are the prospects for continued growth in the future? Three organizations have recently published projections of fertilizer demand: the Planning Commission in the Draft Plan, the Fertilizer Association of India

(FAI), and the National Council of Applied Economic Research (NCAER). A comparison of the FAI projection with that of NCAER was provided earlier in Graph 3.2. The Planning Commission's projection extends only to 1982/83 and at that point is virtually identical to FAI's.

3.29 The FAI projection seems reasonable and achievable, but it embodies large absolute increases in the quantities of fertilizer even though it assumes a falling rate of growth in total consumption. Between 1978/79 and 1982/83, annual fertilizer consumption will have to increase by 2.5 million tons if the FAI projection is to be achieved. This will require a considerable effort in developing the demand for fertilizer. There is not much scope left for stimulating demand through the price mechanism. The abolition of various State and local taxes on fertilizer -- such as the 50% reduction in the excise on the production and import of fertilizers announced in the 1979/80 Budget -- could reduce prices. On the other hand, it may not be possible to maintain indefinitely either the subsidy on all indigenously produced phosphatic fertilizer, or the variety of fertilizer subsidies introduced by several State Governments.

3.30 The main effort to increase fertilizer consumption will need to focus on further market development. As noted above, fertilizer consumption is heavily concentrated in relatively few districts. In such districts, sales volume is high and usually there are nearby railway delivery depots. Even though there are frequently numerous outlets, the dealers' margins are generally adequate in such districts to provide an incentive for operations. To move fertilizer to low consumption areas, however, several things are necessary, including continuation of ample overall fertilizer supply. If shortages emerge, dealers are going to concentrate what fertilizer is available on their better developed market areas. If stocks are on the high side, there is pressure on the dealers to move out to develop new markets. There are two broad areas where market development offers a great deal of promise. Firstly, there are quite a few districts with substantial irrigation but relatively low fertilizer use. Fertilizer demand could increase rapidly in such areas. Secondly, there are the vast rainfed areas which constitute 75% of India's cropped area. Fertilizer efforts have been concentrated primarily in irrigated areas. Yet, recent experience in Karnataka indicates that substantial increases in fertilizer use are possible in rainfed areas. Innovative marketing techniques such as selling fertilizer for cash from trucks, which visit major village markets on market days, can be used in the initial stages of developing demand until the volume is sufficient to make retail outlets viable. Larger margins may be needed initially, especially in remote areas, to give dealers an adequate incentive until sales volume builds up.

3.31 In both the rainfed areas and the irrigated districts with low fertilizer use, the reorganized extension service can play a major role in developing, with the farmers, fertilizer recommendations which meet their needs. In rainfed areas, for example, fertilizer placement is critical as is timely weeding. Split dose recommendations can reduce a farmer's risks (since he can delay full application until he knows he has a good initial stand) and increase efficiency at the same time. Some States are beginning to develop "threshold doses" of fertilizer, which are roughly the smallest

dose that gives a recognizable increase in output. Multiples of these threshold doses can then be recommended on an individual basis depending on a farmer's income. Finally, extension can play a major role in introducing a range of practices which improve the physical efficiency, and hence the profitability, of fertilizer. Many of these practices are well known, but an adaptive research program in farmers' fields aimed at identifying the best ways to increase fertilizer efficiency could refine such recommendations to fit particular on-farm conditions.

3.32 The network of retail outlets appears flexible enough to grow to accommodate the projected increases in demand. However, basic infrastructure, particularly rail transport, may become a more binding constraint. A recent study of fertilizer transportation may identify areas for investment and improve operations. Power and fertilizer production capacity may also constrain the growth in domestically produced supplies, but an ambitious investment program is underway in both these sectors which will hopefully keep the gap between domestic production and demand to manageable limits. The present comfortable foreign exchange situation suggests ample capacity for importing fertilizers should this gap grow.

3.33 Extension. Improved agricultural extension is another force increasing productivity that has much improved in some areas in the recent past. Substantial progress has been made during the past five years in strengthening the agricultural extension services in a number of States. The States are now in various stages of reorganizing their agricultural extension efforts along the lines of the Training and Visit System, an approach to extension which has been found highly effective in reaching large numbers of farmers rapidly. The main components of the system -- frequent and regular visits to specific groups of farmers by full-time, adequately trained extension personnel -- have been described in various reports. The improvements make the services more effective in both raising the productivity of the inputs already in use and in accelerating the adoption of HYV, fertilizer and more efficient techniques for utilizing irrigation water. Adopting the system is difficult as it requires a major reorganization of large numbers of staff and the gradual but systematic development of the technical competence of that staff. Nevertheless, progress in many States is encouraging.

3.34 Over the past four years, the reorganized extension services in nine States have covered roughly 13 million farm families. At full development, these services will cover about 29 million farm families. Efforts are under way to expand this system to other States and eventually to all of India's 70 million farm families. Extending sound and timely advice to improve agriculture practices and enhance farm management skills is a necessary ingredient, along with the inputs discussed above, in raising India's foodgrain yields from their current level in the range of 1-1.5 tons per hectare to their realizable potential of around 4 tons per hectare; and in raising other crop yields in a similar proportion. A very hopeful start has been made and considerable increases in productivity and farm income are expected as the new extension system progressively takes hold in more areas.

B. Non-Foodgrain Agricultural Products

3.35 Crops. Foodgrains make up about 55% of the value of agricultural production, non-foodgrain crops about 25%, livestock and dairying 15% and forestry and fishing 3% and 1% respectively. Besides its quantitative importance, non-foodgrain agriculture, being by and large less land intensive than foodgrain production, offers prospects for faster and ultimately larger growth in income of very small landowners and for the employment of landless labor. The Draft Plan emphasizes mixed farming incorporating crop production, animal husbandry, poultry, forestry, etc., as a way to realize this income and employment potential. In the context of a mixed farming approach, there is room for specialized programs to promote certain agricultural activities but the overall aim is for less specialization by individual farmers and farming communities. A balance of incentives and assistance and an extension system covering all the main income options is therefore required. In particular, the stress on non-foodgrain programs does not imply serious reduction in land or other inputs allocated to foodgrains; at present, all non-foodgrain crops collectively absorb only 23% of cropped area; fibers and oilseeds, the main crops in short supply domestically, use only 17% of the land. Therefore, only marginal changes in the percentage of land used for foodgrains would be necessary to balance domestic crop production to domestic demand, although this may become a greater problem over time if foodgrains advance faster than other crops. For the non-crop outputs such as livestock, poultry, sericulture and forestry the diversion of land would be minimal; the main inputs would have to be extension and organizational and technical support.

3.36 The most important non-foodgrain crops are oilseeds, sugarcane and fibers, comprising respectively 11%, 8% and 4% of total value of agricultural output. Of these, oilseeds and fibers are deficit commodities and the sugar market is currently glutted. The plan targets for oilseeds and fibers were devised to achieve self-sufficiency by the end of the planning period. This implies annual growth rates of about 4.5% for jute, mesta, and oilseeds and 6.4% for cotton. For livestock products, fishing and forestry current production does not begin to approach potential, and targets have been set simply to reflect realistic growth prospects. For milk and milk products, animal husbandry and fishing, annual growth targets are 5.2%, 4.0% and 4.1% respectively. Rapid growth, 8.9% per annum, is anticipated in forestry and logging. Except for cotton and forestry the growth targets of all the main non-foodgrain outputs are only slightly above those for agriculture as a whole.

3.37 Production of cotton, which is targeted for a particular rapid increase, is to be fostered by the propagation and introduction over wide areas of new hybrid seeds, the encouragement of cotton growing on lightly irrigated areas, and the expansion of plant protection and pest control. Its main disadvantage, a comparatively long growing season, may be relieved by the system of transplanting cotton seedlings, which has been piloted successfully in rainfed areas. By shortening the growing season by about a month, this avoids the period of water stress and increases the chances of second cropping, thereby enhancing profitability.

3.38 Forestry, a second agricultural industry of targeted rapid growth is to be fostered by two separate programs -- the production forestry program

and the social forestry program -- the latter including farm forestry. Forest Development Corporations have been set up in several States to develop and use forests under the production forestry program; these are generally new Corporations with considerable inadequacies still apparent in planning, nursery management and infrastructural development. At a national level, it is proposed to create the Forestry Survey of India, to assist in identification and program planning.

3.39 The target of the Draft Plan would require planting of about 275,000 hectares annually with fast growing hardwoods and tropical pines. The total land area classified as forest is 23% of the land area of the country or about 75 million hectares of which 30 million hectares is relatively unencumbered with local rights that prevent production forestry. Most of this forest is characterized by extremely low yields and lack of proper scientific management. Compared to the land potential, therefore, the plan target is indeed very modest. It will require some building up of institutional and technical capacity because the target for production forestry is well above the achievements during the Fifth Plan, when an average of 170,000 hectares annually were planted in economic plantations and in plantations of fast growing species. 1/

3.40 The program of social forestry comprises the planting and protection of trees on waste land, mainly within established agricultural areas, including margins of roads, railways, irrigation channels, living areas, etc. and cropping of trees on portions of small farms and village common lands, which are for some reason unsuitable to other crops. The Draft Plan discusses the potentially high yield, in terms of fuelwood, land conservation, and employment creation of the social forestry program, but sets no quantitative targets for land area planted or for production. This is probably a realistic recognition of the very severe organizational problems connected with planting and protection of trees in scattered small areas; the Plan recognizes that to succeed, the operation will have to have strong local support from local government, Panchayats, and voluntary organizations, in addition to the support, such as provision of proper seedlings, that can be provided by the Forestry Departments. In most States, the institutional framework for a successful social forestry program is still lacking. As with other mixed farming programs, social forestry could benefit from being included in the general extension service particularly where the Forestry Departments are in a position to provide inputs and technical support.

3.41 Compared to the ambitious targets for cotton and forestry, other non-foodgrain crop products have relatively modest plan targets which are in general only slightly higher than those for agriculture. Nevertheless, they often represent distinct breaks with past trends of stagnation or very slow growth. The targets should be achievable without any radical departures from past policy or crash programs; what the Draft Plan envisions and what appears to be required is a marginal change of emphasis and an extension to more crops of the services and incentives which have until recently been concentrated mainly on wheat and rice.

1/ This average includes an estimated 40,000 hectares per year by State Forestry Corporations.

3.42 The progress of non-foodgrain crops has suffered in the past on account of relative neglect of technical development and extension effort. Thus, for example, pulses, oilseeds and jute all lack an adequate supply of quality seeds, and opportunities exist for larger farm profits from the introduction of a proper mixture of legumes and fodder crops in conjunction with cereals. Seed programs for these crops are to be given additional emphasis through the established seed corporations, and extension efforts will attempt the difficult task of ascertaining and then teaching and demonstrating improved crop mix patterns to match special local conditions. The Draft Plan puts considerable emphasis on low level planning to accomplish this refocussing of extension effort; the Training and Visit System with suitable evaluation of cropping options should also be adaptable to this purpose.

3.43 For the important crops a price support system has evolved out of the old system of mandatory procurement prices, and recent changes in price supports reflect an emphasis on stimulating the production of crops in comparatively short supply. The 1978/79 wheat support price was increased by 2%, while the support price of paddy was increased by 10% and much larger increases were granted for pulses (gram 39%; new support prices for arhar and moong) and for some oilseeds (soyabean 25%; groundnut, rapeseed and mustard 9%). Sugarcane, a crop in relative surplus, is purchased by mills at prices officially fixed by the individual States. With the recent decontrol of the sugar industry the Central Government has urged the States not to fix prices higher than the support price suggested by the Centre, which was well below the transfer prices in some States. It is clear that the changes in relative prices are in the general direction of correcting the perceived imbalances: i.e., the present surpluses in sugar, the emerging surpluses in wheat and to a lesser extent rice, and major shortages of pulses and oilseeds and the shortage of cotton. But there is not yet a systematic approach to the setting of agricultural support prices that will clear the domestic markets, with suitable buffer stocks. Since India is a generally high cost agricultural producer, it is important that incentives be structured so as to achieve domestic balance in major crops. Although surpluses could be temporarily exported -- sugar being an important exception where exports are controlled by international agreement -- this would entail substantial losses to the price support agencies.

3.44 To make support prices serve as effective incentives, the system of procurement must be improved. Wheat and rice have effective purchasing arrangements, carried over from the years of mandatory procurement, and the Cotton and Jute Corporations of India have purchasing networks. For pulses and oilseeds and for the proportion of sugarcane not purchased by mills at State-administered prices, the purchasing arrangements are generally inadequate, although the National Agricultural Marketing Federation and some State-level marketing federations are starting to procure a wide range of products.

3.45 Dairying and Livestock. Dairying is already a major source of cash income and it is a natural area for concentration of the effort to promote mixed farming. Most draft power for agriculture is provided by 80 million bullocks, most of which are cattle bred from about 54 million cows. In addition, about 30 million buffalo cows are maintained, primarily for milk production. Breeding to replenish bullock stock and production of milk are of

course complementary activities; not quite so obviously, production of milk and crop output appear to be complementary as well, according to a series of model farm studies, because cows can subsist largely on crop by-products and cow manure is a useful input into agriculture. Cattle tending and milk production is also an extremely labor intensive activity, and it is thus more profitably undertaken by landless farmers and very small landowners with surplus labor time, than larger farmers who would often have to depend on hired labor.

3.46 The Draft Plan stresses three methods to increase the value of milk production: improvement of cattle breeds through crossbreeding including extensive artificial insemination; rapid growth in the organized marketing system for milk and milk products through cooperatives of producers and unions of cooperatives to process and market products on the model of AMUL development which has already been extensively and successfully replicated by the National Dairy Development Board; and the improvement in condition of cattle through better health care and the introduction of improved fodder crops, particularly legumes, through seed distribution and extension effort. Development along these lines will enhance the smallholder and landless farmers' position in the industry by extending organized markets into more rural areas, thereby increasing the percentage of milk that can be sold in liquid or high grade product form. The trade-off between dairy development and other farm outputs is expected to be minimal: breed improvement and care, rather than larger herds, will provide the incremental production, and the leguminous fodder crops needed to supplement by-product feeds are beneficial rotation crops. The main additional input at the farm level is labor, which is likely to remain in surplus.

3.47 Plan targets for milk and milk product production are: growth of just over 5% per year, from 27.5 million tons estimated output in 1977/78 to 35.5 million tons in 1982/83; organized processing and marketing of 15% of the total milk supply compared to 5.5% in 1978/79, catering to all towns larger than 100,000 persons; and breed improvement covering about 10 million cows -- i.e., about one-fifth of the national herd -- primarily through artificial insemination.

3.48 The Draft Plan envisions a very rapid increase in poultry and egg production (nearly 60% over the plan period) from very low current levels: about 1-1/2 dozen eggs per capita per year. In marked contrast to milk production, poultry and eggs are currently produced mainly by industrial establishments in the neighborhood of major city markets; poultry and eggs are not produced extensively in village areas and the informal market is small. It is proposed to try to replicate for the poultry industry the structure that has succeeded in the milk industry: cooperatives and unions of cooperatives, and a National Poultry Development Board to lead development and provide technical, organizational and financial support. The purpose of this institutional development would be to spread modern poultry technology and to decentralize poultry culture into rural areas and to smaller producers. In general, the development of the poultry industry has not been demonstrated successfully in rural areas, and it is probably a harder development problem than dairying because of the needs for modern inputs, for more intensive care, and particularly for feed, raised and perhaps processed, for poultry. Raising and processing grains for animals is not a traditional farm activity, and the trade-off with grains

for human consumption is immediate and obvious. Difficulties notwithstanding, the development of the poultry sector is a labor-intensive activity with considerable longer-term potential as a source of animal protein for that portion of the population that finds it acceptable, and as a crop with considerable export potential.

3.49 Targets for sheep and wool production and pig production are modest, and programs consist mainly of breed improvement through the expansion of breeding centers and importation of exotic varieties. The fishery targets are also low; the main new emphasis in the fisheries programs is increased extension and increased production of fish seeds for the inland water industry. The Draft Plan also proposes, but does not spell out in detail, the establishment of an extensive fishery cooperative network.

3.50 Meeting of the Plan Targets: Labor Absorption. Several of the agricultural programs are as important or more important for their downstream labor absorption as they are for the value and employment created in producing the raw agricultural product. Social forestry, for example, is a necessary input into many village handicraft industries, and wool and wool products to the handicraft carpet industry. Imports of raw materials may substitute for agricultural outputs in comparatively organized industries, such as carpet-making, but this is probably not viable in local handicrafts founded on wool, where the industrial output is likely to be constrained by the supply of locally available material; in the absence of growth of the agricultural product the industry would stagnate. A prime example of the latter type of industry is sericulture which presently employs about 360,000 workers in the various processes of the industry. The Draft Plan includes several integrated sericulture programs, including all processes from irrigation for growing of mulberry to the export marketing of finished products, designed to double exports during the planning period and to increase employment by about one-third, to 440,000 persons. Like the handloom programs (see Chapter 4, Section C) the sericulture programs also do not promise high income employment but rather mass employment which can relieve to some extent the overall poverty and lack of cash incomes of a large number of the rural poor. Not quite so obviously as in the specialized program for sericulture, the entire emphasis of the Draft Plan on mixed farming and a multiplicity of agricultural goals points in the direction of more labor absorption per hectare of land, and consequent supplementation of low rural incomes. Most of the elements of the mixed farming approach have special problems of organization and management (discussed above in the sections on each program) which are likely to make achievement of even the more modest targets difficult. But to the extent that these problems can be overcome, the effect on poverty relief in rural areas will be out of proportion to the quantitative output targets. Thus, the mixed farming approach probably offers as great a hope for distributing the gains from agricultural growth as the more conventional "redistribution" efforts discussed in the next section.

C. Reducing Rural Poverty

3.51 More than one-third of the world's poor live in India. The following observations indicate the dimensions of the problem:

(a) There are about 290 million people in India who fall below the minimum acceptable standard of living. More than half of these are below 75% of the poverty line. More than 80% of the poor live in rural areas.

(b) The incidence of poverty in India is highest among agricultural labor households and small cultivators. More than one-fourth of rural households depend on labor income for their livelihood and own very little or no land. Slightly less than half of these rural labor households belong to the scheduled castes or tribes.

(c) Less than 1% (0.72%) of the land holdings in the country account for 25% of the foodgrain production whereas smaller holdings account for 50% of the total holdings but only 10% of foodgrain production.

(d) Agricultural labor households and small cultivator households are increasing faster than rural households. The number of marginal holdings -- below one hectare -- increased by about 51% from 23.6 million to 36.6 million during 1961-70, and the number of agricultural laborers increased by about 75% from 27.1 million to 47.5 million.

(e) According to the preliminary results of the Rural Labor Enquiry for 1974/75, there is some evidence that the average daily earnings of rural laborers have declined in real terms during the past decade, and that the number of days that rural laborers have been unemployed due to want of work has increased.

3.52 The improvements in the living standards of landless laborers and poor farmers will depend to a large extent on the overall growth of the economy, mainly on the productivity increases in agriculture but also on the expansion of employment opportunities in urban areas. This point cannot be emphasized enough. Not only will faster growth expand direct employment opportunities, but the demand for the services of the poor and the surplus out of which informal sharing of incomes can take place within the family or the community will be augmented only if there is sustained growth in agricultural and industrial output. Moreover, higher growth of output will also facilitate the implementation of special programs and projects which aim at benefiting the poor directly. However, though faster growth is a necessary condition for reducing poverty, it is also true that, at least in the Indian context, growth at targeted rates will at best absorb the new entrants to the rural work force and will leave the backlog of unemployment intact. This is why India cannot ignore direct programs for creating employment and reducing poverty.

3.53 The Draft Plan is emphatic on the priority given to anti-poverty policies, measures and programs though there is hardly any idea that has not been tried in India in the past. Indeed, India has not lacked imaginative schemes, particularly since the Second Plan, which aim at helping the weaker sections of the population; and over the past two decades, one can point to

many cases of successful programs. However, in the context of the total economy and society, the scope and the success of anti-poverty schemes have been limited if not disappointing and this has, unfortunately, led to widespread cynicism regarding such efforts. This is why in evaluating the prospects of anti-poverty programs it is important to look for the mechanisms which are being set up for serious implementation of such schemes and the political will which is an absolute necessity if such schemes are to succeed. Below we review the progress in three major areas which are once again highlighted in the Draft Plan as important components of the Government's effort to reduce rural poverty.

3.54 Land Reform. Relative to most Asian countries, India is well placed in terms of crop land per head of total population as well as per head of agricultural population. Only Burma, Pakistan and Malaysia have crop land ratios to agricultural population that are higher than India's. In fact, India's agricultural population operates over twice as much crop land per capita as in Bangladesh, China, Indonesia, the Republic of Korea, Nepal and Vietnam, and about two-thirds more than Japan and North Korea. Despite this relatively favorable position the pressure of population on land has been acutely felt in India, increasingly so as the traditional relief through expanding the area under cultivation has become less and less available. The early 1960s marked the turning point, after which the area under crops in India has become rather stagnant. The growth rate declined from about 1.7% per annum in the 1950s to 0.5% per annum since 1961.

3.55 The situation was further aggravated because the proportion of the labor force engaged in agricultural activities has remained constant at about 72% since the beginning of planned development in the early 1950s. The failure of industry, mining and the tertiary sector to absorb the bulk of growth in the labor force, combined with the slow down in crop land expansion contributed to the decline in land-man ratios in agriculture. One indication is the shrinkage in the average size of operational land holdings by some 28% from about 3.0 hectares in 1953/54 to 2.2 hectares in 1970/71. Multiple cropping and increased yields have to some extent mitigated the effects of this decline.

3.56 According to the Agricultural Census of 1970/71, holdings of two hectares and less comprised about 70% of all operational holdings, but accounted for a mere 21% of the total cultivated area. Census data further revealed that 31% of the cultivated area was in the top 4% of holdings (measuring ten hectares and above). The Reserve Bank data on rural assets also confirm this skewed pattern. The poorest 10% of rural households owned 0.1% and the richest 10% owned more than half of the total assets in 1971/72.

3.57 The statistics on the land ownership pattern and size distribution of operational holdings also suggest that no significant lessening of land concentration has occurred over time. Thus, the National Commission on Agriculture Report concludes that "the concentration of land in the hands of the more affluent farmers, therefore, continues to be intact." According to one analysis of the land holdings surveys conducted in 1954/55, 1961/62 and 1971/72, in a number of States the proportion of the totally landless has shrunk progressively and there has been some reduction of the proportion of large landowners, but little seems to have been achieved in stopping the

growing numbers of the poor farmers and laborers. The Draft Plan also states that "up to the 1960s, the land reform measures had no visible impact on the distribution of rural poverty."

3.58 The abolition of intermediaries (the zamindari reform) was the main concern of land reform programs in the first decade after Independence. Although the implementation of this program left a lot to be desired, allowing the ex-intermediaries to acquire large areas of choice land, all in all the abolition legislations succeeded in curbing feudal and semifeudal ownership over large parts of the country and brought some 20 million cultivators in direct contact with the State. But the removal of intermediaries also led to the eviction of tenants on a vast scale. Between 1951 and 1962 -- the period over which zamindari abolition was implemented -- the area leased-in as a percentage of the total area operated declined substantially from about 36% to 11%. "This decline has occurred much more as a result of resumption of land by landlords for the ostensible purpose of 'self-cultivation' than of acquisition of ownership rights by former tenants." 1/

3.59 It was this wave of mass evictions that provided the impetus for the second line of land reform legislation, i.e., tenancy reforms. Tenancy legislation enacted by the States sought to provide greater security to tenants by regulating rents, by enabling them to acquire occupancy rights usually at the expiration of a fixed period of continued occupation, by conferring ownership rights to them on payment of compensation to landowners and by restricting the land owners' right for resuming land for self cultivation. Although the extent of tenancy has diminished and although the farmers who lease-in land are not always poor and those who lease-out land are not always rich, the progress on protecting the rights of the tiller against the landlords has not been encouraging. Experience in India has demonstrated once again that tenancy reform is not easier to implement than land reform.

3.60 The third line of land reform legislation came in the form of fixing land ceilings. The Planning Commission Panel on land reform set up in 1955 found compelling reasons to endorse ceilings legislation not only as a means of welfare distribution, but even from the point of view of agricultural productivity. Except for a temporary period of adjustment, the Panel reckoned that land distribution would help agricultural production by inducing capital investments on land, encouraging personal cultivation, ending the uncertainty in land relations, and providing work and security to the landless. Both the Second and the Third Plans favored imposition of land ceilings and legislation to that effect followed in most States. However, not only were ceilings set quite high as to limit severely the potential surplus land, but all manner of exceptions, loopholes, malpractices and judicial obstructions combined to frustrate the legislators' objectives.

3.61 The Planning Commission's Task Force on Agrarian Relations reported in March 1973 that approximately one million hectares had been declared surplus which was equivalent to a meager 0.7% of the total net area sown. Much of this surplus was unfit for cultivation and only half had been distributed.

1/ P. C. Joshi, Land Reform and Agrarian Change in India and Pakistan Since 1947.

Summing up the poor performance, the Task Force pointed to the lack of effective political support, direction and control, without which no tangible progress could be expected. "The sad truth is that this crucial factor has been wanting. The lack of political will is amply demonstrated by the large gaps between policy and legislation and between law and its implementation. In no sphere of public activity in the country since Independence has the hiatus between precept and practice, between policy pronouncements and actual practice been as great as in the domain of land reform."

3.62 This observation is still valid. Although more ceiling legislation has been passed since 1973, the result in terms of land distribution has been insignificant. Four years after 1973 (in July 1977), the total land declared surplus was only 1.4% of net area sown or 1.6 million hectares, of which 0.85 million hectares has been taken possession of by the Government and only 0.53 million hectares has been distributed. What is equally discouraging is the total surplus land estimated by the Government which has come down to only 2.1 million hectares as reported in the Draft Plan 1/ from 25 million hectares which was the estimate in the late 1950s. One view voiced but not pressed in the Draft Plan is that the surplus land under present ceilings may be much larger than the official estimates: 8.7 million hectares or more. According to the Draft Plan, "the discrepancy between the 'estimated surplus' by survey data may be due to varying definitions of surplus land in different States, the transfers made to evade ceilings, the failure to record or verify true surpluses or both." The recommendation of the Draft Plan to rectify this situation by completing and correcting land records will not make much headway unless the political will exists for pushing through the land reform in a serious manner.

3.63 The redistribution of this much land could contribute significantly to the well-being of the poor rural households. For example, about half of the rural households own less than one hectare of land. Their average holding size is about 0.31 hectares. If the estimated 8.7 million hectares could be distributed to this group of marginal farmers, the average size of their holdings would rise by about 40%. Or, alternatively, the landless rural households could be given about one hectare per household, which would open up new opportunities for them.

3.64 The political support for agrarian reform which seemed to gain momentum in the early 1970s was not sustained during the following years. This was evident in the modest targets adopted, in the failure to achieve even these modest targets and in the faltering legislative support. In recent years, Governments have emphasized the implementation of the limited programs -- acquiring and distributing the surplus land derived from the existing ceiling laws -- and hence, putting an end to further "unsettling talk" about changes in land relations. Even this very limited objective, however, has not been achieved as evidenced by the poor performance in land distribution. Although

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1/ Revised but unofficial estimates by the Ministry of Agriculture as of June 1978 give the following figures: estimated surplus 2.8 million hectares; declared surplus 1.8 million hectares; taken over by Government 0.9 million hectares; distributed 0.6 million hectares.

the Central Government has discouraged the attempts to raise the land ceilings in at least two States, there has been very little progress either in taking over the land declared surplus under the existing legislation or distributing the land which has been taken over. "A mere 32% of the area declared surplus has been distributed; the remainder of the allottable area still remains with the former landowners. This achievement would have to be discounted even further considering that, quite a few cases of reported allotment are said to exist only on paper, the allottees having not been put in physical possession of the land." 1/

3.65 Not much progress is evident towards improving the conditions of the tenants and sharecroppers either. Perhaps the only significant exception is the attempt made recently in West Bengal. According to the West Bengal Land Reforms Amendment Act of 1977, where a person lawfully cultivates any land, not being a member of the family of the owner, he shall be presumed to be a bargadar (sharecropper) and the onus of the proof that he is not a bargadar will rest with the owner of the land. The law also stipulates that where a person wants to resume land from the bargadar for personal cultivation, such person or a member of his family must reside for the greater part of the year in the locality where the land is situated. It is also necessary that the principal source of the income is produced from such land. The effort of the West Bengal Government to have two million of the estimated three million sharecroppers registered in the State so that they would be eligible for all facilities accorded to sharecroppers has been frustrated by various judicial actions although the campaign has also encountered political resistance at various levels.

3.66 As stressed in the First Report of the new Land Reform Committee, the Land Reform Amendment Act of West Bengal as well as three other recent land reform legislations have not been included in the Ninth Schedule of the Constitution which would have given these acts protection from prolonged litigations. There was even a move in some departments of the Government to do away with the Ninth Schedule altogether when the Constitution is amended, on the grounds that the Ninth Schedule will be redundant when property rights are no longer included under Fundamental Rights. The Committee on Land Reforms has come out publicly and strongly against this view and, in its First Report, has recommended the preservation of the explicit protection of the Ninth Schedule and the inclusion of the recent and future land reform legislation under the Schedule. It is encouraging that the Central Government has endorsed the recommendation of the Land Reform Committee.

3.67 To summarize against the background of increasing land hunger, the scope for agrarian reform in India is not wide relative to the large numbers of the landless and small peasants, but is certainly more than indicated by the official estimates of surplus land. The absence of any progress in distributing even the modest areas declared surplus or taken over is a regrettable indication that agrarian reform has lost even the little momentum that it had in 1972/73. This is unfortunate since it is unlikely that the

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1/ R.K. Rath, "Towards a Functional Land Distribution Program," Economic and Political Weekly, January 13, 1979.

relative income distribution in rural areas can be significantly improved in the absence of larger availability of land for the poor. Moreover, the scope for land reform is becoming more limited every passing year with the rise in rural population.

3.68 Rural Credit. In the renewed efforts for reaching the poor in rural areas, the Government of India has emphasized the expansion of credit to agriculture and the delivery of a major portion of this to the weaker sections. Looking at the picture over the past quarter of a century it is clear that institutional credit has gained substantial ground from traditional informal credit in the countryside. The share of institutional credit in the total indebtedness of the rural population has risen from 7% in 1951/52 to 29% in 1971/72 and may be around 35% at present. However, the dependence of the poorer sections of the rural population on non-institutional rural credit sources is much larger. In 1971/72, the share of institutional agencies in the debt of cultivators was only 10% in Rajasthan, 12% in Bihar and 15% in A.P. Similarly, the agricultural laborers and the rural artisans owed less than 5% of their debt to the institutional agencies.

Table 3.7

DIRECT FINANCE FOR AGRICULTURE

	Outstanding Amounts End of Year				
	1974		1978		1978÷1974
	(Rs m)	(%)	(Rs m)	(%)	
Primary Agricultural Credit Societies	10,550	44	18,640	41	1.77
Land Development Banks	9,145	38	12,490	28	1.37
Scheduled Commercial Banks	4,355	18	13,482	30	3.10
Regional Rural Banks	-	-	716	1	-
Total	24,050	100	45,328	100	2.3

Source: Reserve Bank of India, Report on Currency & Finance, 1977/78.

3.69 The agricultural credit societies and the land development banks have been the traditional channels of institutional credit in India and still provide about 70% of the direct credit by institutional agencies to agriculture (see Table 3.7). However, the share of the commercial banks in rural credit has increased rapidly so that their share in direct credit to agriculture has risen from 18% in 1974 to 30% in 1978. In addition to these, the Regional Rural Banks have entered the scene since 1976 but so far their share is minimal.

3.70 The distribution of rural credit in terms of the land holdings of the borrowers indicates a rather balanced picture when compared with the overall pattern of land distribution in the country (see Table 3.8). However, "it is possible that the data on the borrower's size of holding with the cooperatives may not be very accurate. We also learn from knowledgeable persons that there are a number of benami transactions under which bigger landowners borrow in the name of small farmers." 1/ Moreover, other data reveal some important imbalances. First, the number of borrowers is still small compared to the rural households. Of the estimated 77 million rural households in India in 1976 the agricultural credit societies had a membership of 40 million, but the number of borrowing members was only 15 million. 1/

Table 3.8

DISTRIBUTION OF CREDIT ACCORDING TO BORROWERS IN 1975/76
(%)

	Area of Holding	Primary Agricultural Credit Societies	Labor Development Banks	Commercial Banks
Below 2 hectares	21	30	20	56
2-4 hectares	19	25	21	19
Above 4 hectares	60	41	28	25
Tenants, laborers and others		4		
	100	100	100	100
Total (Rs million)		10,234	2,154	2,126

Sources: 1. Reserve Bank of India, Statistical Statements Relating to the Cooperative Movement in India, 1975/76
2. Reserve Bank of India, Agricultural Credit Schemes of Commercial Banks, Report of the Expert Group, 1978
3. Reserve Bank of India, Regional Rural Banks, Report of the Review Committee, 1978

Secondly, the share of credit going for non-farm activities is still quite low. And finally, the regional distribution of agricultural credit is very skewed against the poorer States. As shown in Table 3.9, seven of the poorer States (U.P., H.P., West Bengal, Orissa, M.P., Bihar and Rajasthan) with 58% of the total rural population and 54% of the cropped area get only 30%

1/ RBI, Regional Rural Banks, Report of the Review Committee, 1978.

of the agricultural credit. In West Bengal, Bihar and Orissa, per hectare credit is Rs 50-90 compared to more than Rs 200 in Kerala, Tamil Nadu, Punjab and Haryana. By all indications the development of commercial banks has been additive but has not helped to fill the geographical gap in the agricultural credit not covered by the cooperatives.

Table 3.9

STATEWISE DISTRIBUTION OF AGRICULTURAL CREDIT IN 1976/77
(Cooperative and Commercial Banks)

States	Rural Population (m)	Cross Cropped Area ('000 ha)	Institutional Credit (Rs m)	Credit per capita (Rs)	Credit per hectare (Rs)
Kerala	17.9	2,999	1,128.7	63	376
Tamil Nadu	28.7	7,648	2,332.5	81	305
Punjab	10.3	6,016	1,433.4	139	238
Haryana	8.3	5,150	1,103.5	133	214
A.P.	35.1	13,238	2,246.1	64	170
Karnataka	22.2	10,893	1,738	78	160
Gujarat	19.2	10,162	1,454.0	76	143
Maharashtra	34.7	19,486	2,429.5	70	125
	176.4	75,592	13,866.1	79	183
U.P.	76.0	23,006	2,272.7	30	99
H.P.	3.2	907	82.8	26	91
West Bengal	33.3	7,462	654.3	20	88
Orissa	20.1	7,315	496.3	25	68
M.P.	34.9	21,212	1,171.1	34	55
Bihar	50.7	10,767	553.2	11	51
Rajasthan	21.2	17,886	891.5	42	50
	239.4	88,555	6,039.1	25	68

Source: Reserve Bank of India.

3.71 The Draft Plan, like the Report of the National Commission on Agriculture recognizes that a substantial step-up in the volume of rural credit would be required to meet the growing needs of agriculture and rural development and projects an increasing share of credit to the weaker sections. In achieving these goals the main burden will be placed on the cooperative banks, operating through multipurpose and other cooperative societies. Commercial banks will, however, assume increasing responsibilities to supplement the efforts of the cooperative credit agencies, through their rural branches which are expanding rapidly and through the Regional Rural Banks. Commercial banks have now been asked to earmark one-third of their advances to the priority sectors and to deploy at least 60% of the deposits mobilized in rural areas or semi-urban areas for credits in those areas.

3.72 The expansion of rural credit to increase productivity and to help the poor households does not depend on the availability of finance only, but is a function of the improvements in the delivery of credit on the one hand and the promotion of demand for credit through rural development programs on the other. The fact that there exists unmet demand by the poor households even under present conditions is indicated, among other observations, by the results of the 25th Round of the National Sample Survey (July 1970-July 1971). According to this, of the total number of "weaker households" reporting possibilities of land development, 58% reported the need for a long-term loan for the purpose of land development but only about 8% of such households approached some agency for a long-term loan. Among those who applied, only 27% were hopeful of getting a loan. The reasons for showing apathy towards procuring loans were inadequacy of assets (44%), unhelpful attitude of the credit agencies (23%), and non-availability of credit agencies within their reach (14%). These as well as many case studies support the view that a great deal more can be achieved by improving the delivery channels to the poorer households.

3.73 Recognizing that the weakest links in the credit chain have been at the primary cooperative level, it is necessary to emphasize the importance of turning these agencies into rural development institutions which will have competent management and which will perform service functions including input supply, storage and marketing. In fact, there could be a greater chance of realizing a direct impact on the productivity of the poorer farmers if the primary cooperative societies concentrated as much on other activities as on credit so that lending policies should be geared to production programs and projects which would link credit with other important services required by the rural households.

3.74 To channel more credit to the poor, the Reserve Bank of India has stipulated that at least 20% of the District Cooperative Banks' outstanding borrowings from State Cooperative Banks should be advanced to societies for small and economically weak farmers. There are similar stipulations for relending the finance provided by the Agricultural Refinance and Development Corporation (ARDC). Such targets are only informally adopted by the commercial banks. Under the new guidelines, commercial banks will also have to raise the level of the loans they provide at subsidized rates -- the differential interest scheme -- to 1% of their total lending, which is expected to serve as an inducement to the small and marginal farmers. The Central Budget for 1979/80 announced the Government's decision to exempt the Agricultural Refinance and Development Corporation from income tax. This concession, together with other measures is expected to reduce the interest rate charged by this instititution by one percentage point.

3.75 A serious constraint to the viability and development of the rural credit institutions is the problem of overdues. Along with the increase in rural credit, overdues have risen steeply. This has been the case both in cooperative credit and the rural credit extended by the commercial banks. It is interesting to note that the Study Team on Overdues of Cooperative Credit Institutions, which made an analysis of the causes of overdues did not find much distinction between the repayment behavior of small, medium

and large farmers. They also concluded that high levels and consistent defaults could not be related to the district being "backward."

3.76 The provision of the total financial needs of rural households -- short-term and long-term, for investment, operational expenses, working capital and consumption needs -- is as important as increasing the amount of credit. Timely availability of credit, simplified procedures and dependability is crucial in any system that is to respond to the requirements of the poorer cultivators and other rural workers. Equally important is the creation of the awareness among the farmers of the availability of such facilities. There seems to be no easy solution to these problems and the progress so far has lagged significantly behind the needs. This is why non-institutional sources of credit have continued to play a dominant role in rural life. Farmers find such credit assistance to be dependable, timely, adequate and better tailored to their needs. Although the exploitive nature of the informal credit markets has often come under criticism, the dependence of the rural poor on these markets will probably continue for some time since these intermediaries operate not only in finance but also in land, labor and commodity markets, and since their delivery systems offer more flexible terms than those of the formal agencies. Efforts to eliminate the non-institutional agencies would not succeed and should not be pursued until formal credit institutions *can* offer similar services and accommodation.

3.77 Although improvements in credit delivery systems, and development of multipurpose institutions which combine various services for farmers with the supply of credit, can go a long way towards increasing productivity in agricultural activities and also benefit the small and even the marginal farmers, this will not be sufficient to reach the majority of the more vulnerable sections of the population for whom the creation of demand for credit is at least as important as the availability of credit. Projects and programs must be designed within which poor farmers or landless peasants can participate in a productive activity which in turn can be supported by credit. A successful example of such an approach is provided by the Indian Dairy Corporation (IDC) scheme. IDC supports dairy development through dairy cooperatives which, while they don't provide credit, do provide various services to members -- i.e., animal feed, veterinary care, attention, etc. -- on a cash payment basis (sometimes at subsidized prices).

3.78 In conclusion, the efforts by the Government to raise the share of institutional credit flowing to agriculture and within this, the share of the poorer sections of the rural population, is commendable. The increase in the supply of finance, however, has revealed more clearly the institutional weaknesses. Over the last decade, many problems in the delivery of credit for rural activities and poorer households have been identified and some institutional improvements have been accomplished. However, much remains to be done especially in restructuring the primary cooperatives so that they can serve as efficient agents especially for reaching the rural poor. But the success of reaching the rural poor through the credit mechanism will also depend on the success of specific rural development programs which again is more a question of organization than mere availability of finance.

3.79 Integrated Rural Development. Designing special programs for rural development is not a new idea in India. Comprehensive Community Development Programs were emphasized starting with the First Plan and since then several other large-scale experiments have been attempted. Among the better known programs initiated in the late 1960s and early 1970s were the Rural Works Program, the Crash Scheme for Rural Employment, and the Pilot Intensive Rural Employment Project. The Fourth and the Fifth Plans introduced even more ambitious programs such as the Drought Prone Area Program (DPAP), the Small Farmer Development Agency (SFDA), the Marginal Farmer and Agricultural Labor Agency (MFAL), and the Tribal Development Agency (TDA). In our Economic Report for 1977, we had concluded our discussion of some of these programs as follows: "While it is clear that these programs have far to go before they make a significant impact on a substantial portion of the small farmers and agricultural laborers, they have focussed attention on the rural poor and provided help to at least some of them. If they have not been more successful, it is a result not only of the programs' own weaknesses, but also of the complexities of the problem and the vast numbers involved."

3.80 It is into this complex and rather vaguely defined area that the Draft Plan attempts to introduce a new approach. The Plan argues that "experience of various rural development programs in the earlier plans has shown that a mere project approach or a sectoral approach is not adequate to lead to an overall development of the area and distribution of benefit to local population, particularly the weaker sections of the society." 1/ Therefore, an integrated approach is proposed which is distinguished from previous efforts by its emphasis on the formulation of area specific plans at the grassroots level. According to this, planning will be comprehensive, covering crop production, animal husbandry, forestry, fisheries, local industry, infrastructure and social services. Normally the area plans are to be prepared at the block level -- hence, the title "block-level planning" -- for production and employment components and at the district level for infrastructure. From the plan document it is not quite clear what the administrative and fiscal layers of responsibility and coordination would be. It appears that area planning is conceived as a frame in which several programs with their own budgets and management will be fitted.

3.81 The Draft Plan targeted that area planning would fully or partially cover 3,500 blocks by the end of the plan period and the remaining 1,600 blocks would be covered in the subsequent five years. By 1988, full employment would have been reached in 3,100 of these blocks. The strategy proposed choosing 2,000 blocks in the first year where one or more of the three major programs -- SFDA, DPAP and CAD -- were already being implemented and then add 300 blocks every year. According to the Draft Plan the funds for the special programs would continue as before but additional plan funds would be provided as the program picked up.

3.82 This new approach to integrated rural development has been fairly slow to get off the ground. Generous budgetary allocations during 1978/79 to intensify the SFDA, DPAP and CAD activities in selected blocks have not

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1/ Planning Commission, Draft Five Year Plan, 1978-83, p. 154.

been fully utilized and no area planning based on the new pattern has so far been initiated. The Working Group appointed by the Planning Commission to prepare the guidelines for block level planning has questioned the targets of the Draft Plan and has recommended that the effort start with 100 blocks instead of 2,000 in the first year (second year of the Plan) reaching 500 blocks at the end of the fifth year. This is a significantly slower pace than envisaged in the Draft Plan. The Working Group has also recommended that the components of all special programs operating in the selected blocks should be merged in the block level plans, and funds allocated to the special programs should be placed at the disposal of the block level planning authority. The need for strengthening district level planning which would have the responsibility of preparing block plans was also emphasized. So far, no progress has been made in establishing the implementing machinery; i.e., blocks for intensive activity have not been selected, district plan bureaus have not been established, voluntary agencies whose help would be sought have not been identified and the operational guidelines to the district and block authorities have not been furnished.

3.83 Thus, at the end of the first year of the new Plan, the contribution of the new approach to promoting or improving special rural development programs is not yet evident and the ideas about integrated or area-based planning have not been translated into action. Other than the Food for Work Program which was initiated in 1977 in response to rising food stocks, whatever efforts exist in the form of special programs consist of either the continuation of the old public schemes such as SFDA, MFAL and DPAP, or the isolated cases of successful programs launched by the States and other agencies. Under the Food for Work Program, the Central Government supplies free foodgrains to the States which are willing to provide some cash component and use these resources for generating gainful employment in the construction and maintenance of public works. The program has expanded rapidly, with the allocation from the Central Budget rising from Rs 200 million in 1977/78 to about Rs 1,000 million in 1978/79 and the foodgrains utilized rising from 127,000 tons to over half a million tons in the first nine months of 1978/79. Orissa, Bihar, West Bengal and Andhra Pradesh have large programs underway and the Food for Work Program has been dovetailed with the Employment Guarantee Scheme of Maharashtra and the Antyodhya scheme of Rajasthan.

3.84 We had discussed the encouraging start made by the Maharashtra Employment Guarantee Scheme in our last Report. This program is now offering employment to thousands of rural workers. Another successful experiment in rural development has been the dairy cooperatives in Gujarat better known as Operation Flood. Under this program, 1 million rural milk producers -- most of them from poor households -- have joined 5,000 dairy cooperatives which enabled them to market their milk efficiently. This program is now being replicated in several other States.

3.85 Two other experiments in rural development worth mentioning are the Antyodhya scheme in Rajasthan and the Comprehensive Area Development program in West Bengal. The Antyodhya scheme which was launched in 1977 makes a micro attack on rural poverty by attempting to help the "poorest of the poor." The poorest five families are identified in each village

and they are assisted in ways that fit their needs and skills: giving them house sites, land, credit for cattle and other means for upgrading their living conditions. Even modest pensions are included in the program for those families which do not have members at working age or health. Existing facilities such as surplus land under the ceiling laws, subsidized credit schemes, and the food-for-work resources are utilized in addition to the State budgetary allocation for financing the scheme. It is reported that 125,000 families have already benefited from this scheme.

3.86 The West Bengal Comprehensive Area Development Corporation -- attempting an integrated area approach which perhaps comes nearest to the model envisaged in the Draft Plan -- has been active since 1975 in 20 project areas in West Bengal. Two-thirds of the population covered consist of landless laborers and marginal farmers. Through improvements in irrigation, credit allocations, input distribution and better marketing facilities, commendable increases were reported in agricultural productivity. In addition, village industries were promoted and a system of stabilizing the prices of foodgrains (Community Grain Gola) was established to help the households which had only seasonal opportunities for farm work.

3.87 Broad Conclusions. Direct intervention by public or semi-public agencies for creating employment and reducing poverty is needed in the Indian context even if such programs have not produced the desired results in the past. Although at the surface, the failures in the past seem to be mostly due to administrative or financial constraints, there are more basic difficulties involved in implementing such programs which need to be recognized in setting the targets for the future. First, it is not always realized that direct interventions for employment creation or poverty eradication, no matter what form they take, usually involve redistribution of income or assets. Therefore, these programs can only succeed if the political weight is behind such explicit or implicit redistribution schemes. This is so whether the programs take the form of land reform, concessionary credit, minimum needs or rural public works. There are successful examples of direct programs which can generate higher incomes for the poor without involving a transfer but, realistically speaking, the scope of such achievements will be limited to the employment absorption through the normal elasticities of agricultural and industrial growth.

3.88 Secondly, in India where large agricultural estates are not prevalent and where wealth concentrations are not substantial relative to the extent of poverty, the redistribution involved in direct anti-poverty programs will not be always from the very rich, but more often from those who are of modest means such as the small and medium farmers and urban workers. This is why for such programs to succeed, the political support for direct intervention must depend on grassroot consciousness of the needs of the very poor relative to those who are less poor. Effective support can be sustained only if the beneficiaries of these programs are involved in the decision making process. Whether the land reform committees suggested in the Draft Plan, the reorganization of the cooperatives or the village government (Panchayati Raj) reform will be able to mobilize such a political momentum remains to be seen.

3.89 Thirdly, in the same sense that land reform, credit or rural development programs which aim at productivity increases alone cannot suffice to solve the poverty problem in the foreseeable future, these programs cannot afford to be pure transfer schemes either if they are to provide long-term solutions to poverty. The land distributed under the ceilings acts must be cultivated, allocated credit must be used productively, and rural development projects must yield added value. All these require efficient management which is in short supply. There are benefits to be derived, as stressed in the Draft Plan, from decentralized planning, integration of programs on an area basis and from using the voluntary agencies. However, as the experience of the first year of the new Plan as well as the earlier experiments have shown, decentralized initiatives, although very desirable, move at a rather slow pace, too slow to make an appreciable impact on the poverty problem.

Chapter 4

INDUSTRY

4.1 Indian industry recorded growth of about 8%-10% in 1978/79, about twice the average growth rate for the last decade, raising hopes that the long slump in industrial expansion may be coming to an end, and that a period of rapid industrial investment may ensue. In some subsectors -- cement, petroleum and petrochemicals, fertilizer, power -- a long period of rapid expansion and high utilization of capacity is clearly feasible. In the bulk of the industrial sector, however, the prospects are less clear and the pace and the pattern of investment will be determined largely by the decisions of private entrepreneurs reacting to profitability signals and government policies. The first section of this chapter will discuss briefly the context in which industry has evolved, while the second will explore the present investment climate in India and attempt an assessment of the various factors that weigh most heavily in private industrial investment decisions. The last section will be on the prospects for the small-scale and tiny sectors.

A. Industrial Context

4.2 India's sluggish record of industrial production and expansion since the early 1960s can be explained largely by the context in which industry must operate. India is an agricultural country with 80% of its would-be consumers living in the countryside. Most of them earn very low incomes and are out of reach of markets for manufactured goods except for very few items such as cloth and even these are demanded only in very small amounts. Between 1965/66 and 1975/76, the average annual growth of agricultural production was only about 3%, or little more than population growth. For the economy as a whole, the growth in this period was not much better (about 3.8% per annum) and the per capita gain was a bare 1.5% a year. This creeping pace of income growth with about half the population living on less than US$100 a year, can go a part of the way towards explaining industrial lethargy.

4.3 In the late 1950s and early 1960s, industrial investment, both public and private, was large and expansion was rapid. It was boosted by large government investments in industrialization, oriented towards heavy industry and import substitution. But the momentum of government investment petered out after the mid-1960s for well known reasons. Subsequently, government spending was not a buoyant source of demand, except briefly in the early 1970s, until the recent public investment revival since 1975/76. Import substitution investment has been a dwindling source of industrial demand as the economy has developed more and more capacity to meet manufactured requirements, and can provide little additional impetus. Imports of manufactures are now of only minor importance in relation to the size of the industrial sector although they are, of course, still significant in a few lines of production such as fertilizer and other chemicals, sophisticated machinery, aircraft and some petroleum products.

4.4 The export market, another potential source of industrial demand, has had a subordinate role in India's development strategy, although in recent years, increasing importance has been attached to it. The traditional export manufactures -- cotton and jute textiles -- have provided little stimulus in recent times partly because of intense international competition, especially from synthetic substitutes, and partly because of low productivity growth. Export development of non-traditional manufactures has lagged until recently because of the relative attractions of the domestic over foreign markets. This has been partly offset by various export incentives and aided by the downward float of the rupee exchange rate between 1972 and 1977. Non-traditional exports jumped sharply in this period. As yet, however, they are far short of a size to be a significant industrial demand factor in relation to the size of the industrial sector. Nor as yet is there much development of industrial capacity which is specifically oriented towards international trade in fields of India's comparative advantage. More typically, exports represent a small share of the output of most firms whose major interest is in the domestic market. Consequently, supplies for export depend mainly on the varying state of domestic demand.

4.5 Hence the pull on manufactured output from the usual sources of industrial demand -- rising incomes, public investment, ample opportunities for import substitution and expanding export markets -- has been weak and erratic over most of the period since the mid-1960s. In this respect the recent years from 1975/76 may be considered somewhat exceptional, and as a result, the industrial environment has improved considerably. Agricultural production jumped sharply in 1975/76 to a new record which has since again been surpassed in 1977/78 and probably again in 1978/79. Exports of non-traditional manufactures have also done unusually well with an average gain in dollar values during 1976/77 and 1977/78 of about 34% a year. This brisk expansion in non-traditional exports remains of small significance in relation to the total size of the industrial sector, but of somewhat greater moment as a contributor to the annual increase in value-added by non-traditional industries. Increasing remittances from Indians living and working abroad have also boosted income and industrial demand. Both exports and remittances have helped augment India's external reserves and ease the chronic industrial difficulty of inadequate access to necessary imports of equipment and raw materials. Finally, government investment has emerged from its lethargy of the early and mid-1970s to expand over the last four years at about 20% per annum in real terms.

4.6 All this might have been expected to arouse industry from its earlier doldrums. And it did, but in a very uneven way over the industrial sector and over time. As already noted, there was a jump in industrial production by 9.5% in 1976/77 but then the growth rate fell back to only 3.9% in 1977/78 and in 1978/79 revived somewhat to about 8%-10%. Within industry most durable goods, both capital and consumer, responded briskly, but non-durable consumer goods and especially textiles and clothing remained surprisingly slow. Textiles including jute weigh heavily in the index of manufacturing production and if they are removed, the index for other manufactured output grew more impressively by 12.5% in 1976/77, by 4.9% in 1977/78 and by 8.0% in the first seven months of 1978/79. Some other industries also lagged in production for special reasons: e.g., paper because of shortages

of capacity and some of the heavy engineering industries like railway equipment and large structurals which derived little demand benefit from the increase in government investment which was concentrated in industry and mining (mostly steel, coal, petroleum and fertilizer), agriculture and irrigation, and power.

4.7 Thus, aside from textiles and a few other exceptions, this period from 1975/76 can be characterized as "moderately buoyant" for industry as a whole in contrast to the fairly static industrial situation of the earlier 1970s, especially during 1973-75. The broad patterns of growth in industrial production by sectors over the period since 1974/75 are shown in Table 4.1.

Table 4.1

PATTERNS OF INDUSTRIAL GROWTH: 1974-78

Depressed or Slow Growth (Negative to less than 10%)	Moderate Growth (10% to 20%)	Rapid Growth (20% or more)
Textiles and Apparel	Wood Cork Products	Processed Food
Paper and Products	Rubber Products	Fertilizer
Leather	Drugs and Pharmaceuticals	Other Chemicals
Railway Wagons	Metal Products (except Machinery)	Basic Metallurgy
Passenger Vehicles	Commercial Vehicles	Cement
		Machinery
		Electrical Equipment
		Motorcycles, Scooters and Bicycles

Source: Ministry of Industry, Office of the Economic Advisor.

B. Industrial Investment

4.8 The improved industrial demand of the last few years and the higher than average level of output growth have raised hopes that a surge of industrial investment may be forthcoming in the near future, with accelerator effects on industrial growth similar to the government and private import-substituting investments of the early post-Independence period. But the response of private industrial investment has so far been slow and hesitant. The statistical picture of recent investment (see Table 4.2) is not as clear as it might be; it does however indicate in real terms a rather static private industrial investment pattern. Disregarding the 1975/76 aberration in the data of the Central Statistical Organization, the course, in real terms, of private corporate fixed investment was downward from 1972/73 to 1976/77 and finally began to turn up only in 1977/78. As yet, however, it is not clear that this revival has gone beyond the levels of the early 1970s. There are,

nevertheless, indications in the applications and sanctions of the term lending institutions that these improving private investment trends will continue into 1979/80.

Table 4.2

GROSS DOMESTIC CAPITAL FORMATION IN PRIVATE CORPORATE SECTOR
(at 1970/71 prices in Rs billion)

	Fixed Investment	Change in Stocks	Total Investment
1970/71	6.51	4.71	11.22
1971/72	7.72	4.67	12.39
1972/73	9.37	2.62	11.99
1973/74	9.15	6.26	15.41
1974/75	8.34	9.29	17.63
1975/76	11.29	2.44	13.73
1976/77	7.79	0.81	8.60
1977/78	8.21	1.36	9.57

Note: There is a large and fluctuating "errors and omissions" item included in the annual CSO estimates of gross domestic investment to reconcile them with the estimates of investible resources based on financial flows. If it were possible to allocate this "errors and omission" item among sectors, the trend in private corporate investment might be somewhat different than shown above.

Source: Central Statistical Organization.

4.9 The sharp decline in private corporate investment in 1976/77 and its slow recovery since then has raised the question once again of what are the major constraints being faced by private enterprises in their investment decisions. This has become especially important because in recent years actual private investment performance has been at variance with positive developments in the economy that could have been expected to elicit a more favorable investment response. These include rising agricultural and industrial output, higher national income, as well as an improved foreign exchange situation capable of alleviating the long-standing constraints on industry of insufficient imports of equipment and raw materials. We have made an effort to identify the major constraints to industrial investment as perceived by the private entrepreneurs. Needless to add, this does not constitute a complete account of these constraints, and some subjective evaluation as to the relative importance of different explanations is unavoidable.

4.10 In spite of the improved industrial performance, investment prospects still appear to be viewed in private industrial circles with some ambivalence, combining many aspects of optimism , caution, and hesitancy. Among the reasons for private investment hesitation there seems to be uncertainty over the outlook for the economy and for policies affecting private industry. The other reasons usually cited as restraining private investment -- shortages of essential inputs, unsatisfactory labor relations, investment financing difficulties, declining profitability and rising taxes, government restrictions, cost and price dislocations and dilemmas about modernization -- can be important at certain times and for some sub-sectors but do not seem to be major obstacles which the industrialists could not surmount if the long-term expectations for growing markets were firmly established.

4.11 Economic and Policy Uncertainties. Despite four years of high agricultural output and an ample foreign exchange cushion many industrialists are unconvinced that the future is bright enough to justify large long-term investment commitments. Obviously this is not a universal view and there are a number of substantial private investment possibilities at various stages of consideration. Nevertheless for many industrialists there remain persistent uncertainties which have been traditionally inherent in the Indian economy and which are consistently mentioned by manufacturers. Doubts are expressed as to whether a favorable demand situation and rising investment levels can be sustained considering the vagaries of Indian weather and harvests. The long-held belief seems still to persist, rightly or wrongly, that the "Indian Budget is a gamble in rains". Credibility was lost in the mid-1960s in the ability of the Government to sustain an ever-rising level of public and private investment and it has evidently not been restored. Hence conviction appears lacking so far that India has moved permanently up to a new and higher long-term economic growth path.

4.12 Beyond this rather general hesitation about long-term demand prospects, an ill-defined element of uncertainty about the course of policies appears to have a restraining influence on many investment decisions. The extent of this restraint is difficult to assess; it appears to reflect a concern about the future of the mixed economy, and this concern appears to result most directly from the public pronouncements by some government officials in favor of nationalization of certain industries. The concern is tempered, but not completely eliminated, by counter-arguments against nationalization by other officials. This policy uncertainty obviously introduces some element of additional caution and hesitancy in those industries most directly affected, but it does not amount to an outright inhibition to private industrial investment in general.

4.13 Shortages of Inputs. The most disturbing and seemingly chronic supply problem for industrial development is the inadequate and unreliable availability of power. In addition to constraining the utilization of existing industrial capacity, power shortages influence investment attitudes, primarily because the problem is expected to continue over the medium term. The power difficulties are partly attributable to variations in weather and their effects on hydro-electric generation. But the more intractable part of the problem seems to be in poor utilization of thermal capacity because of unsatisfactory maintenance and other deficiencies in the performance of

management, technical operation, and labor (see Chapter 5, Section A). Among industrialists, complaints about the adverse industrial consequences of power shortages are widespread with only few regional exceptions such as in Gujarat. Their effects on industry appear particularly serious in West Bengal, but only somewhat less so in several other States. In spite of the considerable improvement in the supply of power during 1978/79, industrialists are generally not convinced that the problem is nearing solution.

4.14 There are other frequent and intermittent constraints in steel and non-ferrous metals, cement, coal, paper, some chemicals, and agricultural raw materials. Most of these shortages can now be eased with India's enhanced import capability. Unsatisfactory rail service is frequently included among industrial complaints, especially for coal deliveries and for movement of other bulk products such a cement. There are some long-standing problems of railway operational efficiency but these are being improved and transport interruptions seem now to be less frequent and due to such special circumstances as floods and labor troubles.

4.15 Labor Relations. Strikes, indiscipline and absenteeism are regularly mentioned as reasons why industrialists hesitate to expand. The problem was especially difficult in 1977 when, with the termination of the Emergency restrictions, labor disputes rose from 1,459 in 1976 to 3,117 in 1977 and the mandays lost because of labor-management disputes jumped from nearly 13 million to more than 25 million. The relationships between labor troubles and investment attitudes seem quite diverse and are consequently difficult to assess. Discussions with entrepreneurs in Bombay and Calcutta have suggested much greater concern about labor relations in the former than in the latter even though in 1977 the number of workers involved and the mandays lost in strikes and lockouts in West Bengal was two and eight times respectively as great as in Maharashtra. This may be explained by past experience in which industry in West Bengal has long been used to a stormy labor front and, by comparison with the past, tends to look on the current labor scene as relatively peaceful. Labor disturbance in Maharashtra is a more recent and perhaps growing phenomenon and consequently of greater moment in investment decisions. Gujarat has had the most peaceful labor scene among the industrial States and this may be one explanation for the investment activity reflected in the much greater use in Gujarat of IDBI assistance than in any other industrial State. But if so, it can only be one among other explanations, and it seems unlikely that labor relations could itself be considered a major and direct obstacle to investment unless conditions were to deteriorate to say the levels of disruption reached in West Bengal in 1969 and 1970. Indirectly, unsatisfactory labor relations may be a more serious deterrent to private industrial investment in the considerable responsibility they bear for power shortages and disruptions and for unreliable railway service.

4.16 Financing. The funding of investments is almost invariably mentioned among the problems and constraints on private industrial investment. The problems seem less those of absolute shortages of funding for projects otherwise viable at the prevailing cost of capital, than the conditions on which such funding is available.

4.17 Available data point to an increasing dependence of private corporations on outside sources of financing in the course of the 1970s. This is partly a reflection of static or sagging profit rates, a subject that will be discussed in the next section. The other side of this coin of declining financial independence is an increase in the importance of institutional and private deposit resources in financing the private sector. In connection with longer-term financing it has been particularly the government investment institutions which have advanced to a position of near dominance. Table 4.3 shows how their gross sanctions of loans to the private sector (including the joint sector and cooperatives) have jumped since 1969-74.

Table 4.3

PRIVATE SECTOR SANCTIONS OF ALL-INDIA FINANCIAL INSTITUTIONS /a
(in Rs million)

	Private Sector	Joint Sector	Cooperatives	Total (Excluding Public Sector)
1969-74 (Annual Average)	1,741	252	192	2,185
1974/75	3,388	224	107	3,719
1975/76	4,012	387	370	4,769
1976/77	5,611	768	839	7,217
1977/78	7,159	1,898	545	9,602

Note: Inflation may distort comparisons of nominal sanctions, especially for the period 1969-75.

/a Includes Industrial Development Bank of India (IDBI), Industrial Finance Corporation of India (IFCI), Industrial Credit and Investment Corporation of India (ICICI), Industrial Reconstruction Corporation of India (IRCI), Life Insurance Corporation (LIC) and Unit Trust of India (UTI).

Source: IDBI, Operational Statistics, 1964/65 to 1975/76; Annual Report 1977/78.

4.18 The sanction figures, shown above, run of course well ahead of actual disbursements. Gross disbursements of the three specialized industrial financing institutions (IDBI, ICICI, and IFCI) have averaged about two-thirds of sanctions (for the private, joint and cooperative sectors) in the three years ending in 1977/78. 1/ Net disbursements (gross less repayments) of these institutions in this period averaged Rs 2,260 million per annum of which probably about Rs 2,000 million per annum was to the private sector.

1/ IDBI, unpublished tables.

By comparison the new capital raised by private corporations through public issues is small; in the same three-year period 1975-78 it averaged Rs 788 million per annum. 1/

4.19 The official lending institutions are not presently constrained in their availability of funds. Nevertheless, the policy and procedural requirements of these institutions are often mentioned as impediments to private investment. Most vocal are the objections to the unilateral rights of these institutions to convert a part of loans above Rs 2.5 million into equities at a pre-determined equity price stipulated in the loan agreement. The guidelines for the proportion of loans convertible to equity is a maximum of 25% of total equity except where there is already public institutional shareholding in a company, in which case the conversion option may be so adjusted so that total institutional holdings would not exceed 40% in the event of exercise of the option.

4.20 In the period 1970/71 - 1976/77 institutional loans to private borrowers with convertibility clauses amounted to Rs 2,331 million of which about 15% were subject to conversion. 2/ Few conversions had been exercised up to mid-1977. However, loan agreements usually delay exercise of the option until two or three years after project completion. Where the options had matured (up to June 1977) they were exercised in 36 cases and waived in 26. 3/ Experience suggests that the decision to exercise or not by the lending institutions is very much based on a straight financial assessment of where the advantage lies for the lender. 3/ The opportunity for government takeover does not appear to have played any part in motivating the exercise of the option.

4.21 The objections of potential borrowers to the conversion option are based on several grounds. One is the lengthy addition to loan negotiations over the terms of the conversion clause and especially over the conversion price. (The feeling seems fairly common, rightly or wrongly, that the conversion price is usually settled to the disadvantage of the borrower). Another is the fact that exercise of the option is entirely at the discretion of the lender and in accordance with the lender's advantage as he sees it. Finally there appears to be considerable concern, whatever the experience to date, that acquisition of substantial equity holdings by the Government through exercise of convertibility, can be a device for government takeover or at least for increasing government interference in private company affairs. Some industrialists insist that they would refuse to proceed with an otherwise viable investment project if its execution depended on an institutional loan with a convertibility clause.

1/ Reserve Bank of India, Report on Currency and Finance, 1977/78.

2/ U.K. Srivastava and M. Oza Nikhil, "Stipulation and Exercise of Convertibility Options by Financial Institutions", Economic and Political Weekly, November 1978, p. M-137.

3/ Ibid., p. M-141.

4.22 The extent and intensity of such feeling is difficult to assess. Undoubtedly, aversion towards the convertibility clause is higher in those firms in which government participation in equity holdings is already extensive. Possibly the convertibility clause may be reasonably regarded as a thorn in the side of the patrons of the term-lending institutions but, for most serious patrons with attractive projects to finance, not an intolerable thorn. It is not unusual in the financial world for major lenders to insist on board representation and a voice in company affairs. Of course, where this is the potential for major representation by the Government this must obviously become a more serious concern for borrowers. But worry over convertibility as a potential back-door entry for nationalization seems exaggerated.

4.23 Besides convertibility, there are other alleged problems for the borrower in dealing with the term-lending institutions. One is the insistence on debt ceilings in relation to equity in the interest of sound finance and reduced reliance on lending institutions. Another is insistence on minimum promoter contributions to capital in the interest of promoter acceptance of risk and of dispersion of entrepreneurship among wider numbers. These requirements appear to be administered with flexibility and while they tend again to prolong and complicate loan negotiations, they do not seem to be serious impediments to the financing of otherwise acceptable investment projects.

4.24 Profitability and Taxation. Profits and taxation are important considerations in the investment decisions of entrepreneurs. Data collected and processed by the RBI on the financial performance of private companies are utilized here as the basis for estimating trends in profitability. Discounting the impact of inflation on company accounts, there seems to have been a decline in profitability over time. The average rate of return (after taxes) on non-financial assets of medium and large private corporations fell from 7.0% in 1961/62-1965/66 to 5.2% in 1966/67-1970/71 and to 4.8% in 1971/72-1975/76. Part of this trend could be attributable to slower growth of sales which declined, in constant prices, from 6.1% to 4.7% and 2.8% per annum during these five-year periods. In the more recent period, the annual after-tax rate of return has progressively declined from 5.7% in 1971/72 to 4.7% in 1974/75 and then sharply to 3.2% in 1975/76. The decline in 1975/76 may have had an influence on the subsequent private corporate investment fall in 1976/77.

4.25 Higher taxation has contributed to the decline in rates of return. The effective corporate tax rate in profit-making companies increased from 44.0% in 1971/72 to 56.8% in 1974/75 and 67.9% in 1975/76. These trends are the result of two factors. Firstly, taxable income has been overstated as a consequence of inadequate accounting depreciation provisions which fail to compensate for the economic value of depreciation in current prices. The divergence between accounting and replacement value of fixed assets has progressively increased as a result of inflation. In fact, most of the increase in effective corporate tax rates between 1971/72 and 1975/76 can be imputed not to increases in the nominal rates, but to overstatement of current income for tax purposes. In profit-making companies, actual taxable income as a

percentage of corrected taxable income 1/ increased from 106.5% in 1971/72 to 113.2% in 1973/74 and accelerated to 122.2% in 1974/75 and 138.8% in 1975/76 due to higher inflation rates. Secondly, nominal tax rates have increased also, partly as a result of higher statutory rates and surcharges and partly on account of the lower utilization of fiscal incentives for investment. In effect, significantly higher corporate tax collections in very recent years do not seem to be primarily the result of higher statutory tax rates, but a consequence of the lower investment activity in the corporate sector (which induces lower tax deductions and hence higher overall tax liability) together with inadequate depreciation provisions which inflate the corporate tax base. 2/

4.26 Lower profitability and inadequate provision for depreciation have reduced the savings capacity of the corporate sector. The proportion of cashflow (defined as the sum of accounting after-tax profits and depreciation provision) to the replacement value of the non-financial assets of the firm (comprising fixed capital stock and inventories) has declined over time, from an average rate of 9.2% between 1961/62 to 1965/66 to 7.1% in the period 1966/67 to 1970/71 and 6.8% in the subsequent five-year period. This decline represents a reduction in the private corporate sector's ability to finance internally a given percentage growth rate of its real capital stock, a factor which may very well have contributed to the corresponding deceleration in the growth rate observed since 1965/66.

4.27 On balance the principal financial obstacle to private investment would appear to be in the sagging levels of real profit and of internal financing capacity. From the strict standpoint of raising financial resources, this handicap is surmountable by drawing on the resources of the public lending institutions. These could become tighter sources of funds if the recent upward movement of investment were to continue in a context of general monetary restraint but this seems unlikely. The more serious aspect of the sagging real profit levels is their effect on investment incentives. High taxes and the method of tax assessments are a consideration here although it may be difficult in view of fiscal circumstances to expect a significant reduction in company rates. One comes back again to the more serious culprit for sagging profits and weak incentives: the slow and uneven growth of the economy and the consequent unexciting or uncertain demand outlook of most manufacturers.

4.28 Government Restrictions. Among the numerous aspects of government regulation and administrative involvement with private industrial activity,

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1/ I.e., adjusted to reflect the economic depreciation of fixed assets.

2/ For instance, corporate taxes in 1977/78 were 31.6% higher than in the previous year, even though prices (as reflected by changes in the wholesale price index) rose only 5.1% over the same period. Probably less than half of the real increase in corporate taxes can be attributed to higher overall corporate income (the tax base); the rest reflects higher effective taxation rates due to lower investment activity in this period and inadequate depreciation accounting.

those which are most frequently blamed (along with high taxation) for inhibiting investment have included the comprehensive industrial licensing requirements; restrictions on large and dominant companies under the Monopolies and Restrictive Trade Practices (MRTP) Act and on foreign-interest companies under the Foreign Exchange Regulation Act (FERA); the sequestering of certain areas of the industrial sector as the preserves of certain categories of enterprises (e.g. the reservation of 807 commodities for cottage and small-scale industries); and formal and informal influence over industrial pricing.

4.29 Licensing requirements have recently been liberalized by increasing the annual limit on investment, below which it is not subject to licensing, from Rs 10 million to Rs 30 million for firms with gross capital of less than Rs 200 million. This should allow for considerable competition from middle-sized firms in any industry with attractive market prospects. The Government through several committees is considering further rationalization of industrial controls and regulations, which are frequently blamed for constraining competition as an engine of industrial dynamism. Rewards and penalties for efficiency and inefficiency have been dulled by the licensing system and government support or operation of firms of dubious financial viability ("sick firms"). Growth of large firms and foreign firms has been controlled, and the range of activity of individual firms has been circumscribed by product, regional and size classifications of industries into non-competitive compartments. These long-standing tools of industrial policy, which are designed to serve India's commitments to particular social objectives, have undoubtedly been a restraining influence in recent years on the industrial development of the larger private manufacturers 1/. The capabilities, experience and resources of these firms would have qualified many of them, if they were so inclined, to take the lead in such competitive technological change as was feasible even in the sluggish economic situation in the first half of the 1970s. They are eligible for licensing in the so-called "core-sector" which is a large and varied area of industrial activity; 2/ it would seem to offer substantial scope for large firms to modernize and expand, subject of course to license approval. Industrialists sometimes complain that reluctance to sanction growth of large

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1/ For example, firms of more than Rs 200 million of gross capital or which have a dominant market position (i.e. which supply a third or more of a particular commodity). These are called MRTP firms after the Monopolies and Restrictive Trade Practices Act of 1969.

2/ Reserve Bank of India Bulletin, December 1977, p. 824 describes this as follows: "Areas for large scale industry would be (a) basic industries which are essential for providing infrastructure as well as for development of small and village industries, such as steel, non-ferrous metals, cement and oil refineries; (b) capital goods industries for meeting the machinery requirements of basic industries as well as small-scale industries; (c) high technology industries which require large-scale production, which are related to agriculture and small-scale industrial development such as fertilizer, pesticides and petrochemicals; (d) other industries which are outside the list of reserved items for the small-scale sector and which are considered essential for the development of the economy such as machine tools and organic and inorganic chemicals."

houses delays licensing until obvious shortages develop. For example, the large sanctions for cement investment in the last year, if they had been made earlier, could have helped ease the present serious shortages.

4.30 Data are limited for comparing the performance of these large firms with industrial enterprises generally. An examination, however, of the 65 private companies (all of MRTP size) in the list of India's 100 largest public and private companies during 1971-1976, when compared with the Reserve Bank's annual survey of 1,650 private corporations, most of which are below MRTP size, suggests that the performance of MRTP-size companies was about the same as the Reserve Bank sample in annual growth of assets and somewhat better in growth of sales and in the ratio of operating profits to net assets. Neither group's performance, only moderately better than the rate of inflation, was particularly impressive. Perhaps but for MRTP, the larger firms might have done better; that better performances were possible is indicated by the facts that a third of the 65 largest firms increased their assets 20% faster than the average and ten doubled their assets in nominal terms in this five-year period. 1/

4.31 Within the industries where MRTP licensing is authorized, there seems little restraint where there is clear need for expansion beyond that contemplated by public enterprises. Examples are in fertilizer, cement, paper, commercial vehicles, some chemicals and non-ferrous metals, machinery and farm equipment. Of the 65 private (including foreign) firms listed among India's 100 largest corporate units, 41 had expansion programs underway or contemplated with favorable government consideration in the form of licenses or letters of intent. Without adjusting for inflation, data of IDBI show an increase in loans sanctioned to MRTP companies from an annual average of Rs 368 million during 1969-74 to Rs 554 million in 1975/76, Rs 759 million in 1976/77, and Rs 1,098 million in 1977/78. These sanctions in 1977/78 amounted to 16% of total IDBI assistance. Similar evidence of growth by large companies has been noted by the Sachar Committee 2/ which concluded that "the Central Government has been quite liberal in allowing expansion or the setting up of new undertakings". The Committee viewed with misgivings the fact that more than 90% of MRTP industrial license applications in the 3-1/2 years from January 1974 were disposed of without reference to the Monopolies Commission which had been established under the MRTP Act to advise the Government on restraining growth of economic power of large companies.

4.32 It is difficult to assess the evidence on the growth of MRTP companies. Table 4.4 presents data for 1972 and 1976. Although in nominal terms the growth of net assets, sales and profits before tax seem impressive -- reaching 62%, 81% and 48% respectively over the four-year period -- these growth rates are considerably reduced as soon as the inflationary trends in this period are discounted. For instance, the real level of sales of MRTP

1/ Such an increase is less significant in real terms because the wholesale price index rose by nearly 61% between 1971/72 and 1975/76.

2/ Report of the High Powered Expert Committee on Companies and MRTP Acts, August 1978, p. 251.

companies in 1976 seems to have been only 26% higher than in 1972. Profits before tax in 1976 appear to be only slightly higher than in 1972 once the effects of inflation are subtracted. 1/ In conclusion, as measured by the extent of growth of sales and profit, the available evidence does not support the view that the expansion of MRTP companies during the 1970s has been substantial, although they have not done worse than the average for the industrial sector as a whole.

Table 4.4

ASSETS, SALES AND PROFITS BEFORE TAX IN MRTP COMPANIES, 1972 AND 1976
(in Rs billion)

	No. of Under-takings	Net Assets			Sales			Profit before Tax		
		1972	1976	% Change	1972	1976	% Change	1972	1976	% Change
81 Industrial Houses	980	49.5	80.4	62.5	58.6	106.3 (73.9)	81.5 (26.3)	3.8	6.1 (4.2)	60.0 (11.4)
Single Large Undertakings	26	6.5	100.7	54.9	6.6	11.7 (8.1)	76.5 (22.8)	0.6	0.4 (0.3)	-25.5 (-48.1)
All MRTP Under-takings	1,006	56.0	90.5	61.7	65.2	118.0 (82.1)	81.0 (25.9)	4.4	6.5 (4.5)	48.3 (3.2)

Note: The numbers in parenthesis represent the estimated value of sales and profits before tax for 1976 at prices of 1972/73. The wholesale price index of manufactures has been used to deflate these data. The corresponding percentages represent the real rates of growth of sales and profits before tax respectively, over the four-year period. Data for net assets have not been deflated because they represent successive additions of rupees which do not have comparable purchasing power over capital goods.

Source: Department of Company Affairs, Press Release of February 5, 1979.

1/ The data on net assets are likely to be misleading on the issue of growth in MRTP companies since the concept does not refer to an annual flow but to a stock, for which in principle there is no readily available price deflator. Moreover, the data on net assets are constrained by accounting practices which fail to reflect the replacement value of fixed assets and their corresponding economic depreciation.

4.33 Assessment among industrialists of the inhibiting effects of the MRTP and FERA 1/ regulations on private investment vary considerably. On the one hand, there are firms which do not seem to have been constrained by the these regulations. On the other hand, some manufacturers complain that license negotiations tend to proceed with undue caution, deliberation and compromise, resulting at times in costly delays and in some cases pushing narrowly viable projects below the margin of viability. There is also the complaint that the MRTP net is cast unnecessarily wide by including all firms with Rs 200 million or more of gross assets. This, it is contended, is hardly measure these days of excessive concentration of economic power, especially since the definition is gross and takes no account of any company liabilities. Finally, there is the common complaint that the area of industrial activity open to MRTP firms (the so-called "core-sector") is too restrictive and limits investment activities that would be taking place if a wider range of industrial ventures were allowed.

4.34 The effect on investment, either for better or worse, of the reservation of large numbers of commodities (807) for production by the small-scale sector is difficult as yet to assess. The time since the effectiveness of this reservation has been short and the District Industrial Centers throughout the country to assist small-scale manufacturers are still in the establishment, organization and staffing process. The course and prospects of small-scale industry are discussed in Section C below. Generally, this emphasis of government policy does not appear to be regarded in the organized industrial sectors as a serious handicap to their development. Where the reservation for the small-scale sector impinges in some cases on existing large-scale enterprises there are provisions for exception as in the cotton textile industry, which will be discussed later. While recognizing the necessity for development of the small-scale sector in the interest of employment, there is some skepticism in industrial circles that response from small-scale suppliers will be adequate, that their cost (or real productivity) will be at a comparatively advantageous level for mass consumption products, and that there will be sufficient importance given to such crucial entrepreneurial functions as planning, organization, purchasing, design and marketing. This targeting of small-scale industry for separate development focus is also thought by some industrialists, e.g. in the automotive ancillary industry, to give insufficient weight to the inter-linkage between large and small-scale industry as a promising avenue for development of the small-scale sector.

4.35 Aside from the restrictions attributable to MRTP and the reservations for the small-scale sector, there is a wide variety of other controls over industry, which govern details of production, distribution, quality control, stocks, provision of information, channels of supply, and price. Few of these controls elicit serious complaint from industrialists comparable

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1/ Restrictions on the industrial activities of foreign companies are similar to those of MRTP companies and in addition they are required to reduce the share of foreign interests to 40% unless they are predominantly engaged in export-oriented or high-priority or high technology production in which case they may be allowed to retain up to 74% interest.

with their objections to high taxation, MRTP restrictions, prolonged negotiation with the term-lending institutions and the cumbersome administration of licensing and controls.

4.36 During the past year, the Government has introduced measures which have resulted in more attractive prices in several important industries such as cement, steel, sugar and textiles. However, in October 1978 there were still 21 commodities subject to statutory price regulation. In addition there is a far more extensive pattern of "informal" price controls which have been described as consisting in essence of "an administrative understanding between the Government and the industry concerned to maintain existing prices to the extent possible, and effect revisions only after obtaining the prior approval of the Government". 1/ The seriousness of price controls as an investment disincentive is not easily assessed and probably differs a great deal among industries. However, price inflexibility in the face of rising costs has led to an erosion of real profits.

4.37 The nature of the problem is illustrated by current efforts to expand the cement industry. Capacity has risen very little over the past ten years and a serious shortage has developed. At the statutory ex-factory price of cement prevailing in the recent past, it is generally conceded that expansion was not a viable investment because of the increased cost of cement making equipment in recent years. Cement prices have recently been raised in order to improve the profitability of investment. The response of industry to the new prices has been very favorable and a large investment program is getting underway.

4.38 Costs and Prices. In a number of industries, including cement and fertilizer, the high cost of capital equipment -- which it is contended has risen faster per unit of output than the price of the finished good -- is frequently mentioned as a deterrent to investment. This, it is argued, limits the competitive capability of a new firm in competition with an older firm with equipment purchased at a time when capital costs were lower and are depreciated at historical rather than replacement cost.

4.39 The frequency with which dislocation of capital costs and output prices is mentioned is something of a puzzle. According to detailed wholesale price indices, the increases in prices of capital goods over the past ten years are by and large not very different from the wholesale price index generally, which more than doubled between 1966/67 and 1976/77. There are of course exceptions, particularly in industries where output prices advanced slowly during most of the 1970s, as in the textile industry where costs of textile machinery jumped sharply in the mid-1970s while cloth prices lagged far behind. There are other such examples: zinc smelter project costs of capital per ton increased four-fold in the ten years 1967-77; fertilizer costs of capital per ton virtually doubled during the 1970s; paper costs of capital per ton have risen from two to more than three times since 1972; and in the

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1/ A. Dasgupta and N.K. Sengupta , Government and Business in India, 1978, p. 214-215.

same period capital requirements per ton for cement have also risen by two to two and a half times. It is however difficult to assess the importance of this factor as an investment deterrent in the industrial sector generally. Perhaps the main point is that since profits have fallen as indicated above, the capacity of firms to replace assets has declined.

4.40 On balance, one must reserve judgement about the seriousness of rising relative capital costs as an investment disincentive. It is certainly a disincentive for investment in new capacity in competition with older capacity which persists in viewing its financial state of affairs on the basis of depreciation at historical rather than replacement costs. This is difficult competition in the medium term but it is hardly a prescription for business longevity. This would seem to be a problem for further examination from the standpoint both of capital cost/output price dislocations and from the standpoint of depreciation practices, how they might be influenced and what fiscal implications might be involved.

4.41 Modernization. The pervasive obsolescence in the industrial sector would seem to offer wide technological opportunities for the modernization of Indian manufacturing. But the economic attractions of modernization are not always so clear and their clarity varies inversely with the buoyancy of demand expectations. There is, of course, a wide range of technological improvements up to the very latest of sophisticated equipment which can come under the heading of modernization. It can also imply modest improvements in technology which may be well suited to India's resource availabilities and requirements while still far from the "latest" to be found in many other industrial complexes. All that is implied here by modernization is some change in technology which reduces unit costs of production and usually increases output capacity. It may involve only the renovation and replacement as necesary of over-aged and worn equipment, such as characterizes about 90% of the cotton mills in Bombay according to one estimate. 1/ India's need, as far as domestic requirements are concerned "is not the most modern technology available, but a set of machines which represent appropriate technology under the existing social and economic conditions of the country". 2/ In some industries, there are government restrictions that limit the scope of modernization. For example, in textiles the number of looms in the mill sector has been frozen in order to encourage handloom expansion. In this context, the fairly modest modernization ambitions of one large mill operator consist mainly of replacing old non-automatic looms with conventional automatic looms. This would increase the output per loom of the mill at less cost and with less labor per unit of cloth; even such incidental displacement of labor would appear to run counter to current policy as it is actually administered.

4.42 In coming to such an investment decision the entrepreneurs in the textile and other industries have to consider the whole set of questions that bear upon the costs and the benefits of modernization. The benefits will depend not merely on cost savings at the previous output level, but more often on the availability of the markets for extra sales at lower prices. This

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1/ S.T. Sawant, "Textile Industry: A Trade Union View", Commerce, December 23, 1978, p. 44.

2/ Ibid.

in turn depends on the price elasticity of demand for the product as well as on the reactions of the competitors and the Government. When markets and elasticities are uncertain and when producers, in the nature of the market or through intervention of the Government, are in an oligopolistic position to resist or restrain the pace of modernization, this can and undoubtedly does inhibit the growth of private industrial investment.

4.43 Modernization is occurring although with a slow start and a moderate pace. In an effort to accelerate the process, the Government authorized in November 1976 a program of soft loans from the term-lending institutions (IDBI, ICICI, IFCI) at concessional rates and with advantageous conditions including exemption since November 1977 from the lenders' right to convert loans to equity). These loans are for modernizing investment in cotton textiles, jute, cement, sugar and specified engineering industries. The latter list was considerably extended in August 1978. Despite a slow start, interest in the Soft Loan Scheme has been accelerating with 132 loans sanctioned for an amount of Rs 1,754 million up to June 1978. Actual utilization of the funds has, however, been slow even after removal of the convertibility clause, and the total sanctions so far seem small by comparison with the vast magnitude of India's industrial obsolescence.

4.44 Such "bootstrap" development of the industrial sector needs support from outside the sector if all uncertainties of demand and market elasticities are to be perceived with the greater clarity that would emerge in a faster growth context. Such sources of demand support, as mentioned earlier, have to be found in the export markets, in government investment programs with adequate resource support and, given India's economic structure, in a more dynamic agriculture. In these respects prospects are encouraging. There is evidence that the recent favorable agricultural years reflect more than just a fortunate run of good weather; rather along with the good weather there has been spreading agricultural development into new regions and new crops, and advances in farm resources and technologies (see Chapter 3, Sections A and B). If these views of developing agriculture are sustained under less favorable weather conditions, the industrial demand and consequent confidence that could be expected to follow should dispel much of the economic doubt that seems now to restrain modernization, and reduction of obsolescence could be expected to be a powerful inducement for private industrial investment.

4.45 The prospects for private industrial investment have improved since the second half of 1977/78. Sales have increased in a broad range of industries. Excess capacity seems no longer to be the damper on incentives for industrial expansion that it was in the later 1960s and early 1970s. Pockets of surplus capacity still exist, especially in some of the engineering industries such as the metallurgical, heavy mechanical and light electrical industries. Some of these are geared to public transport expansion which has not figured large in the recent upswing. But in the event of a sustained spurt in the industrial sector, needs for additional capacity are likely to be substantial across most industries. Heavy industrial investment in modernization is also needed if the pervasive obsolescence which characterizes much of Indian industry is to be remedied.

4.46 The extent to which better opportunities will be translated into actual investment depends partly on government policies and on the response

of entrepreneurs to profitability signals. There are indications that the improved demand situation has led to higher profits. In this context, the availability of fiscal incentives that reduce the tax liability of investing companies may prove to be a significant stimulus to investment.

C. Small-Scale and Tiny Sectors

4.47 The policy of the present Government and the targets of the new Draft Plan place emphasis on the importance of the small-scale and tiny sectors in achieving industrial growth and providing employment. Current employment in unregistered (mostly traditional) industries is estimated at about 14 million persons and in modern small-scale firms at about 2.8 million. 1/ Employment in the government and joint manufacturing sector is about 1.9 million and in the private medium and large manufacturing sector about 2.5 million; in terms of people employed, therefore, the small and tiny firms are still extremely important, and an employment-oriented plan rightly places emphasis on preserving and expanding this employment base. Table 4.5 gives some perspective on the overall employment problem and the critical position that small-scale and traditional industries occupy in the government strategy for employment and promotion.

Table 4.5

TOTAL LABOR FORCE
(in millions)

	As on March 31		
	1961	1971	1978
Chronically Unemployed	1.4	3.6	4.4
Working Force, Agriculture	137.8	167.3	192.4
Working Force, Non-Agricultural	80.9	59.5	68.5
Recorded Employment	14.6	20.2	24.8
Other Activities /a	36.3	39.3	43.7
Total Labor Force	190.1	230.5	265.3

/a Derived as a residual equal to the difference between the non-agricultural labor force and those employed in recorded employment.

Source: Planning Commission, Draft Five Year Plan 1978-83.

4.48 The labor force will grow by about 30 million persons between 1978 and 1983. Assuming industrial growth of 7% per year, 3 million of these workers will be absorbed in recorded employment, i.e., public sector employment and formal sector manufacturing, trade, and service activities; 27 million will be absorbed in agriculture or in informal activities. Since agricultural labor markets are generally characterized by labor surplus during

1/ A small-scale firm is defined as one having investments (excluding land) of less than Rs 1 million, except for ancillary industries, where the size limit on investment is Rs 1.5 million.

Table 4.6

PRINCIPAL CHARACTERISTICS AND STRUCTURAL RATIOS BY SIZE OF CAPITAL IN 1975/76

Characteristics	Tiny Sector	Small-scale /a Sector (excl. Tiny Sector)	Large Scale	Could Not be Classified by Size	Total Factory Sector
No. of Factories (Nos)	33,596	20,778	6,149	11,182	71,705
No. of Employees (Th. Nos)	891	1,145	3,991	354	6,381
Fixed Capital (Rs million)	2,170	6,990	126,440	4,690	140,290
Fixed Capital plus Working Capital (Rs million)	6,150	12,930	179,640	5,600	204,320
Value Added (Rs million)	3,280	6,990	50,580	3,020	63,870
Structural Ratios					
A. Per Employee					
Fixed Capital (Rs)	2,435	6,106	31,680		21,987
Fixed plus Working Capital (Rs)	6,901	11,290	45,008		32,021
Value Added (Rs)	3,677	6,103	12,671		10,009
Emolument (Rs)	2,040	3,092	7,063		5,427
B. Ratio of:					
Capital to Value Added	1.88	1.85	3.55		3.20
Fixed Capital to Value Added	0.66	1.00	2.50		2.20

/a Factories with fixed capital of less than Rs 100,000 invested in land and building, plant and machinery at book value of assets during the year under survey have been classified under tiny sector. Those with fixed capital up to Rs 1 million have been classified as belonging to small-scale sector.

Source: Ministry of Industry, Office of the Economic Advisor, Basic Information From Annual Survey of Registered Industries, 1975/76 (mimeo).

most of the year, it is imperative that a large portion of these 27 million new workers be diverted to other activities, primarily in the small and tiny industrial sectors. The village and small-scale industries program has a target of 6.8 million full-time jobs created during the planning period: 3 million in small-scale industries, 3.5 million in handloom weaving and 0.3 million in power looms. For handlooms and small-scale industries, these targets imply employment increases of 81% and 108% respectively, in the five-year period. It also aims at creating 6.3 million part-time jobs in khadi and village industries, handicrafts and sericulture.

4.49 In addition to employment generation per se, small-scale industries are encouraged because of their assumed low capital-output ratio; if scarcity of investment capital is thought to be the main impediment to industrial growth, then faster output growth might be realized through investment in establishments with low capital-output ratios. Although it is easier to accept this argument when it is applied to traditional and cottage industries, where capital investment is typically very small, it is not so clear in the case of the factory sector. Even in the case of the traditional and cottage industries, the future expansion has to be seen within the constraints imposed by the markets for their products, and their own competitiveness.

4.50 Statistical comparisons of efficiency and labor intensity of tiny, small, and larger firms are made difficult by limitations in the sample of firms surveyed. The Survey of Industries (1975/76) covers only registered firms. Small and tiny firms which seek registration tend to be urban-based, import-intensive beneficiaries of capital subsidies and protective measures available to smaller firms. This bias in data could foster misleading conclusions, particularly regarding organized small industries: while tiny, traditional industries by definition use extremely labor-intensive methods, a range of alternative technologies exist for organized small firms. Registered surveyed small industries may well contain a high proportion of beneficiaries of product reservation, subsidized interest rates, and industrial estate programs. Each of these features has a tendency to reduce market incentives for efficient utilization of capital.

4.51 According to the data in Table 4.6, collected by the Survey of Industries in 1975/76, the ratio of total capital to value added was 3.55 for the large-scale sector and 1.85 and 1.88 for the small and tiny industries respectively, and the distribution of fixed capital was still more skewed. Fixed capital-output ratios were 2.5, 1.0, and 0.66 for large, small and tiny industries. Although wages in the small and tiny sector were much lower, roughly in line with productivity differences, the small firms do appear in aggregate to provide jobs at much lower cost, and to provide a rupee of wage income at lower cost. Emoluments per rupee of capital were Rs 0.30, Rs 0.27 and Rs 0.16 in the tiny, small and large sectors respectively. But this picture is distorted quite severely by the level of aggregation of the data. Many of the industries included have no small or tiny registered firms -- e.g., steel, petrochemicals and fertilizers -- and these are generally very capital-intensive industries. Among industries where tiny, small and large firms coexist, and where the policy decision in favor of small and tiny firms is therefore relevant, the picture is less clear. It can be seen from Table 4.7 that for most surveyed industries, the fixed capital-output ratio was lower for tiny firms than for large-scale firms but that small-scale firms

(i.e., assets between Rs 0.1 million and Rs 1.0 million) had, for some industries, higher capital-output ratios than the large-scale sector. To the extent that these comparisons reflect actual differences in the efficiency and labor-intensity of small and large firms in various subsectors (rather than biases in data), it would appear advantageous to emphasize promotion of and services to selected small and tiny industry groups which can be competitive while labor-intensive, rather than protect all small and tiny industries through general increases in subsidies and reservation.

Table 4.7

CAPITAL-OUTPUT RATIOS FOR SELECTED REGISTERED INDUSTRIES IN 1975/76

Industry	Tiny Sector	Small-scale /a Sector (excl. Tiny Sector)	Large Scale Sector	Total Factory Sector
Edible Oils & Fats (excl. hydrogenated oils) /a	0.41	0.57	1.25	0.60
Matches	0.24	0.93	0.51	0.45
Utensils & Cutlery /a	0.51	0.99	0.51	0.68
Hand Tools & General Handware /a	0.66	1.09	0.80	0.85
Textiles, Garments, Wearing Apparels, etc.	0.29	0.73	0.72	0.62
Electrical Apparatus, Appliances & Parts /a	0.79	0.96	1.57	1.39
Knitting Mills	0.30	0.62	0.72	0.51
Bakery Products	0.39	1.79	0.54	0.59
Rubber Products (excl. footwear tires and tubes)	0.67	0.90	0.67	0.74
Soap and other Toilet Preparations (incl. cosmetics, perfumes, toothpaste, shampoos, etc.)	0.36	0.65	0.49	0.51
Bicycles, Cycles, Rickshaws & Parts	0.82	1.35	0.78	0.91
Footwear (incl. leather, rubber and plastic)	0.49	1.81	0.33	0.51
Medical, Surgical and Scientific Equipment	0.60	1.04	1.33	1.19
Radio, Television, Transmitting and Receiving sets (incl. allied electronics equipment)	0.65	1.02	0.74	0.75
Stationery Articles	0.63	1.51	0.90	0.97
Watches and Clocks	1.11	1.01	1.24	1.21

Note: For the purpose of this table the capital-output ratio is defined as fixed capital divided by value added by manufacture.

/a Data relate to the year 1974/75.

Source: Ministry of Industry, Office of the Economic Advisor, Basic Information From Annual Survey of Registered Industries, 1975/76 (mimeo).

4.52 Government emphasis on small-scale and tiny firms is not new. The small-scale sector has been encouraged in a succession of plans and policy statements, and small-scale enterprises have been favored by several methods: absence of licensing requirements and other controls, reservation of subsectors for the small-scale sector, and a host of special programs for credit, technical assistance, hire purchase, etc. The current industrial policy and the Draft Plan expand on this long-term emphasis by adding to the list of industries where further investment in new capacity is to be made only by small firms, by increasing substantially the funding of small-scale industry programs, and by attempting to strengthen and streamline the institutional support for small-scale industries.

4.53 The Draft Plan includes a major jump in the share of plan outlays allocated for small-scale industries programs, from 1.3% in the Fifth Plan to 1.9%. Each of the major programs is to be expanded, as shown in Table 4.8. Each of the major programs has substantial institutional infrastructure already in place, and the new allocations are primarily for expansion of existing programs, or for unspecified additions to the activity of present agencies.

Table 4.8

PUBLIC SECTOR OUTLAY ON VILLAGE AND SMALL-SCALE INDUSTRIES
(Annual averages at 1977/78 prices - in Rs million)

	Fifth Plan		New Draft Plan Projections (1978-83)
	Final Projections (1974-79)	Actuals (1974-78)	
Handlooms	212	210	560
Powerlooms	7	4	12
Khadi and Rural Industries	304	329	780
Small-Scale Industries	427	318	970 /a
Industrial Estates	45	46	90
Handicrafts	63	39	114
Sericulture	63	50	140
Coir Industry	16	14	34
Total	1,137	1,010	1,700

/a Excludes Rs 120 million for Craftsmen and Apprenticeship Training.

Source: Planning Commission, Draft Five Year Plan 1978-83.

4.54 The handloom sector, for which the plan outlay is expected to increase by 167% in constant prices, can serve as an example of government efforts in traditional industries. Firstly, reflecting the heavy emphasis given to employment in the traditional sector, employment in handlooms is expected to increase by 3.5 million persons during the plan period from its

present level (plan estimate) of 5.7 million persons. 1/ This will require, according to the analysis of the Planning Commission, a more rigorous control on diversion of materials from the handloom to the powerloom subsector, and a virtual reservation of coarse cloth and lower medium count cloth to the handloom sector. In terms of aggregate growth in textiles only the handloom sector would expand its output significantly during the plan period.

4.55 If the employment targets for the handloom sector could be achieved, they would represent a quantum jump in low-paid, perhaps largely part-time, labor. At present relative prices for inputs, handlooms are approximately competitive with powerlooms and can produce low count cloth cheaper than mills. But these relative prices include an excise of about 5% of cost for the mill and powerloom sector and huge differentials in wages: rupees 26, 7 and 3 per day for mills, powerlooms and handlooms respectively. To stimulate handlooms at the expense of powerloom or mill expansion is thus to opt quite consciously for more employment rather than for more-highly-paid employment. Under the new textile policy, which has eliminated the requirement for production for the controlled cloth scheme, a system of differential excise on the mill and powerloom sector, and subsidies for handloom cloth, is proposed in order to encourage the diversion of market growth to handlooms. This device can introduce a wider relative cost difference in favor of handlooms, and probably stimulate employment, but it is not likely to affect relative wages appreciably.

4.56 In addition to fiscal and control devices, the government agency at the all-India level (the Handloom Commission) and several of the State handloom boards are undertaking major new programs to upgrade the productivity of handlooms and the quality of output, aiming at new markets, primarily export markets. These new programs are expected to cover about 220,000 weavers within a short time period, i.e., about 5% of the full-time employment in handlooms as estimated in the Draft Plan. Typical programs include captive spinning mills, specialized dyeing and finishing arrangements, loom improvements, including provision of larger more efficient and versatile looms (sometimes in centralized sheds), training and extension, and some arrangement for quality control and marketing. A few experiments have already begun with elements of these planned programs, usually excluding spinning and substituting procurement of special yarns, with mixed results. It appears to be possible to produce a competitive export product with wages as high as 7 to 10 rupees per day, i.e., 100% to 200% higher than the average handloom earnings and comparable to earnings in the powerloom sector.

4.57 The main problem areas in the programs, besides the start-up organizational problems, appear to be the related ones of quality control and marketing. At present, marketing responsibilities are shared by a host of agencies, none with an effective mandate or close associations to the emerging production programs. Quality control is a very difficult technical problem because decentralized processing will be hard to supervise. At the same time

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1/ Since a large proportion of handloom work is part time, and all statistics on the industry are poor, employment estimates vary from 10 million persons (Handloom Commission) to the 5.7 million persons estimate of the Plan.

it will be difficult for a public promotional agency to use semi-automatic market tools such as a high rejection rate. If these problems can be solved, the possibility of opening major avenues of employment for the export market appear good. The Handloom Commission estimates that as many as 30% of handloom weavers could be readily trained and upgraded to produce export quality output. The Draft Plan does not specify how much of its employment target will be met by exports, but even at the 1977/78 export level (Rs 2,100 million) employment for the export market may be of the order of 100,000 full-time employees.

4.58 The export-oriented handloom program is but one of many examples of possible programs that could have an employment impact on the firms that are assisted with little concern arising that this is merely a diversion from other firms. Several other programs have a potential effect on exports, in markets that are far from saturated. Examples include the leather industry modernization program (tanning, finishing, and leather products) of the Development Commission for Small Scale Industries and the leather programs of the Khadi and Village Industries Commission (flaying and tanning of hides). Similarly a wide range of small-scale engineering industries have shown a capacity to export, and well-defined programs to improve efficiency and productivity can stimulate more firms to enter the export market. Marketing programs -- including export marketing, sub-contracting and joint marketing -- are underdeveloped compared to production programs, however, and they are typically undertaken by unrelated institutions, as in the handloom industry.

4.59 There is an explicit recognition in the Draft Plan that the institutional organization of all major small-scale industry programs is weak. This is partly the result of many parallel programs with the chain of command stretching from villages to a central institution in Delhi; each organization is generally too thin on the ground to be fully effective. Further inefficiency results from overlap at the State level of still other parallel institutions with terms of reference to assist small industries. To solve the general problem of weak and overlapping institutions with poor local knowledge, a major new program, the District Industries Center Program, has been started as from 1978/79.

4.60 The basic idea of the District Industrial Centers (DICs) is to establish for each of the 400 districts in India, having an average population of 1 to 2 million persons, a single center for the planning and coordination of assistance to industry. Each of the DICs will be staffed by about 10 professionals, with supporting staff. (246 DICs are already established and partially or wholly staffed.) The Centers will be under the direction of the Ministry of Industry's Development Commission for Small Scale Industries (DCSSI), and staff will come partly from the existing field staff of DCSSI, partly seconded from other institutions such as State Industrial Development Corporations, State Finance Companies, Small Scale Industry Corporations, Khadi and Village Industries, and branches of State Banks, and partly from new recruitment. The staff of each Center is expected to include persons with training and experience in each of the major relevant disciplines -- management, marketing, engineering, production processes, etc., -- and may include specialists on the main industries of the district.

However, considerable staff training is required as many of the more qualified and experienced staff may resist relocation to relatively remote districts. The budgets of the Centers will be primarily for administration; they are not expected to finance major investment or modernization programs, but rather to effectively identify and plan activities for the other agencies, from which most of their staff is seconded, and to advise the existing or potential small-scale industrialists on how to use the various government programs. Eventually they should operate as actual clearing houses for government programs, so that by contacting the DIC an industrialist could get clearances, approvals, financing, technical assistance, etc., as available within the district from any of the Government's industry programs. This would necessitate considerable delegation of authority from pre-existing institutions or, at a minimum, very close and effective communication of all of these through the DIC. The success of the DICs will depend on how well they perform this function. It does not appear than any immediate reduction in the number of government agencies in the field is to be expected. However, it would be useful if the number of clearances and approvals were reduced while attempting the DIC experiment.

4.61 The DICs have other potential functions in addition to their clearing house role. Acquisition of local industrial intelligence and the establishment of local industrial development priorities may be improved by combining under DIC direction the scattered statistical and planning work that each of the agencies does in the district. The centralization of the lower level intelligence and planning in the same institution that is charged with the coordination of the local field work of the industrial agencies could lead to more effective implementation. A feature of the DICs which figures importantly in the philosophy of the Draft Plan and in the justification for DICs, is their anticipated ability to evaluate and analyze local effective demand for the products of small-scale and village industries and to encourage, assist and finance with a minimum of red tape, adaptation of the product lines of small-scale industry to meet these demands. However, all of these secondary tasks of the DICs will depend on their success in negotiating with other agencies to secure a clearing-house function so that they can actually deliver the goods to small-scale and tiny industrialists. Where they fail in the negotiations, the DICs could easily become yet another level of bureaucracy of marginal usefulness in the small-scale industry support system.

Chapter 5

POWER

A. The Current Situation

5.1 The power sector in India has grown rapidly: capacity has increased from 2,300 MW in 1951 to 26,000 MW at the end of 1977/78. There are now roughly 28,000 circuit kilometers of transmission lines at and over 200 KV out of a total of over 1 million circuit kilometers of transmission and distribution lines.

5.2 The sector has become a sophisticated and complex part of India's basic infrastructure. As a concurrent subject under the Constitution, power is the joint responsibility of the Centre and the States. The Department of Power in the Ministry of Energy is responsible for national policy in the sector. The Central Electricity Authority (CEA), a separate statutory body, reports to the Department and acts as its technical arm in most matters. The Department of Atomic Energy is responsible for commercial nuclear policy and for planning and establishing all commercial nuclear power plants. The Atomic Power Authority, reporting to the Atomic Energy Department, is responsible for operation of all nuclear power plants in the country. The 18 State Electricity Boards (SEBs) are the principal agencies within their respective States that own, operate and develop the power systems in the States. In addition, there are three major private licensee utilities that both generate and distribute power, and a number of smaller licensees, both public and private, that are distribution agencies only. The Centre has established two new generation corporations (the National Thermal and National Hydro-Electric Power Corporations) to carry out the Central program for the development of large projects which will benefit more than one State. The Rural Electrification Corporation is a specialist financing institution, established at the Centre to lend funds to the SEBs for the development of rural electrification schemes. Finally, and somewhat unlike the rest of the sector's organizations, are the Regional Electricity Boards (REBs), associations of their constituent SEBs, established by executive sanction with small secretariats seconded from the CEA and the SEBs; their purpose is to facilitate the integrated operation and development of the State power systems within their respective regions. The sector employs over 600,000 regular staff throughout India.

5.3 As electricity demand has grown, its structure has changed (see Table 5.1). Among sectors, the most pronounced shift has been towards agriculture, where growth has been very rapid from a small base. Part of the effort to develop rural areas has been to extend the rural electrification network as fast as possible. The percentage of villages receiving electricity from the grid has increased from 0.5% in 1950/51 to just over 38% in 1977/78. The number of pumpsets electrified has risen over the same period from 21,000 to over 3.3 million, that is at an average annual rate of 21%. Evidence from the census shows also that the proportion of rural industrial establishments using electricity increased from only 1.2% in 1960 to 5.4% in 1970.

Table 5.1

TRENDS IN ELECTRICITY CONSUMPTION AND POWER CAPACITY

	1960/61	1970/71	1977/78	Annual Growth Rate (%) 1960/61-1970/71	Annual Growth Rate (%) 1970/71-1977/78
Consumption (GWh)					
Utilities: Industry	9,696	29,579	43,032	11.8	5.5
Agriculture	833	4,470	9,930	18.3	12.1
Other	3,424	9,675	16,001	10.9	7.5
Non-utilities /a	1,656	5,384	7,400	12.5	4.6
Total	15,609	49,108	76,363	12.1	6.5
Capacity at End of Year (MW)					
Utilities: Hydro	1,917	6,383	9,957	12.8	6.6
Thermal	2,736	7,906	12,612	11.2	6.9
Nuclear	-	420	640	-	6.2
Non-Utilities (captive)	1,001	1,562	2,310	4.6	5.7
Total	5,654	16,271	25,519	11.1	6.6

/a Generation

Source: CEA, Public Electricity Supply All India Statistics, General Review (various issues).

5.4 There has also been a shift in consumption among the regions. The Northern and Western Regions together accounted for 45% of total consumption in 1960/61; by 1975/76, their share had risen to 55%. The Eastern Region's share dropped from 28% to 19% over the same period. This shift in consumption has been matched by a similar shift in generating capacity, its development being more rapid in the Western and Northern Regions than the Eastern Region. It is no coincidence that industry has grown vigorously in the Western Region in the last several years, while it has stagnated in the Eastern Region.

5.5 Since 1970/71, growth has not kept pace with demand: the annual average growth rate of capacity was 6.6% between 1970/71 and 1977/78 compared with 10.3% in the previous two decades. Investment in transmission and distribution has also lagged. Shortages of electricity became chronic and widespread, with serious impact on the economy at large toward the end of the Fourth Plan. The official estimate of shortage, developed to monitor this situation, has in more recent years (1974/75-1977/78) varied between 6% and 15%, and, for the first three quarters of 1978/79, 10%. Among the major regions, the absolute deficit has been greatest in the Northern Region where it was 19.6% in 1977/78. (As a percentage, the deficit was greater still in

the Northeastern Region -- 27% in 1977/78 -- but the consumption in the northeast is a small proportion of the total in India). Because of the level and frequency of unscheduled load shedding in West Bengal and Bihar, the Eastern Region has also been seriously affected.

5.6 In a situation of capacity shortage, it becomes a matter of high priority to utilize existing generating capacity and to reduce system losses to the fullest extent possible. The average rate of thermal capacity utilization has been roughly 50% in recent years. This is partly explained by the level of outages that are caused by inherent problems of using high ash content and abrasive coal in thermal stations to generate power, which are beyond the direct control of sector management. It is also partly explained by the rapid rate of growth of the system, since there are always a relatively high proportion of thermal generating plants coming on stream which face teething problems. Nonetheless, there is undoubtedly room for improvement in operating and maintenance policies and procedures. System losses have risen from 14.7% in 1965/66 to a plateau of roughly 20% over the last six years. This reflects the inherent costs of reaching the expanding low density and seasonal agricultural load and more importantly, under-investment in transmission and distribution relative to generation.

5.7 Undoubtedly a contributing factor to the present scarcity has been the high rate of growth of demand for electricity in relation to the rate of economic growth. The crude elasticity relating electricity use to GDP was 2.7 between 1970 and 1975 compared with 2.0 and 1.4 in such countries as Indonesia and Pakistan, and the much lower elasticities of developed countries (typically close to 1.0). While electricity consumption per capita is of course still very low, consumption is in fact rather high in relation to GDP: in 1975 it was 1 KWh per US dollar compared, for example, with 0.3, 0.7 and 0.9 KWh per US dollar in Sri Lanka, Brazil and Pakistan respectively. Indeed, the level of electricity consumption in relation to GDP in India is comparable to that of developed countries.

5.8 This high rate of increase and high level of power intensity reflects the rapid rate at which electricity has been substituted for other forms of energy as well as the pattern of development and choices of technology that have been adopted in India. The replacement of bullock effort and diesel energy by electricity for irrigation pumping has been a conscious policy of the Government for many years. The development of heavy, power-intensive industries has necessarily required a rapid increase in the availability of power in the country.

5.9 Industry is relatively power intensive both because some power-intensive subsectors are disproportionately large and because in other subsectors the relationship between electricity use and value added is unusually high. Some of the more power-intensive industries have grown particularly rapidly (see Table 5.2). Production of aluminum has averaged a 16% annual growth between 1960/61 and 1976/77, almost four times faster than the industrial sector as a whole. Power consumption in aluminum manufacture has risen by roughly 15% per annum during this period, compared with 9% per annum for industry as a whole. Fertilizers should also be

singled out as a very power-intensive industry, where production has grown by 19% per annum over this 16-year period and electricity consumption by close to 15% per annum. Thus, while there has been a decline in electricity use per unit of production in both aluminum and fertilizers, their rates of growth have been so high as to contribute significantly to the increase in electricity intensity of industry as a whole. The consumption of electricity in chemicals has also risen rapidly, but statistics are not available on the growth of production over this period. Cotton textiles also warrant a mention since growth has been rather slow -- 1.4% per annum in terms of final production -- but electricity consumption has risen by almost 6% per annum. This reflects, among other things, a change in the composition of textile products being manufactured as well as a substitution of electricity for steam to provide prime mover energy.

Table 5.2

GROWTH IN ELECTRICITY CONSUMPTION IN MAJOR POWER CONSUMING INDUSTRIES: 1960/61-1976/77
(% per annum)

	Electricity Consumption	Production
Aluminum	14.7	16.4
Iron and Steel	7.9	6.0
Cotton Textiles	5.8	1.4
Fertilizers	14.7	18.9
Chemicals	13.6	n.a.
Cement	5.9	5.5
Paper	6.2	6.0

Sources: 1. CEA, Public Electricity Supply all India Statistics, General Review (various issues).

2. Government of India, Economic Survey (various issues).

5.10 The power intensity of industry--and the economy as a whole--is partly the result of direct decisions of the Government to develop particular sectors with particular technologies. But this is an incomplete account: tariffs have undoubtedly been low and this may provide an explanation of electricity intensity in the private sector. Though the exact extent or speed of response is not known, it is a reasonable hypothesis that the rate of increase of demand would fall if tariffs were raised. Electricity costs are certain to be one factor that affect choice of product and technology in the private investment decision, so that even if tariff responsiveness is low in the short run, in the long run there will be an impact on demand.

5.11 Tariffs are in fact low in relation to long-run marginal costs. The evidence of a number of State studies and of the overall cost of the Draft Plan investment program for power suggest this is true. The discrepancy between the financial and marginal costs is partly the result of past inflation and partly of the differences in methodologies for estimating financial and economic costs. Although a thorough going system of marginal-cost pricing is probably out of the question, the costs of system expansion and of operating the system are a useful guide to the general desirable level of rates. This easily allows for special tariff treatment for promotion of particular activities. Agricultural tariffs in particular have been intentionally held at a concessional level in relation to marginal costs which are higher than average in low-density, rural areas in pursuance of the Government's development goals. But average tariffs have also fallen in real terms in the last two decades, as the wholesale price index has risen faster than tariffs (see Table 5.3). Moreover, electricity tariffs have fallen behind other commercial energy prices. Since coal is a major cost component in electricity generation, the implication is that electricity tariffs were probably closer to marginal costs in the past.

Table 5.3

TRENDS IN ELECTRICITY TARIFFS AND REFERENCE PRICES

	Indices			Annual Increase (%)	
	1961/62	1970/71	1977/78	1961/62-1970/71	1970/71-1977/78
Electricity	66.6	100.0	181.4	4.6	8.9
Coal	59.6	100.0	197.6	5.9	10.2
Petroleum	71.8	100.0	785.2	3.7	34.2
Wholesale Price Index	55.2	100.0	185.6	6.8	9.2

Sources: 1. Reserve Bank of India, Bulletin (various issues).
2. Fuel Policy Committee Report, 1974.

5.12 Shortages of electricity are particularly damaging, because, unlike shortages of most other inputs, they cannot be made up in the short run by drawing down reserves or by importing. After non-essential uses have been cut back, production must slow down. Shortages fall most heavily on the industrial sector, which uses 66% of the electricity delivered, because it is the easily controlled industrial load that is usually reduced first. Many firms have found it essential to invest in captive generating sets. But since these sets deliver electricity at many times the cost of that supplied by the grid, this investment is a major misallocation of resources from the national viewpoint. More importantly, industrial output has suffered. The effects are difficult to estimate because shortages of other inputs and a periodically

weak demand situation have complicated the issue, but the impact of power shortages is clearly substantial. With average shortages for the last few years running at between 6% and 15% shortfalls to the industrial sector have been proportionally higher. Assuming that all the shortfall is borne by industry, the extent of the industrial shortages was as shown in Table 5.4. The net effect on industrial output in the years of greatest shortage could easily have been on the order of a 10% reduction below what it might have been with adequate power. 1/ The effect of electricity shortages on agricultural production has been comparatively minor, since in most States agricultural supply (13% of total use) is largely protected as a matter of policy.

Table 5.4

ESTIMATED IMPACT OF RECENT POWER SHORTAGES ON INDUSTRY

	1974/75	1975/76	1976/77	1977/78
1. Electricity Shortage (%)	14.1	10.3	5.8	15.5
2. Shortage Faced by Industry (%)	21.4	15.7	8.8	23.6

Source: World Bank estimates.

5.13 Shortages are symptomatic of many basic problems in the power sector. The weak state of finances common to most of the SEBs, problems of planning and implementing new projects and operational problems have all contributed to the present situation. Further, in a federal system, solutions often require joint action by the Centre and a group of States. When shortages are pervasive the impetus towards these solutions is obviously greater, but in such matters as the exchange of power between States it becomes critically important that the arrangements are seen to be fair and mutually beneficial. These problems have received due recognition in the power sector for some time, but the solutions are evolving only gradually. The reason for this is partly inherent in the fact that power generation is capital-intensive and new investment is expensive and long-gestating.

1/ This crude estimate has been derived using the historical growth rates of industrial production and power. For every 1% increase in industrial output, power consumption has increased by about 2%, so shortfalls in power availability on the order of 20% would (if the historical elasticity is reversible) result in reductions from potential industrial output of about 10%.

B. Medium-Term Outlook

5.14 In the Draft Plan, the unrestrained growth of demand for electricity is forecast to average 8.4% per annum 2/ over the next five years or so and 10.0% per annum thereafter until 1987/88. These growth rates are somewhat below the observed long-run trend of 10.3% per annum (1951-1976/77), and no doubt reflect the structural change (towards less power-intensive activities) which the Draft Plan envisages in the rest of the economy. However, that factor is unlikely to outweigh the increase in the economic growth rate and unrestrained demand may grow somewhat faster in the next five years at perhaps 10% or so annually.

5.15 For this reason, the expansion of capacity envisaged in the Draft Plan of roughly 18,500 MW -- from 26,000 MW in March 1978 to roughly 44,500 MW by March 1983 -- may be conservative (see Table 5.5). Moreover, it would have been desirable in formulating the investment program to make allowance for the following considerations: the uncertainty of the demand forecast (to be somewhat liberal is prudent in a sector where shortages cannot be made up at short notice); the lumpiness of investment; and the inevitable (though unidentifiable) lag in some of the projects that comprise the program. These considerations suggest that a target closer to 22,000 MW would be appropriate, in the expectation that some 21,000 MW would actually be commissioned. This would require an average increase in capacity of 4,000 MW per annum.

5.16 In the past, plan targets have proved elusive. While the Draft Plan target may be lower than is needed, it still represents a substantial increase over past levels of investment. The most that the SEBs have been able to achieve over a sustained period was to commission an average of 1,800 MW per annum in the first four years of the Fifth Plan. In 1977/78, installed generation capacity increased by 1,957 MW, and in the first nine months of 1978/79, by 1,700 MW. In the present transmission program the high voltage component, while it has already made some progress, may prove difficult to implement in its entirety without any delays. Against these considerations, the domestic heavy electrical equipment industry has now become internationally competitive and is itself expanding to meet the great bulk of the equipment needs of the power sector, including the provision of bigger sets, the first of which have been successfully installed. The implementation capabilities of the SEBs -- now supplemented by those of the two national generation corporations -- are also developing, so that achievements in the range of the plan target may in fact be within reach. Since the program is bunched towards the end of the new plan period, it will be essential to manage project implementation efficiently and avoid lags if the target is to be met.

1/ The Draft Plan, which relates observed consumption in 1977/78 to forecast consumption in 1982/83, gives a figure of 10.8% per annum; 8.4% per annum is the growth rate that relates estimated unconstrained consumption in 1977/78 to the plan forecast in 1982/83.

Table 5.5

PLANNED INCREASE IN INSTALLED POWER CAPACITY
(in MW)

	Installed March 1978	Planned March 1983	Addition Between 1978 and 1983
Hydro	10,016	14,655	4,678
Thermal	13,058	25,881	12,614
Nuclear	640	1,565	925
Total Utilities	23,715	42,101	18,217
Non-utilities	2,225	2,525	325
All India	25,940	44,626	18,542

Sources: 1. Planning Commission, Draft Five Year Plan 1978-83.
2. Ministry of Energy, Department of Power.

5.17 Financial resources may well be a constraint, both for the SEBs and in the larger context of the Central and State plans. The Draft Plan calls for an increase in real terms of 123% in the average annual level of outlays for power over the level of the Fifth Plan. In the past, while outlays in nominal terms have been greater than plan projections, physical achievements in terms of capacity installed and electricity generated have been well short of plan targets. Therefore, unless the efficiency with which resources are used is improved, even the large rise in outlays for power projected in the Draft Plan might prove inadequate to implement the physical programs. This is of course a long-run problem in that it has affected the power sector for a long time, and a complete solution will take time to develop. But if allocated resources are insufficient to meet investment costs in the short run, tariff increases will probably be needed to cover the gap in finances. 1/

5.18 It should be possible to ameliorate both the finance and perhaps more importantly the supply situations by extra efforts to improve efficiency in operations. But our assessment of capacity needs -- following the assumptions of the Draft Plan in this respect -- does in any case assume some improvements will be realized. Therefore, the prospect of shortages persisting for the next few years cannot be ruled out.

1/ As the financing plans are normally worked-out, the internal generation of funds by SEBs is simply deducted from total investment financing that would otherwise come from plan allocations; there is thus no clear link, from the point of view of SEB management, between internal cash generation and investment capability.

C. Long-Term Issues

5.19 As part of its continuing effort to cope with the problems of the power sector, the Central Government has recently established an important committee to review the sector in detail. Chaired by a member of the Planning Commission, it comprises for the most part senior administrators from the power sector and is supported by a substantial secretariat. The committee's terms of reference call for an examination of "all aspects of the functioning of the State Electricity Boards and Central organizations engaged in electricity generation, transmission and distribution, including organizational structure, management practices, planning system, efficiency of operations, financial performance, tariff structure and legislative framework and make recommendations for improving them". Given the committee's seniority and wide purview, its report expected by the end of 1979, should have a far-reaching impact.

5.20 There are two basic elements to the long-term strategy for developing the power sector, one general and one specific. The first rests on the sector's enormous assets of organization, of physical capital and perhaps most importantly human skill. The challenge is to maintain these resources and to find ways of mobilizing them more effectively. The second element in the long-term strategy for the development of the power sector is the integration of the present State systems. Electricity can be delivered more economically if the scale of the supply systems can be increased: integrated systems require less generating capacity due to the diversity between daily and seasonal peak demands; because larger and more efficient generating plants can be built, the need for spinning reserves diminishes; higher-voltage transmission (with lower losses) becomes feasible; and thermal and hydro-electric generating plants can be operated more economically in large combinations. The long-term issues that affect the sector must be seen against this background.

5.21 Within most of the organizations in the sector, management can be improved. A more multidisciplinary approach is needed in many instances -- the power engineers who constitute the backbone of the sector need more support and guidance from professional managers, and specialist disciplines (such as economists, computer resources and statisticians) -- and organizational structures could be reformed to reflect function rather than expertise. Among the sector's organizations, the prominence of those with a key role in integrating the sector must gradually increase. The REBs in particular will grow more important, since their principal purpose is to help their constituent SEBs plan and operate their systems in closer harmony. Up to now, each REB has acted only as a forum for periodic discussion on matters of common interest among its SEB chairmen, and as a source of region-wide intelligence on such matters as the incidence of forced outages, shortages and so forth. Only the Southern REB is close to assuming all the operational functions for which the REBs were originally formed. It is now beginning to operate on a fully integrated basis, coordinating plant operation and maintenance programs throughout the region. The remaining REBs are moving more slowly, but all the regions nonetheless should be fully integrated by the mid-1980s.

5.22 The process of planning has evolved in the last several years, the CEA now playing a central role in sanctioning major projects. System planning in particular has grown more comprehensive and a basic plan for developing the regional high voltage networks has been devised. The CEA is now in a strong position to argue for an optimal disposition of resources among types of expenditure and among States. But to analyze options effectively both the Centre and the States need to develop perspective long-term plans and roll them forward periodically. The scale of investment has grown so large that, to supplement the existing technical and financial analysis, more sophisticated techniques of project selection are now warranted -- shadow pricing, examining fuel savings, and using regional rather than State requirements as justification -- to make choices between what should become longer shelves of alternative generation and transmission projects. It is worth looking 15 to 20 years ahead, using mathematical models to sketch out the main parameters of an optional investment plan, and to create a framework within which the more technical and detailed considerations of system planning and project selection and design can be refined.

5.23 Without reviewing the details of different options, nothing categorical can be said about the composition of investment in future plans, but there are broad considerations that suggest that investments in hydro-electric generation on the one hand and transmission and distribution on the other should be increased relative to thermal generation investment. The proportion of hydro-electricity in total generating capacity has fallen from 41% at the end of 1968/69 to 38% at the end of 1977/78, and in the Draft Plan it is forecast to fall further to 33% by the end of 1982/83. At that time only 15,000 MW of a total estimated potential of 66,000 MW will have been developed. The reasons for the relatively slow progress of hydro potential development are many: the short-term need for new capacity that can only be met with relatively quick-gestating thermal plants; the costs -- in human and financial terms -- of preparatory surveys and investigations in remote regions that yield uncertain returns; the inherent uncertainty even after investigations surrounding the time and cost of a project; 1/ the dislocation of those who need to be relocated when a reservoir is formed; and, perhaps most importantly, the difficulties surrounding inter-State and international riparian rights. Despite their inconclusiveness it is essential that investigations and surveys proceed apace. The merits of hydro schemes as compared to thermal depend on particular geological, geographical and hydrological conditions usually unique to the scheme in question. To build up a pipeline of cost-effective hydro schemes may require a special effort by the Centre to support the investigatory activity of some of the States -- particularly in the Northeastern Region -- and, if necessary, to supplement it with direct efforts of its own.

5.24 Transmission and distribution investment should bear a close relationship to investment in generating capacity. In India, with its generally low load density and with its new sources of power (pit-head stations and

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1/ This is a major factor in the Himalayas where much of the unexploited potential is to be found.

more remote hydro schemes) being some distance from load centers, one would expect as much as one-half of the investment program to be devoted to transmission and distribution. Allocations -- and actual expenditures more so -- have fallen well below this mark in the past, and this has contributed to the growth of losses to their present high level of roughly 20%. Apart from the benefits which accrue from increased integration, and the improved quality of service that development of the transmission system and reinforcement of the distribution system would provide, every percentage reduction in losses that can be achieved results in commensurate cuts in the investment it is necessary to make in new generation capacity.

5.25 The last major area where long-term reforms are clearly needed is in finance. (Indeed these may be urgent if financial considerations threaten to constrain the power program in the next five years). In the Draft Plan, the share of power in total outlays has now reached 23%. For the States, power investments average 35% of total plan outlays, and certain States -- among them Maharashtra, Andhra Pradesh and Madhya Pradesh -- now devote over 40% of their annual plan outlays to power. An outlay of Rs 157 billion in five years is substantial in almost any context. If yet more is to be invested in the power sector, it is unlikely that either commercial borrowing -- which is accounted as part of plan finances -- or resources from general tax revenue could be much increased. Internal resource generation will have to rise from its present very low levels in most SEBs and, while to a limited extent this may be achieved through greater operational efficiency, it will undoubtedly call for increased tariffs. Moreover, tariffs must increase at a rate greater than the rate of inflation, since they have, as was argued above, underrepresented the long-run cost of expanding and operating the power system.

5.26 Real tariff increases should also contribute to a more rational distribution of electricity among alternative uses. As argued above, this impact on demand will be gradual since in most instances it can only take effect on the choice of technology when new investments are made. It should lead to a fall in the growth rate of demand for electricity relative to the overall rate of economic growth, though how large a fall it is impossible to predict. It is so important to overcome shortages with their concomitant constraining effect on the rest of the economy, that to gamble on the size of this relative drop in demand and plan for a smaller system would be unwise.

5.27 Indeed, to overcome shortages is the primary goal for the long run. Progress can be made in the meantime towards more rational and efficient management of the sector, and, given the enormous draw on national resources that the power sector represents, this must have high priority. But given the complexity of the issues, the many organizations involved and the need to reach a consensus before joint action can be taken, progress will necessarily be gradual.

STATISTICAL APPENDIX

ECONOMIC SITUATION AND PROSPECTS OF INDIA - 1979

Statistical Appendix

Table No.

Table No.

Table No.

Table 1.1

ESTIMATED ANNUAL POPULATION & DISTRIBUTION BY SEX 1961 - 2001
(in thousands)

Year	Male	Female	Total
1961	227,394	213,946	441,340
1962	232,872	218,847	451,720
1963	238,487	223,869	462,356
1964	244,291	229,011	473,302
1965	250,177	234,280	484,457
1966	256,249	239,676	495,924
1967	262,406	245,145	507,551
1968	268,732	250,758	519,490
1969	275,229	256,519	531,748
1970	281,904	262,432	544,337
1971	288,764	268,502	557,266
1972	294,757	273,922	568,679
1973	300,919	279,494	580,413
1974	307,255	285,222	592,477
1975	313,771	291,112	604,883
1976	320,471	297,168	617,638
1977	326,341	302,505	628,847
1978	332,374	307,988	640,362
1979	338,574	313,623	652,197
1980	344,946	319,412	663,359
1981	351,497	325,351	676,848
1986	382,028	353,239	735,267
1991	411,306	380,115	791,421
1996	437,818	404,598	842,415
2001	460,142	425,386	885,528

Note: The population figures for the Census years 1961 and 1971 differ from the official estimates as they have been corrected for under-recording.

Source: World Bank estimates.

Table 1.2

DISTRIBUTION OF POPULATION BY AGE-GROUP & SEX 1961-1981
(in thousands)

Year	(0 - 4)	(6 - 14)	(15-20)	(21-30)	(31-40)	(41-50)	(56 +)	Total
1961								
Males	43,296	48,967	26,395	36,536	28,705	28,103	15,391	227,394
Females	42,251	46,816	24,880	34,633	25,955	24,431	14,980	213,946
Total	85,547	95,783	51,275	71,169	54,660	52,534	30,371	441,340
1971								
Males	55,058	65,404	32,699	43,522	33,896	35,446	22,739	288,764
Females	51,502	61,697	30,811	40,613	30,715	31,939	21,224	268,502
Total	106,560	127,101	63,510	84,135	64,611	67,385	43,963	557,266
1981								
Males	55,629	77,663	45,126	57,108	41,115	43,613	31,245	351,497
Females	51,737	71,230	42,207	53,250	37,985	39,562	29,379	325,351
Total	107,366	148,893	87,333	110,358	79,100	83,175	60,624	676,848

Note: The population figures differ from the official census estimates as they have been corrected for under-recording.

Source: World Bank estimates.

Table 1.3

SELECTED DEMOGRAPHIC CHARACTERISTICS BY STATES

State/Union Territory	Area ('000' Sq.Km) 1971	Population (million) 1971	Population (million) March 1979 (estimated)	Population per Sq. Km 1971	Sex Ratio (females per 1000 males) 1971	Average Compound Growth Rate of Population (% per annum) 1961-1971	Crude Birth Rate per 1000 Population 1976	Crude Death Rate per 1000 Population 1976	General Marital Fertility Rate Rural 1972	General Marital Fertility Rate Urban 1972	Total Marital Fertility Rate Rural 1972	Total Marital Fertility Rate Urban 1972	Gross Reproduction Rate Rural 1972	Gross Reproduction Rate Urban 1972	Percentage of Urban to Total Population 1971	Working Force as Percentage of Total Population 1971	Literacy Rate (%) 1971
Andhra Pradesh	276.8	43.43	49.74	157	977	1.92	33.7	14.5	164.0	156.4	5.60	4.92	2.36	2.07	19.3	41.39	24.57
Assam	78.5	14.63	18.55	186	896	3.02	32.8	14.9	227.5	165.9	7.42	5.37	2.79	1.95	8.8	28.35	28.72
Bihar	173.9	56.35	64.16	324	954	1.95	31.1	12.1	160.3	134.9	5.73	4.91	n.a.	1.74	10.0	31.03	19.94
Gujarat	196.0	26.70	32.00	136	934	2.61	37.4	15.3	222.6	175.7	7.84	6.15	3.11	2.73	28.1	31.45	35.79
Haryana	44.2	10.04	11.74	227	867	2.83	36.3	12.8	232.2	179.6	8.15	6.45	3.38	2.29	17.7	26.44	26.89
Himachal Pradesh	55.7	3.46	3.77	62	958	2.10	32.5	13.5	182.8	153.2	6.54	5.13	2.78	1.90	7.0	36.95	31.96
Jammu & Kashmir	222.2	4.62	5.38	21	878	2.63	32.1	11.3	202.2	144.2	9.65	8.38	2.40	1.30	18.6	29.76	18.58
Karnataka	191.8	29.30	33.96	153	957	2.19	29.4	11.7	165.0	141.7	5.80	4.85	2.27	1.65	24.3	34.74	31.52
Kerala	38.9	21.35	25.06	549	1,016	2.36	27.8	8.1	184.1	180.2	6.87	6.81	2.25	2.01	16.2	29.12	60.42
Madhya Pradesh	442.8	41.65	49.93	94	941	2.55	39.8	16.3	212.8	197.0	7.81	6.47	3.47	2.68	16.3	36.72	22.14
Maharashtra	307.8	50.41	59.17	164	930	2.46	29.3	11.3	165.7	159.2	5.89	5.43	2.41	1.94	31.2	36.48	39.18
Manipur	22.4	1.07	1.25	48	980	3.24	25.3	6.9	194.4	153.4	6.67	8.36	1.96	1.75	13.1	34.57	32.91
Meghalaya	22.5	1.01	1.18	45	942	2.78	33.5	15.5	205.8	n.a.	6.59	n.a.	n.a.	n.a.	14.5	44.17	29.49
Nagaland	16.5	0.52	0.58	31	871	3.41	20.3	8.3	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	9.9	50.75	27.40
Orissa	155.8	21.94	25.68	141	988	2.26	34.8	15.8	167.2	159.8	5.90	5.47	2.43	2.02	8.4	31.22	26.18
Punjab	50.4	13.55	15.68	269	865	1.98	31.6	11.0	191.8	171.9	7.33	6.66	2.79	2.25	23.7	28.87	33.67
Rajasthan	342.2	25.76	30.53	75	911	2.49	33.4	14.7	215.2	183.6	7.75	6.22	3.34	2.45	17.6	31.24	19.07
Sikkim	7.3	0.21	n.a.	29	863	2.61	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	9.5	n.a.	n.a.
Tamil Nadu	130.1	41.20	47.12	317	978	2.03	30.7	14.6	166.4	142.1	5.88	5.06	2.29	1.61	30.2	35.78	39.46
Tripura	10.5	1.56	1.81	149	943	3.14	34.7	10.2	168.9	137.5	5.45	4.27	2.08	1.64	10.4	27.79	30.98
Uttar Pradesh	294.4	88.34	99.32	300	879	1.82	40.0	20.5	221.2	194.5	8.13	6.78	3.58	2.46	14.0	30.94	21.77
West Bengal	87.9	44.31	52.80	504	891	2.41	31.9	11.9	n.a.	155.6	n.a.	5.57	n.a.	1.76	24.7	27.91	33.20
A & N Islands	8.3	0.12	0.13	14	644	6.12	39.0	9.1	307.6	164.9	9.06	5.35	n.a.	n.a.	22.6	39.55	43.59
Arunachal Pradesh	83.6	0.47	0.55	6	861	3.34	32.5	27.0	243.7	n.a.	12.49	n.a.	n.a.	n.a.	3.6	57.65	11.29
Chandigarh	0.1	0.26	0.30	2,257	749	7.93	31.2	4.5	265.3	231.8	7.33	6.33	n.a.	n.a.	90.7	33.29	61.56
Dadra & Nagar Haveli	0.5	0.07	0.09	151	1,007	2.50	42.1	12.3	173.6	n.a.	6.76	n.a.	n.a.	n.a.	-	47.17	14.97
Delhi	1.5	4.07	5.60	2,738	801	4.34	28.6	7.6	222.5	172.2	7.96	6.10	3.50	2.17	89.7	30.21	56.61
Goa, Daman & Diu	3.8	0.86	1.00	225	989	3.19	24.4	9.2	160.0	129.8	5.74	5.15	1.75	1.32	26.5	31.67	44.75
Lakshadweep	0.03	0.03	0.04	994	978	2.81	35.2	8.8	170.8	n.a.	5.73	n.a.	n.a.	n.a.	-	26.15	43.66
Mizoram	0.5	0.33	n.a.	983	947	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	41.9	n.a.	n.a.
Pondicherry	21.1	0.47	0.55	16	989	2.48	31.1	11.6	161.1	146.8	5.89	5.96	n.a.	n.a.	11.4	29.90	46.02
All-India	3,287.8	548.2	640.8 a/	177	930	2.24	34.4	15.0	190.8	172.9	6.82	6.05	2.75	2.07	19.9	32.92	29.46

a/ Revised estimate is 643.29 for which State-wise estimates are not available.

Source: Office of the Registrar-General of India.

Table 1.4

TRENDS IN DEMOGRAPHIC CHARACTERISTICS OF THE POPULATION

Year	Population (million) Total	Males	Females	Average Compound Growth Rate of Population during Previous Ten Years (% per annum)	Sex-Ratio (Female per 1000 males)	Density of Population Per Km^2	Percentage of Urban Population to Total
1951	361	185	176	1.26	946	117	17.30
1961	439	226	213	1.98	941	142	17.98
1971	548	284	264	2.24	930	173	19.91
1981 a/	672	348	324	2.06	931	204	22.04
1991 a/	799	412	387	1.75	939	243	24.33

Actuals for 1951/61 & 1961/71 and Assumptions Underlying Official Population Projections 1971-91

Average for Period b/	General Fertility Rate (per thousand women of child-bearing age) c/	Average Expectation of Life at Birth (years) Male	Female	Birth Rate c/	Death Rate	Population Growth Rate c/
				(per thousand population)		
1951/61	201	41.9	40.6	40.9	22.0	18.9
1961/71	192	46.4	44.7	41.2	19.2	22.0
1971/76	175	50.1	48.8	36.6	15.2	21.4
1976/81	154	52.6	51.6	32.9	13.2	19.7
1981/86	133	55.1	54.3	29.5	11.6	17.9
1986/91	117	57.6	57.1	27.0	10.4	16.6

All India Sample Registration Survey: Vital Rates
(Annual rate per thousand)

Year	Crude Birth Rate Total	Rural	Urban	Crude Death Rate Total	Rural	Urban	Infant Mortality Rate per 1000 Live Births Total	Rural	Urban
1970	36.8	38.9	29.7	15.7	17.3	10.2	129	136	90
1971	36.9	38.9	30.1	14.9	16.4	9.7	129	138	82
1972	36.6	38.4	30.5	16.9	18.9	10.3	139	150	85
1973	34.6	35.9	28.9	15.5	17.0	9.6	n.a.	n.a.	n.a.
1974	34.5	35.9	28.4	14.5	15.9	9.2	n.a.	n.a.	n.a.
1975	35.2	36.7	28.5	15.9	17.3	10.2	n.a.	n.a.	n.a.
1976	34.4	35.8	28.3	15.0	16.3	9.5	n.a.	n.a.	n.a.

a/ Projections by Registrar-General of India, for March 1 of year shown. The projections yield somewhat lower values than do those produced by World Bank staff (Table 1.1), which have a higher base to adjust for census under-reporting. It should also be noted that the projections were made before the decided slump in performance of the National Family Welfare Program, dating from March 1977. At this time it is by no means clear how long it will take to get the program back to its former effectiveness, and beyond. It therefore seems inevitable that the official population projections will have to be revised upwards.

b/ Projections relate to mid-year of period.

c/ For 1971-91 these values are probably understated, for the reasons given in footnote a.

Sources: 1. Office of the Registrar-General.
2. Planning Commission, Draft Five Year Plan, 1978-83.

Table 1.5

TRENDS IN ACCEPTANCE OF FAMILY PLANNING METHODS AND ESTIMATED NUMBER OF BIRTHS AVERTED
(in thousands)

Year	Sterilization			IUD Insertions	Users of Conventional a/ Contraceptives	Total Acceptors	Equivalent Sterilizations	Cumulative Number of Births Averted since 1961	Medical Termination of Pregnancy	Cumulative Number of Births Averted since 1961 b/	Cumulative Number of Total Births Averted since 1961
	Male	Female	Total								
1956	2	5	7			7	7				
1960	37	27	24			64	64				
1965/66 c/	577	94	671	813	582	2,066	974	n.a.			n.a.
1966/67	785	102	887	910	465	2,262	1,216	1,151			1,151
1968/69	1,383	282	1,665	479	961	3,104	1,878	3,253			3,253
1970/71	879	451	1,330	476	1,962	3,768	1,598	6,787			6,787
1971/72	1,620	567	2,187	488	2,354	5,030	2,481	8,928			8,928
1972/73	2,613	509	3,122	355	2,398	5,874	3,373	11,460	24	19	11,479
1973/74	403	539	942	372	3,010	4,324	1,233	14,452	45	55	14,507
1974/75	612	742	1,354	433	2,521	4,307	1,638	17,482	98	133	17,615
1975/76	1,438	1,231	2,669	607	3,528	6,803	3,069	20,612	214	304	20,916
1976/77	6,199	2,062	8,261	580	3,692	12,534	8,663	24,334	279	527	24,861
1977/78	188	760	948	326	3,244	4,518	1,241	29,381	242	721	30,102
1978/79 (upto November 78)	130	529	659	253	2,837	3,749	906	32,552	164	852	33,404

a/ From 1970/71 onwards the figures exclude condoms distributed freely to vasectomised cases and as free samples. Equivalent users has been derived by dividing the number of pieces of condoms, diaphgrams, jelly & cream tubes, foam tablets and oral pill cycles by 72, 2, 7, 72 and 13 respectively, which are the average numbers required to give complete protection to a couple in one year.

b/ Estimated by assuming that percentage of births averted due to medical termination of pregnancy is 80.

c/ Relates to period January 1965 to March 1966.

Sources: 1. Ministry of Health and Family Welfare.
2. World Bank estimates.

Table 1.6

EXPECTATIONS AND ACHIEVEMENTS OF FAMILY PLANNING PROGRAM IN 1978/79 (April - November 1978)
(in thousands)

	Voluntary Sterilizations					I.U.D. Insertions			Users of Conventional Contraceptives			M.T.P
	Expectation (12 months)	Achievement (April - November) Male	Female	Total	% achievement of proportional expectation	Expectation (12 months)	Achievement (April-Nov.)	% achievement of proportional expectation	Expectation (12 months)	Achievement (April-Nov.)	% achievement of proportional expectation	Achievement (April-Nov.)
Andhra Pradesh	302.0	25.4	81.2	106.6	52.9	46.5	7.4	24.3	153.1	23.7	15.5	4.8
Assam	88.1	8.8	4.1	12.9	22.0	13.3	3.8	43.3	44.6	21.2	47.5	5.7
Bihar	413.1	5.3	16.2	21.5	7.8	62.2	5.1	12.3	209.3	24.2	11.6	2.4
Gujarat	192.5	23.3	62.6	85.9	66.9	29.0	20.6	106.8	97.6	190.9	195.6	13.3
Haryana	50.6	0.8	5.4	6.2	18.4	7.6	16.9	332.7	25.7	123.6	481.6	0.2
Himachal Pradesh	21.7	0.4	1.2	1.6	11.1	3.3	2.3	106.5	11.0	10.6	96.7	1.2
Jammu & Kashmir	37.5	0.9	2.1	3.0	12.1	5.6	1.9	51.8	19.0	4.5	23.5	-
Karnataka	231.1	2.4	56.4	58.8	38.2	34.8	19.3	83.2	117.1	70.0	59.8	8.0
Kerala	161.8	9.0	42.4	51.4	47.7	24.4	6.6	40.8	82.0	22.6	27.6	16.3
Madhya Pradesh	281.1	4.8	23.4	28.2	15.0	42.3	10.7	38.1	142.5	59.1	41.5	6.2
Maharashtra	345.3	10.7	71.3	82.0	35.6	52.0	10.9	31.3	175.0	108.9	62.2	17.3
Manipur	7.7	0.7	0.1	0.8	16.5	1.2	0.5	67.8	3.9	0.9	22.2	0.2
Meghalaya a/	4.3	n.s.	0.1	0.1	4.7	1.3	0.2	25.2	4.3	0.7	16.5	0.5
Nagaland	-	n.s.	0.1	0.1		-	n.s.		-	0.1		0.3
Orissa	135.8	18.2	41.7	59.9	66.1	20.4	7.6	55.8	68.7	43.1	62.7	6.1
Punjab	91.0	1.3	7.8	9.1	15.0	13.7	17.5	192.0	46.1	115.5	250.6	4.8
Rajasthan	201.1	1.9	8.9	10.8	8.1	30.3	9.5	47.2	101.9	77.8	76.4	5.0
Tamil Nadu	276.7	5.9	55.3	61.2	33.2	41.7	14.8	53.3	140.2	75.6	53.9	17.4
Tripura	11.6	0.3	0.1	0.5	6.0	1.8	0.1	8.2	5.9	4.6	77.7	0.3
Uttar Pradesh	686.4	0.9	10.0	10.9	2.4	103.4	72.1	104.7	347.9	275.3	79.1	35.8
West Bengal	327.5	3.4	21.9	25.2	11.6	49.3	4.7	14.4	166.0	70.5	42.5	4.7
A & N Islands	0.7	n.s.	0.3	0.3	71.1	0.1	0.1	197.0	0.4	0.5	137.0	0.1
Arunachal Pradesh	1.7	n.s.	n.s.	n.s.	3.8	0.5	0.1	38.4	1.8	0.4	23.0	n.s.
Chandigarh	1.8	0.1	0.4	0.6	47.3	0.5	2.2	663.7	1.8	7.1	394.4	1.2
D & N Haveli	0.6	0.1	n.s.	0.2	37.8	0.1	n.s.	1.5	0.3	0.4	132.3	n.s.
Delhi	25.5	0.5	3.8	4.3	25.0	7.7	11.4	231.6	25.9	120.9	467.0	8.6
Goa, Daman & Diu	7.6	n.s.	1.3	1.4	27.2	1.1	0.3	42.2	3.8	1.2	30.3	0.6
Lakshadweep	0.3	n.s.	-	n.s.	9.5	0.1	n.s.	9.0	0.2	0.3	135.5	-
Mizoram b/	1.6	n.s.	0.6	0.6	62.1	0.3	0.5	54.5	1.6	0.7	43.8	-
Pondicherry	3.3	0.1	2.1	2.3	102.7	0.5		193.4	1.7	1.3	73.1	0.8
Ministry of Defense	20.0	3.5	4.9	8.4	72.3	2.5	3.1	211.7	45.4	59.0	129.2	0.8
Ministry of Railways	35.0	1.0	3.3	4.3	18.4	3.3	1.1	50.8	155.3	161.1	103.8	1.6
Commercial distribution									1,800.0	1,145.8	63.7	
Others										14.2		
All-India	3,965.0	129.9		659.1	25.0	600.0	252.8	63.3	4,000.0	2,836.8	70.9	164.2

a/ Figures relate to April-September 1978.
b/ Figures relate to April-October 1978.

Source: Ministry of Health and Family Welfare.

Table 1.7

EMPLOYMENT IN THE ORGANIZED SECTOR - BY INDUSTRY
(in thousands)

As at the End of the Fiscal Year	Plantations Forestry and Related Activities	Mining & Quarrying	Manufacturing	Construction	Public Utilities	Transport & Communication	Trade & Commerce	Services	All Activities Total
1960/61									
Public Sector	180	129	369	602	224	1,725	94	3,427	7,050
Private Sector a/	670	550	3,020	240	40	80	160	280	5,040
Total	850	679	3,389	842	264	1,805	254	4,007	12,090
1965/66									
Public Sector	227	160	670	766	303	2,094	155	5,004	9,379
Private Sector a/	903	507	3,858	254	42	123	330	796	6,813
Total	1,130	667	4,528	1,020	345	2,217	485	5,800	16,192
1968/69									
Public Sector	261	174	757	788	369	2,159	184	5,334	10,027
Private Sector b/	813	422	3,772	154	44	108	369	922	6,604
Total	1,074	596	4,530	942	413	2,267	553	6,256	16,630
1970/71									
Public Sector	264	177	782	797	402	2,189	288	5,475	10,374
Private Sector b/	814	429	3,900	152	44	101	293	963	6,696
Total	1,078	606	4,882	949	446	2,290	581	6,438	17,070
1973/74									
Public Sector	324	606	1,027	997	537	2,313	445	6,237	12,486
Private Sector b/	805	134	4,179	121	42	77	310	1,126	6,794
Total	1,129	740	5,206	1,118	579	2,390	755	7,363	19,280
1975/76									
Public Sector	401	719	1,113	992	536	2,418	546	6,639	13,363
Private Sector b/	827	132	4,158	94	35	74	470	1,055	6,344
Total	1,228	851	5,271	1,086	571	2,491	1,016	7,694	20,207
1976/77									
Public Sector	476	757	1,226	1,009	563	2,467	610	6,768	13,876
Private Sector b/	838	130	4,165	83	35	71	461	1,086	6,867
Total	1,314	887	5,391	1,092	598	2,538	1,061	7,854	20,743
1977/78									
Public Sector	628	758	1,323	993	599	2,512	658	6,931	14,402
Private Sector b/	846	127	4,317	82	35	61	462	1,110	7,040
Total	1,474	885	5,640	1,075	634	2,573	1,120	8,041	21,442

a/ Establishments of 25 workers and over. Reporting is compulsory.
b/ Includes employment in establishments of 10 workers and over. Reporting for the category 10-25 workers is on a voluntary basis, and the extent of coverage is not known.

Source: Ministry of Labour, Director General of Employment & Training.

Table 1.8

DISTRIBUTION OF PERSONS AGED FIVE AND ABOVE BY USUAL ACTIVITY STATUS [a/]
(%)

		Rural			Urban			All-India		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
I	Persons in Labor Force	63.84	37.53	50.93	57.09	15.53	37.61	62.38	33.19	48.37
	a. Working in own farm	24.87	4.38	14.82	2.16	0.60	1.43	19.96	3.63	12.12
	b. Working in household non-farm enterprise/profession	5.88	1.96	3.96	16.11	3.15	10.04	8.08	2.19	5.26
	c. Working in household farm as helper	10.24	16.15	13.14	0.77	1.31	1.02	8.19	13.22	10.60
	d. Working in non-farm household enterprise as helper	1.08	1.71	1.39	3.37	2.46	2.94	1.57	1.86	1.71
	e. Working as regular salaried employee/ wage laborer in farm	4.21	0.79	2.53	0.60	0.14	0.38	3.43	0.66	2.10
	f. Working as regular salaried employee/ wage laborer in non-farm enterprise/profession	3.49	0.74	2.14	28.34	4.18	17.02	8.85	1.42	5.28
	g. Working as casual wage laborer	14.07	11.80	12.95	5.74	3.69	4.78	12.27	10.20	11.27
II	Not working but seeking and available for work - unemployed	0.75	0.18	0.47	2.87	1.00	1.99	1.20	0.34	0.79
III	Not in Labor Force	35.41	62.29	48.60	40.04	83.47	60.40	36.40	66.46	50.83
IV	Total Population	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

a/ For the period October 1972 - September 1973.

Source: The National Sample Survey, 27th Round (1972-73), Provisional Results on Employment-Unemployment Survey, October 1977.

Table 1.9

STATEWISE UNEMPLOYMENT RATES BY CURRENT ACTIVITY STATUS [a/]
(%)

STATES	Rural			Urban			Total		
	Male	Female	Total	Male	Female	Total	Male	Female	Total
Andhra Pradesh	2.8	4.6	3.7	5.2	2.6	3.9	3.3	4.2	3.7
Assam	0.9	0.2	0.6	1.4	0.2	0.9	0.9	0.2	0.6
Bihar	2.4	2.0	2.2	3.9	0.8	2.5	2.6	1.9	2.2
Gujarat	1.2	1.0	1.1	2.7	0.6	1.7	1.6	0.9	1.3
Haryana	1.5	0.3	0.9	3.2	1.0	2.2	1.8	0.4	1.2
Himachal Pradesh	0.5	0.1	0.3	1.7	1.3	1.5	0.5	0.1	0.3
Karnataka	2.0	2.4	2.2	3.8	1.7	2.8	2.4	2.2	2.3
Kerala	6.0	4.1	5.0	8.0	4.1	6.0	6.3	4.1	5.2
Madhya Pradesh	1.0	1.3	1.2	2.4	0.8	1.7	1.3	1.2	1.2
Maharashtra	1.7	2.1	1.9	3.8	1.8	2.9	2.4	2.0	2.2
Meghalaya	-	-	-	1.1	0.1	0.6	1.1	-	0.6
Orissa	2.5	3.3	2.9	3.1	1.8	2.5	2.6	3.2	2.8
Punjab	1.4	0.3	0.9	2.3	1.0	1.7	1.6	0.5	1.1
Rajasthan	2.0	1.5	1.8	2.7	0.8	1.8	2.1	1.4	1.8
Tamil Nadu	2.8	2.8	2.8	4.5	1.9	3.2	3.3	2.5	2.9
Uttar Pradesh	1.0	0.7	0.8	1.8	0.2	1.1	1.1	0.6	0.9
West Bengal	2.1	1.3	1.8	4.8	1.6	3.4	2.9	1.4	2.2
Chandigarh	-	-	-	1.1	1.3	1.3	1.1	1.3	1.3
Delhi	0.8	-	0.4	2.2	1.5	1.9	2.0	1.4	1.7
Goa	3.9	9.1	6.3	4.6	0.7	2.6	4.1	3.9	5.3
Pondicherry	2.9	3.9	3.4	4.8	2.2	3.5	3.7	3.1	3.5
Jammu & Kashmir	4.7	0.9	2.8	2.0	0.6	1.4	4.2	0.8	2.5
Manipur	1.8	0.8	1.2	1.3	0.3	0.8	1.7	0.8	1.2
Tripura	0.9	0.5	0.7	3.6	2.1	2.9	1.2	0.6	0.9
All-India	1.9	1.9	1.9	3.6	1.4	2.6	2.3	1.8	2.1

a/ Person-weeks seeking and/or available for work as a percentage of total person-weeks in the labor force, for the period October 1972 to September 1973.

Source: National Sample Survey, 27th Round (1972-73), Provisional Results on Employment-Unemployment Survey, October 1977.

Table 1.10

EMPLOYMENT EXCHANGE STATISTICS

	(At end of year)		(Monthly average in thousands)			
	Exchanges	Applicants on register (000s)	Registrants	Employers using exchanges	Vacancies notified by employers	Placements
1951	126	329	115	6	41	35
1956	143	759	139	5	25	16
1961	325	1,833	269	10	59	34
1966	396	2,622	323	13	71	42
1968	405	3,012	337	12	60	35
1970	426	3,726	376	13	62	37
1971	434	4,602	428	13	68	42
1972	446	5,928	486	13	72	42
1973	461	7,714	512	13	73	43
1974	475	8,378	431	11	56	33
1975	496	8,917	455	11	57	34
1976	517	9,772	468	13	70	41
1977	528	10,924	444	12	67	38
1978 a/	535	12,331	509	13	69	38

a/ For the period January to October, 1978.

Source: Ministry of Labour, Labour Bureau, Simla, Indian Labour Journal.

Table 1.11

NUMBER OF INDUSTRIAL DISPUTES, WORKERS INVOLVED AND MANDAYS LOST - BY PUBLIC & PRIVATE SECTORS

Year	Disputes			Workers Involved (in thousands)			Mandays Lost (in thousands)		
	Public	Private	Total	Public	Private	Total	Public	Private	Total
1961	-	-	1,357	-	-	512	212	4,707	4,919
1962	177	1,314	1,491	128	577	705	532	5,588	6,121
1963	117	1,354	1,471	68	495	563	277	2,991	3,269
1964	254	1,897	2,151	154	849	1,003	747	6,977	7,725
1965	198	1,637	1,835	102	889	991	704	5,766	6,470
1966	345	2,211	2,556	240	1,170	1,410	1,277	12,570	13,846
1967	441	2,374	2,815	368	1,123	1,490	2,540	14,608	17,148
1968	386	2,390	2,776	434	1,236	1,669	1,972	15,272	17,244
1969	389	2,238	2,627	337	1,490	1,827	1,424	17,624	19,048
1970	446	2,443	2,889	439	1,389	1,828	2,062	18,501	20,563
1971	385	2,367	2,752	364	1,252	1,615	2,253	14,292	16,546
1972	538	2,705	3,243	416	1,321	1,738	3,346	17,198	20,544
1973	714	2,656	3,370	789	1,757	2,546	3,392	17,234	20,626
1974	597	2,341	2,938	1,369	1,485	2,855	13,088	27,174	40,262
1975	362	1,581	1,943	321	822	1,143	2,145	19,756	21,901
1976	153	1,306	1,459	148	589	737	872	11,874	12,746
1977	663	2,454	3,117	950	1,244	2,193	4,471	20,849	25,320
1978 a/	813	1,691	2,504	602	732	1,334	2,981	17,719	20,700

a/ Provisional figures for January to November, 1978.

Source: Ministry of Labour, Labour Bureau, Simla.

Table 1.12

EDUCATION - PROGRESS OF ENROLMENT
(Million persons)

	Primary Level (Class I - V) Age 6 - 11 Years			Middle Level (Classes VI - VIII) Age 11 - 14 Years			Secondary Level (Classes IX - XI) Age 14 - 17 Years			University c/
	Boys	Girls	Total	Boys	Girls	Total	Boys	Girls	Total	
1950/51	13.8	5.4	19.2	2.6	0.5	3.1	1.0	0.2	1.2	0.3
1955/56	17.5	7.7	25.2	3.4	0.9	4.3	1.5	0.4	1.9	0.6
1960/61	23.6	11.4	35.0	5.1	1.6	6.7	2.3	0.6	2.9	0.8
1965/66	32.2	18.7	50.5	7.7	2.8	10.5	3.9	1.1	5.0	1.3
1968/69	34.2	20.2	54.4	8.8	3.3	12.1	5.1	1.7	6.8	1.7
1970/71	37.6	22.5	60.1	9.7	4.1	13.8	5.7	1.9	7.6	2.8
1973/74	39.2	24.0	63.2	10.2	4.5	14.7	5.4	2.1	7.5	3.2
1974/75	39.2	24.6	63.8	10.5	4.7	15.2	6.0	2.2	8.2	2.9
1975/76	39.6	25.1	64.7	10.9	5.0	15.9	6.3	2.5	8.8	3.2
1976/77	41.7	25.8	67.5	11.6	5.4	17.0	6.3	2.5	8.8	3.2
1977/78	43.2	26.9	70.1	12.0	5.7	17.7	6.1	2.4	8.5	n.a.
1978/79 (Target)			78.2			21.6 b/			11.2	4.7
Enrolment as percentage of the corresponding age group: a/										
1950/51	60.6	24.8	43.1	20.6	4.6	12.9	8.7	1.5	5.3	
1970/71	96.8	60.5	79.1	47.5	20.2	34.1	29.8	10.3	20.2	
1975/76	99.0	67.6	83.9	48.9	24.1	36.9	31.5	13.0	22.4	
1977/78										

a/ Enrolment as percentage of corresponding age group may exceed 100 in some instances because of the presence of children both younger and older than indicated in the age group for these classes.

b/ Plus 7.8 million proposed part-time students.

c/ Refers to general education in commerce, arts & science courses in the universities. Excludes engineering, medicine and technical courses conducted in autonomous institutions. In September 1977 there were 74,624 students enrolled in medical colleges and 92,115 in engineering sciences.

Source: Ministry of Education.

Table 1.13

STATEWISE RATIOS OF DOCTORS AND HOSPITAL BEDS TO POPULATION - 1977

State/Union Territory	Population Per Doctor	Population Per Hospital Bed
Andhra Pradesh	2,789	1,477 a/
Assam e/	2,502 a/	2,593
Bihar	4,666	2,510 c/
Gujarat	2,628	1,378
Haryana	5,776 b/	1,375
Himachal Pradesh	6,988 b/	785
Jammu & Kashmir	3,709 b/	1,000
Karnataka	4,869 d/	1,057 a/
Kerala	2,656	445 b/
Madhya Pradesh	6,825	2,536 a/
Maharashtra	1,785 a/	792 a/
Manipur	3,800	974
Meghalaya	8,333 a/	833 a/
Nagaland	3,764 a/	492
Orissa	3,678	2,094
Punjab	2,024	1,150
Rajasthan	4,362	1,518
Sikkim	4,558	610 a/
Tamil Nadu	3,408 a/	975 b/
Tripura	7,192	1,315
Uttar Pradesh	5,084 a/	1,897
West Bengal	1,732 a/	958 a/
Andaman & Nicobar Islands	2,321	239
Arunachal Pradesh	3,333	418
Chandigarh	810	259
Dadra & Nagar Haveli	7,000	1,750
Delhi	1,400 b/	415
Goa, Daman & Diu	1,790 a/	404 a/
Lakshadweep	2,000	300
Pondicherry	2,683	383
All-India	3,135	1,231

a/ Relates to 1976
b/ Relates to 1975
c/ Relates to 1974
d/ Relates to 1972
e/ Includes Mizoram.

Source: Ministry of Health & Family Welfare, Pocket Book of Health Statistics of India, 1978.

Table 2.1 (a)

NATIONAL INCOME AND SOME RELATED AGGREGATES
(at current prices - in Rs billion)

Year	NNP at Factor Cost	Consumption of Fixed Capital	GNP at Factor Cost	Factor Income Payments	GDP at Factor Cost	Indirect Taxes less Subsidies	GDP at Market Prices
1950/51	86.99	3.24	90.23	0.41	90.64	5.00	95.64
1951/52	90.37	3.59	93.96	0.35	94.31	5.90	100.21
1952/53	88.25	3.89	92.14	0.25	92.39	5.20	97.59
1953/54	94.80	3.92	98.72	0.19	98.91	5.60	104.51
1954/55	86.06	4.29	90.35	0.29	90.64	6.20	96.84
1955/56	91.28	4.48	95.71	0.10	95.81	6.80	102.61
1956/57	105.53	4.86	110.39	0.17	110.46	7.70	118.16
1957/58	105.40	5.36	110.76	0.20	110.96	8.90	119.86
1958/59	118.26	6.27	124.53	0.35	124.88	9.50	134.38
1959/60	122.11	6.61	128.72	0.57	129.29	10.50	139.79
1960/61	132.63	7.36	139.99	0.72	140.71	9.47	150.18
1961/62	139.87	8.12	147.99	0.98	148.97	10.80	159.77
1962/63	147.95	9.32	157.27	1.08	158.35	12.64	170.99
1963/64	169.77	10.01	179.78	1.12	180.90	15.66	196.56
1964/65	200.01	11.12	211.13	1.47	212.60	17.84	230.44
1965/66	206.37	12.29	218.66	1.64	220.30	20.82	241.12
1966/67	238.48	14.02	252.50	2.30	254.80	21.82	276.62
1967/68	280.54	15.58	296.12	2.58	298.70	24.24	322.94
1968/69	286.07	16.86	302.93	2.55	305.48	27.31	332.79
1969/70	316.06	19.15	335.21	2.71	337.92	30.59	368.51
1970/71	344.12	22.42	366.54	2.84	369.38	35.23	404.61
1971/72	367.28	24.66	391.94	2.91	394.85	40.72	435.57
1972/73	403.91	27.68	431.59	3.02	434.61	45.99	480.60
1973/74	504.98	32.06	537.04	3.23	540.27	51.59	591.86
1974/75	594.17	37.86	632.03	2.79	634.82	65.52	700.34
1975/76	616.09	40.83	656.92	2.55	659.47	79.33	738.80
1976/77	665.61	44.86	710.47	2.32	712.79	83.44	796.23
1977/78	731.57	48.55	780.12	2.32	782.44	88.76	871.20

Sources: CSO, National Accounts Statistics, 1948/49 - 1962/63, February 1964; 1960/61 - 1974/75, October 1976; 1970/71 - 1975/76, January 1978; and Press Note dated January 8, 1979.

Table 2.1 (b)

NATIONAL INCOME AND SOME RELATED AGGREGATES
(at 1970/71 prices - in Rs billion)

	NNP at Factor Cost	Consumption of Fixed Capital	GNP at Factor Cost	Factor Income Payments	GDP at Factor Cost	Indirect Taxes less Subsidies	GDP at Market Prices
1950/51	167.73	7.85	175.58	0.67	176.25	9.71	185.96
1951/52	170.32	8.00	178.32	0.41	178.73	11.18	189.91
1952/53	176.40	8.30	184.70	0.36	185.06	10.41	195.47
1953/54	187.93	8.55	196.48	0.27	196.75	11.14	207.89
1954/55	192.72	9.07	201.79	0.43	202.22	13.83	216.05
1955/56	199.01	9.43	208.44	0.15	208.59	14.82	223.41
1956/57	209.92	9.86	219.78	0.24	220.02	15.34	235.36
1957/58	205.29	10.53	215.82	0.38	216.20	17.34	233.54
1958/59	222.60	11.42	234.02	0.52	234.54	17.84	252.38
1959/60	226.14	11.74	237.88	0.92	238.80	19.39	258.19
1960/61	241.83	12.32	254.15	1.10	255.25	16.02	271.27
1961/62	249.75	13.12	262.87	1.47	264.34	18.15	282.49
1962/63	253.35	14.84	268.19	1.68	269.87	20.94	290.81
1963/64	266.80	15.31	282.11	1.69	283.80	24.88	308.68
1964/65	287.34	16.49	303.83	2.18	306.01	26.87	332.88
1965/66	270.49	17.26	287.75	2.32	290.07	29.68	319.75
1966/67	272.52	18.13	290.65	2.26	292.91	25.45	318.36
1967/68	296.54	19.19	315.73	2.76	318.49	26.86	345.35
1968/69	304.67	19.77	324.44	2.64	327.08	30.00	357.08
1969/70	323.74	21.06	344.80	2.84	347.64	30.48	378.12
1970/71	344.12	22.42	366.54	2.84	369.38	35.23	404.61
1971/72	348.71	23.31	372.02	3.13	375.15	38.63	413.78
1972/73	343.23	24.65	367.88	3.11	370.99	39.69	410.68
1973/74	361.83	25.18	387.01	2.34	389.35	37.14	426.49
1974/75	364.55	24.34	388.89	1.17	390.06	35.70	425.76
1975/76	398.49	25.20	423.69	0.91	424.60	40.23	464.83
1976/77	403.95	26.43	430.38	0.85	431.23	40.84	472.07
1977/78	433.95	27.63	461.58	0.91	462.49	41.83	504.32

Note: Data on consumption of fixed capital, factor income payments and GDP at factor cost (sectoral level) available at 1960/61 prices for the period 1950/51 to 1969/70, have been converted into 1970/71 prices using the price deflators derived from 1970/71 data in CSO, National Accounts Statistics, 1960/61 - 1974/75, October 1976. Similarly, indirect taxes less subsidies available at 1960/61 prices for the period 1960/61 to 1969/70 have been converted into 1970/71 prices. Indirect taxes less subsidies at 1970/71 prices for the period 1950/51 to 1959/60 have been obtained by deflating the data at current prices with the implicit price deflators of gross domestic product at factor cost.

Source: CSO, National Accounts Statistics, 1960/61-1972/73, January 1975; 1960/61-1974/75, October 1976; 1970/71-1975/76, January 1978; and Press Note dated January 8, 1979.

Table 2.2 (a)

GROSS DOMESTIC PRODUCT AT FACTOR COST BY INDUSTRY OF ORIGIN
(at current prices - in Rs billion)

Sector	1950/51 a/	1955/56 a/	1960/61	1965/66	1968/69	1970/71	1973/74	1974/75	1975/76	1976/77	1977/78
1 Agriculture	45.41	42.16	67.51	97.98	141.46	167.27	255.83	281.22	261.80	269.18	299.96
2 Forestry & Logging	10.63	0.67	1.76	3.20	3.56	4.07	5.18	6.55	7.58	8.61	9.90
3 Fishing	0.36	0.58	0.82	1.30	2.04	2.54	4.07	4.72	5.55	5.61	6.39
4 Mining & Quarrying	0.63	0.96	1.44	2.40	3.24	3.74	4.61	7.26	9.72	11.03	11.17
Sub-total: Primary Sector	47.03	44.37	71.53	104.88	150.30	177.62	269.69	299.75	284.65	294.43	327.42
5 Manufacturing	13.87	16.76	19.94	33.37	41.72	53.20	77.04	99.31	106.16	118.24	128.18
5.1 Registered	(5.26)	(7.47)	(11.89)	(21.15)	(26.15)	(34.89)	(50.09)	(64.68)	(68.15)	(77.35)	(82.83)
5.2 Unregistered	(8.61)	(9.29)	(8.05)	(12.22)	(15.57)	(18.31)	(26.95)	(34.63)	(38.01)	(40.89)	(45.35)
6 Construction	3.80	3.83	6.41	11.05	16.52	19.93	25.99	29.37	34.26	41.04	46.03
7 Electricity, Gas & Water Supply	0.27	0.38	0.86	1.81	3.13	4.18	5.14	6.48	8.42	10.37	11.37
Sub-total: Secondary Sector	17.94	20.97	27.21	46.23	61.37	77.31	108.17	135.16	148.84	169.65	185.58
8 Transport, Storage and Communication	3.98	4.98	6.87	11.11	15.91	18.89	25.44	30.20	35.35	41.14	43.97
8.1 Railways	(1.72)	(2.39)	(3.02)	(4.64)	(5.49)	(6.10)	(6.01)	(7.46)	(8.88)	(10.96)	(11.49)
8.2 Other Transport & Storage	(1.90)	(2.11)	(3.20)	(5.29)	(8.62)	(10.41)	(16.30)	(19.17)	(22.38)	(24.75)	(26.39)
8.3 Communication	(0.36)	(0.48)	(0.65)	(1.18)	(1.80)	(2.38)	(3.13)	(3.57)	(4.09)	(5.43)	(6.09)
9 Trade, Hotels & Restaurants	7.37	8.05	13.27	22.87	31.71	40.71	61.34	78.96	86.35	92.79	99.61
10 Banking and Insurance	0.63	0.86	1.63	3.52	4.86	6.47	10.80	13.73	17.83	20.94	22.79
11 Real Estate, Ownership of Dwelling & Business Services	3.90	4.41	6.06	8.50	10.08	14.51	18.99	21.23	23.36	26.13	29.39
12 Public Administration & Defense	4.08	5.46	5.38	9.89	13.70	16.35	22.18	28.55	32.37	34.53	37.29
13 Other Services	5.71	6.71	8.76	13.30	17.55	17.52	23.66	27.24	30.72	33.18	36.39
Sub-total: Tertiary Sector	25.67	30.47	41.97	69.19	93.81	114.45	162.41	199.91	225.98	248.71	269.44
TOTAL: GDP at Factor Cost	90.64	95.81	140.71	220.30	305.48	369.38	540.27	634.82	659.47	712.79	782.44

a/ Sectoral allocation of total GDP has been estimated from proportions given in CSO, Estimates of National Income, 1948/49 to 1962/63, February 1964.

Sources: CSO, National Accounts Statistics, 1960/61 - 1972/73, January 1975; 1960/61 - 1974/75, October 1976; 1970/71 - 1975/76, January 1978; and Press Note dated January 8, 1979.

Table 2.2 (b)

GROSS DOMESTIC PRODUCT AT FACTOR COST BY INDUSTRY OF ORIGIN
(at 1970/71 prices - in Rs billion)

Sector	1950/51 a/	1955/56 a/	1960/61 a/	1965/66 a/	1968/69 a/	1970/71	1973/74	1974/75	1975/76	1976/77	1977/78	Average Compound Growth Rate (% per annum) 1950/51-1975/76	1970/71-1977/78	1976/77	1977/78
1 Agriculture	100.96	115.90	133.85	126.43	145.42	167.27	166.95	162.59	182.13	171.23	190.04	2.4	1.8	-6.0	11.0
2 Forestry & Logging	2.14	2.20	2.69	3.71	3.71	4.07	4.22	4.56	4.96	5.56	5.81	3.4	5.2	12.1	4.5
3 Fishing	1.04	1.39	1.77	2.08	2.38	2.54	2.80	3.03	3.11	2.96	3.13	4.5	3.0	-4.8	1.1
4 Mining & Quarrying	1.32	1.67	2.38	3.37	3.59	3.74	4.08	4.43	5.06	5.36	5.46	5.5	5.6	5.9	1.9
Sub-total: Primary Sector	105.46	121.16	140.69	135.59	155.10	177.62	178.05	174.61	195.26	185.11	204.44	2.5	2.0	-5.2	10.4
5 Manufacturing	17.50	23.09	31.35	44.56	46.77	53.20	59.62	60.26	62.81	68.58	71.08	5.2	4.2	9.2	3.6
5.1 Registered	(9.55)	(12.86)	(18.58)	(28.75)	(29.20)	(34.89)	(38.86)	(38.91)	(39.70)	(44.30)	(45.89)	(5.9)	(4.0)	(11.6)	(3.6)
5.2 Unregistered	(7.95)	(10.23)	(12.77)	(15.81)	(17.57)	(18.31)	(20.76)	(21.35)	(23.11)	(24.28)	(25.19)	(4.4)	(4.7)	(5.1)	(3.7)
6 Construction	7.38	8.41	11.38	16.03	19.38	19.93	19.79	19.43	20.97	23.73	25.63	4.3	3.7	13.2	8.0
7 Electricity, Gas & Water Supply	0.49	0.78	1.40	2.61	3.59	4.18	4.74	4.98	5.72	6.35	6.58	10.3	6.7	11.0	3.6
Sub-total: Secondary Sector	25.37	32.28	44.13	63.20	69.74	77.31	84.15	84.67	89.50	98.66	103.29	5.2	4.2	10.2	4.7
8 Transport, Storage and Communication	6.33	8.05	11.03	14.99	17.29	18.89	21.82	22.54	24.45	25.94	27.15	5.6	5.3	6.1	4.7
8.1 Railways	(2.56)	(2.99)	(4.14)	(5.40)	(5.84)	(6.10)	(6.23)	(6.45)	(7.12)	(7.64)	(7.93)	(4.2)	(3.8)	(7.3)	(3.8)
8.2 Other Transport & Storage	(3.14)	(4.19)	(5.68)	(7.73)	(9.31)	(10.41)	(12.77)	(13.16)	(14.19)	(14.93)	(15.66)	(6.2)	(6.0)	(5.2)	(4.9)
8.3 Communication	(0.63)	(0.87)	(1.21)	(1.86)	(2.14)	(2.38)	(2.82)	(2.95)	(3.14)	(3.37)	(3.56)	(6.6)	(5.9)	(7.3)	(5.6)
9 Trade, Hotels & Restaurants	14.50	18.31	24.20	31.43	34.69	40.71	43.34	44.76	48.80	51.21	53.71	5.0	4.0	4.9	4.9
10 Banking and Insurance	1.60	2.44	3.34	4.65	5.39	6.47	7.66	7.06	8.41	10.03	11.15	6.9	8.1	19.3	11.2
11 Real Estate, Ownership of Dwelling & Business Services	7.59	8.51	9.58	10.56	11.27	14.51	15.62	16.04	16.55	17.08	17.65	3.2	2.8	3.2	3.3
12 Public Administration and Defense	4.75	5.52	7.69	11.76	13.85	16.35	19.78	20.97	22.49	23.35	24.90	6.4	6.2	4.7	5.7
13 Other Services	10.65	12.32	14.59	17.89	19.75	17.52	18.93	19.41	19.14	19.65	20.20	2.4	2.1	2.7	2.8
Sub-total: Tertiary Sector	45.42	55.15	70.43	91.28	102.24	114.45	127.15	130.78	139.84	147.46	154.76	4.6	4.4	5.4	5.0
TOTAL: GDP at Factor Cost	176.25	208.59	255.25	290.07	327.08	369.38	389.35	390.06	424.60	431.23	462.49	3.6	3.3	1.6	7.2

a/ Data at 1960/61 prices have been converted into 1970/71 prices using the price deflators derived from 1970/71 data in CSO, National Accounts Statistics, 1960/61-1974/75, October 1976.

Sources: 1. CSO, National Accounts Statistics, 1960/61 - 1972/73, January 1975; 1960/61 - 1974/75, October 1976; 1970/71 - 1975/76, January 1978; and Press Note dated January 8, 1979.
2. World Bank estimates.

Table 2.3

GROSS SAVINGS AND INVESTMENT
(in Rs billion)

		1950/51	1955/56	1960/61	1965/66	1968/69	1970/71	1973/74	1974/75	1975/76	1976/77	1977/78
I	Gross Domestic Savings					(at current prices)						
	Households	n.a.	n.a.	13.64	25.86	34.84	49.58	73.02	83.25	105.89	n.a.	n.a.
	Private Corporate and Cooperatives	n.a.	n.a.	2.74	3.98	4.07	6.47	10.58	14.90	11.54	n.a.	n.a.
	Public Sector	n.a.	n.a.	4.25	8.07	8.06	12.53	18.09	28.73	35.05	n.a.	n.a.
	Total	9.75	14.30	20.63	37.91	46.97	68.59	101.70	126.48	152.48	185.38	194.98
II	Foreign Savings	- 0.21	0.39	4.81	5.99	4.16	3.94	3.92	6.52	- 1.17	-11.57	- 9.62
III	Total Investible Resources (I + II)	9.54	14.69	25.44	43.90	51.13	72.53	107.62	133.00	151.31	173.81	185.36
IV	Errors & Omissions a/	1.76	-0.53	0.39	0.37	4.27	2.67	- 0.26	12.95	14.95	7.40	- 1.27
V	Total Gross Capital Formation (III + IV)	11.30	14.16	25.83	44.27	55.40	75.20	107.36	145.95	166.26	181.21	184.09
VI	Changes in Stocks	1.60	1.33	4.27	2.95	1.64	11.38	18.49	38.13	31.33	24.40	11.52
VII	Total Gross Fixed Capital Formation (V-VI)	9.70	12.83	21.56	41.32	53.76	63.82	88.87	107.82	134.93	156.81	172.57
	A. By Type of Asset											
	Construction	7.29	8.10	13.37	23.60	33.36	40.36	53.18	63.76	76.07	90.50	101.50
	Machinery & Equipment	2.41	4.73	8.19	17.72	20.40	23.46	35.69	44.06	58.86	66.31	71.07
	B. By Sector											
	Public Sector	2.24	5.33	10.55	20.46	21.11	24.34	39.75	41.73	55.13	65.88	70.48
	of which: Administration	(n.a.)	(n.a.)	(7.16)	(12.57)	(12.58)	(14.16)	(25.17)	(24.45)	(30.25)	n.a.	n.a.
	Non-Dept. Enterprises	(n.a.)	(n.a.)	(3.39)	(7.89)	(8.53)	(10.18)	(14.58)	(17.28)	(24.88)	n.a.	n.a.
	Private Sector	7.46	7.50	11.01	20.86	32.65	39.48	49.12	66.09	79.80	90.93	102.09
	of which: Private Corporate	(n.a.)	(n.a.)	(3.26)	(3.98)	(3.56)	(6.51)	(11.37)	(13.23)	(20.02)	(14.05)	(15.25)
	Households	(n.a.)	(n.a.)	(7.75)	(16.88)	(29.09)	(32.97)	(37.75)	(52.86)	(59.78)	(76.88)	(86.84)
						(at 1970/71 prices)						
I	Total Investible Resources	23.74	31.26	43.19	59.35	57.29	72.53	82.31	80.84	85.85	96.39	99.82
II	Errors & Omissions a/	2.98	-0.90	0.66	0.51	4.82	2.67	- 0.20	7.87	8.40	4.10	- 0.68
III	Total Gross Capital Formation (I + II)	26.72	30.36	43.85	59.86	62.11	75.20	82.11	88.71	94.25	100.49	99.14
IV	Changes in Stocks	3.34	3.19	7.70	4.22	1.79	11.38	13.18	21.91	18.16	13.53	6.20
V	Total Gross Fixed Capital Formation (III-IV)	23.38	27.17	36.15	55.64	60.32	63.82	68.93	66.80	76.09	86.96	92.94
	A. By Type of Asset											
	Construction	16.43	17.54	23.02	32.40	38.26	40.36	39.87	38.88	42.33	50.19	54.66
	Machinery & Equipment	6.95	9.63	13.11	23.24	22.06	23.46	29.06	27.92	33.76	36.77	38.28
	B. By Sector											
	Public Sector	5.40	11.40	17.72	27.68	23.68	24.34	30.70	25.86	31.09	36.53	37.96
	of which: Administration	(n.a.)	(n.a.)	(12.00)	(17.00)	(14.11)	(14.16)	(19.44)	(15.15)	(17.06)	(n.a.)	(n.a.)
	Non-Dept. Enterprises	(n.a.)	(n.a.)	(5.72)	(10.68)	(9.57)	(10.18)	(11.26)	(10.71)	(14.03)	(n.a.)	(n.a.)
	Private Sector	17.98	15.77	18.43	27.96	36.64	39.48	38.23	40.94	45.00	50.43	54.98
	of which: Private Corporate	(n.a.)	(n.a.)	(5.46)	(5.33)	(4.00)	(6.51)	(8.85)	(8.20)	(11.29)	(7.79)	(8.21)
	Households	(n.a.)	(n.a.)	(12.97)	(22.63)	(32.64)	(32.97)	(29.38)	(32.74)	(33.71)	(42.64)	(46.77)

a/ Errors & omissions is the difference between the estimate of total investible resources based on financial flows and the estimate of total gross capital formation based on physical flows.

Sources: 1. CSO, National Accounts Statistics, 1960/61 - 1972/73, Disaggregated Tables, March 1975; 1960/61 - 1974/75, October 1976; 1970/71 - 1975/76, January 1978; and Press Note dated January 8, 1979.
2. World Bank estimates.

Table 2.4

DISPOSABLE INCOME AND ITS USE
(in Rs billion)

	1950/51	1955/56	1960/61	1965/66	1968/69	1970/71	1973/74	1974/75	1975/76	1976/77	1977/78
					(at current prices)						
Gross Domestic Product at Market Prices	95.64	102.61	150.18	241.12	332.79	404.61	591.86	700.34	738.80	796.23	871.20
Factor Income Payments [a]	- 0.28	- 0.06	- 0.58	- 1.47	- 2.41	- 2.54	- 2.92	- 1.96	- 2.15	- 1.92	- 1.92
Other Current Transfers	0.40	0.40	0.28	0.79	1.28	1.23	1.92	2.74	5.28	7.77	14.00 [b]
Disposable Income	95.76	102.95	150.50	240.44	331.66	403.30	590.86	701.12	741.93	802.08	883.28
Gross Domestic Savings	9.75	14.30	20.63	37.91	46.97	68.59	103.70	126.48	152.48	185.38	194.98
Final Consumption of which:	98.30	102.60	130.54	208.24	292.92	339.18	499.05	593.35	600.86	613.61	674.77
Private Consumption	(92.70)	(95.40)	(119.68)	(185.28)	(262.42)	(301.45)	(448.48)	(533.48)	(529.28)	(535.87)	(590.72)
Public Consumption	(5.60)	(7.20)	(10.86)	(22.96)	(30.50)	(37.73)	(50.57)	(59.87)	(71.58)	(77.74)	(84.05)
Statistical Discrepency	-12.29	-13.95	- 0.67	- 5.71	- 8.23	- 4.47	- 11.89	-18.71	-11.41	3.09	13.53
					(at 1970/71 prices)						
Gross Domestic Product at Market Prices	185.96	223.41	271.27	319.75	357.08	404.61	426.49	425.76	464.83	472.07	504.32
Factor Income Payments [a]	- 0.46	- 0.86	- 0.89	- 2.08	- 2.51	- 2.54	- 2.10	- 1.19	- 0.77	- 0.70	- 0.75
Other Current Transfers	0.65	0.62	0.43	1.12	1.33	1.23	1.39	1.15	1.88	2.85	5.49
Disposable Income	186.15	223.17	271.11	318.79	355.90	403.30	425.78	423.42	465.94	474.22	509.06
Gross Domestic Savings	22.94	30.69	34.85	51.65	53.01	68.59	79.28	76.89	86.54	102.82	105.00
Final Consumption of which:	187.10	222.72	237.47	274.71	311.72	339.18	355.07	357.83	386.57	369.58	396.26
Private Consumption	(176.44)	(207.08)	(215.24)	(242.18)	(278.11)	(301.45)	(322.61)	(320.52)	(325.02)	(324.55)	(347.29)
Public Consumption	(10.66)	(15.64)	(22.23)	(32.53)	(33.61)	(37.73)	(30.46)	(37.31)	(61.55)	(45.03)	(46.97)
Statistical Discrepency	- 23.89	- 30.24	- 1.21	- 7.57	- 8.83	- 4.47	- 8.57	-11.30	- 7.17	1.82	7.80

Note: Retained earnings of foreign companies and other current transfers have been deflated by the implicit price deflator of factor income payments. Statistical discrepencies have been deflated by implicit price deflator of disposable income. Final consumption is residual. The implicit price deflator of final consumption has been used to estimate private consumption in 1950/51 & 1955/56 at 1970/71 prices.

a/ Excludes retained earnings of foreign companies.
b/ Rough estimate.

Sources: 1. CSO, National Accounts Statistics 1948/49-1962/63, February 1964; 1960/61-1972/73, Disaggregated Tables, March 1975; 1970/71-1975/76, January 1978; and Press Note dated January 8, 1979.
2. CSO, Statistical Abstract of the Indian Union, 1961.
3. Statistical Appendix Table 2.1 (b).

Table 2.5

AVAILABLE RESOURCES AND THEIR USE
(in Rs billion)

	1950/51	1955/56	1960/61	1965/66	1968/69	1970/71	1973/74	1974/75	1975/76	1976/77	1977/78
				(at current prices)							
Disposable Income	95.76	102.95	150.50	240.44	331.66	403.30	590.86	701.12	741.93	802.08	883.28
Foreign Resources	- 1.31	0.40	4.23	6.14	4.55	3.58	4.64	6.26	7.58	1.93	6.50
Available Resources	94.45	103.35	154.73	246.58	336.21	406.88	595.50	707.38	749.51	804.01	889.78
Final Consumption	98.30	102.60	130.54	208.24	292.92	339.18	499.05	593.35	600.86	613.61	674.77
Gross Fixed Capital Formation	9.70	12.83	21.56	41.32	53.76	63.82	88.87	107.82	134.93	156.81	172.57
of which: Public Sector	(2.24)	(5.33)	(10.55)	(20.46)	(21.11)	(24.34)	(39.75)	(41.73)	(55.13)	(65.88)	(70.48)
Private Corporate	(7.46)	(7.50)	(3.26)	(3.98)	(3.56)	(6.51)	(11.37)	(13.23)	(20.02)	(14.05)	(15.25)
Household			(7.75)	(16.88)	(29.09)	(32.97)	(37.75)	(52.86)	(59.78)	(76.88)	(86.84)
Change in Stocks	1.60	1.33	4.27	2.95	1.64	11.38	18.49	38.13	31.33	24.40	11.52
of which: Public Stocks	(0.35)	(-0.34)	(0.87)	(1.70)	(0.56)	(3.76)	(8.04)	(17.04)	(22.41)	(15.39)	(-0.12)
Private Stocks	(1.25)	(1.67)	(3.40)	(1.25)	(1.08)	(7.62)	(10.45)	(21.09)	(8.92)	(9.01)	(1.64)
Errors & Omissions (in Gross Capital Formation)	- 1.76	0.53	- 0.39	- 0.37	- 4.27	- 2.67	0.26	- 12.95	- 14.95	- 7.40	1.27
Change in Foreign Exchange Reserves	- 1.10	0.01	- 0.58	0.15	0.39	- 0.36	0.72	- 0.26	8.75	13.50	16.12
Statistical Discrepancy	-12.29	-15.95	- 0.67	- 5.71	- 8.23	- 4.47	-11.89	- 18.71	- 11.41	3.09	13.53
				(at 1970/71 prices)							
Disposable Income	186.15	223.17	271.11	318.79	355.90	403.30	425.78	423.42	465.94	474.22	509.06
Foreign Resources	- 3.26	0.85	7.18	8.30	5.10	3.58	3.55	3.81	4.30	1.07	3.50
Available Resources	182.89	224.02	278.29	327.09	361.00	406.88	429.33	427.23	470.24	475.29	512.56
Final Consumption	187.10	222.72	237.47	274.71	311.72	339.18	355.07	357.83	386.57	389.58	396.26
Gross Fixed Capital Formation	23.38	27.17	36.15	55.64	60.32	63.82	68.93	66.80	76.09	86.96	92.94
of which: Public Sector	(5.40)	(11.40)	(17.72)	(27.68)	(23.68)	(24.34)	(30.70)	(25.86)	(51.09)	(36.53)	(37.96)
Private Corporate	(17.98)	(15.77)	(5.46)	(5.33)	(4.00)	(6.51)	(8.85)	(8.20)	(11.29)	(7.79)	(8.21)
Household			(12.97)	(22.63)	(32.64)	(32.97)	(29.38)	(32.74)	(33.71)	(42.64)	(46.77)
Change in Stocks	3.34	3.19	7.70	4.22	1.79	11.38	13.18	21.91	18.16	13.53	6.20
Errors & Omissions (in Gross Capital Formation)	- 2.98	0.90	- 0.66	- 0.51	- 4.82	- 2.67	0.20	- 7.87	- 8.40	- 4.10	0.68
Change in Foreign Exchange Reserves	- 4.06	0.28	- 1.16	0.60	0.82	- 0.36	0.52	- 0.14	4.99	7.50	8.68
Statistical Discrepancy	-23.89	-30.24	- 1.21	- 7.57	- 8.83	- 4.47	- 8.57	-11.30	- 7.17	1.82	7.80

Sources: 1. CSO, National Accounts Statistics, 1948/49 - 1962/63, February 1964; 1960/61 - 1972/73, Disaggregated Tables, March 1976; 1970/71 - 1975/76, January 1978; and Press Note dated January 8, 1979.

2. World Bank estimates.

Table 2.6 (a)

GROSS DOMESTIC CAPITAL FORMATION BY INDUSTRY OF USE
(at current prices - in Rs billion)

Sector	1950/51	1955/56	1960/61	1965/66	1968/69	1970/71	1973/74	1974/75	1975/76	1976/77	1977/78
1 Agriculture	2.08	3.28	3.95	7.21	9.49	13.22	17.08	16.95	20.29	26.85	29.90
2 Forestry & Logging	0.02	0.03	0.08	0.15	0.16	0.24	0.28	0.31	0.37		
3 Fishing	0.03	0.13	0.13	0.41	0.38	0.58	0.86	1.60	1.11		
4 Mining & Quarrying	0.07	0.13	0.40	0.53	0.72	1.20	1.86	3.42	4.56		
Sub-total: Primary Sector	2.20	3.57	4.56	8.30	10.75	15.24	20.08	22.28	26.33		
5 Manufacturing	1.11	2.82	7.07	12.26	11.58	19.27	29.71	47.82	41.63		
5.1 Registered	(0.95)	(2.51)	(6.50)	(10.89)	(8.54)	(13.95)	(20.96)	(36.35)	(34.71)	(37.47)	(44.22)
5.2 Unregistered	(0.16)	(0.31)	(0.57)	(1.37)	(3.04)	(5.32)	(8.75)	(11.47)	(7.52)		
6 Construction	0.07	0.66	0.92	1.39	1.34	1.52	0.56	1.95	2.99		
7 Electricity, Gas & Water Supply	0.21	0.82	1.22	4.06	4.28	6.17	6.47	8.59	10.69		
Sub-total: Secondary Sector	1.39	4.30	9.21	17.71	17.20	26.96	36.74	58.36	55.31		
8 Transport, Storage and Communication	1.04	1.99	3.45	7.02	5.60	7.45	10.47	12.76	13.88		
8.1 Railways	(0.60)	(1.29)	(1.74)	(3.41)	(2.08)	(2.51)	(3.21)	(3.50)	(3.87)	(3.28)	(4.72)
8.2 Other Transport & Storage	(0.35)	(0.58)	(1.54)	(3.23)	(2.99)	(4.38)	(6.10)	(7.74)	(8.06)		
8.3 Communication	(0.09)	(0.12)	(0.17)	(0.38)	(0.53)	(0.56)	(1.16)	(1.52)	(1.95)	(2.33)	(2.90)
9 Trade, Hotels & Restaurants	1.10	1.06	1.30	-0.15	2.10	6.06	8.98	7.26	16.04		
10 Banking and Insurance	0.03	0.01	0.10	0.18	0.24	0.27	0.61	0.51	0.49		
11 Real Estate, Ownership of Dwelling & Business Services	2.89	2.23	3.08	5.67	11.36	10.27	17.43	17.29	16.16		
12 Public Administration & Defense	0.68	1.09	3.07	3.92	2.57	4.71	10.63	11.53	11.65	10.35	10.15
13 Other Services	0.21	0.44	0.67	1.25	1.31	1.57	2.68	3.01	2.89		
Sub-total: Tertiary Sector	5.95	6.82	11.67	17.89	23.18	30.33	50.80	52.36	61.11		
TOTAL: Gross Domestic Capital Formation	9.54	14.69	25.44	43.90	51.13	72.53	107.62	133.00	151.31 a/	173.81	185.36

a/ Includes Rs. 8.56 billion unallocated among sectors.

Sources: CSO, National Accounts Statistics, 1960/61 - 1974/75, October 1976; 1970/71 - 1975/76, January 1978; and Press Note dated January 8, 1979.

Table 2.6 (b)

GROSS DOMESTIC CAPITAL FORMATION BY INDUSTRY OF USE
(At 1970/71 prices - in Rs billion)

Sector	1950/51 a/	1955/56 a/	1960/61 a/	1965/66 a/	1968/69 a/	1970/71	1973/74	1974/75	1975/76	1976/77	1977/78	Average Compound Growth Rate (% per annum) 1950/51-1975/76	1970/71-1977/78	1976/77	1977/78
1 Agriculture	5.08	7.16	7.07	10.58	10.74	13.22	11.77	10.64	11.55			3.3			
2 Forestry & Logging	0.03	0.07	0.13	0.20	0.17	0.24	0.21	0.20	0.22			8.3			
3 Fishing	0.17	0.42	0.32	0.69	0.47	0.58	0.62	1.02	0.56			4.9			
4 Mining & Quarrying	0.16	0.26	0.64	0.70	0.83	1.20	1.45	2.18	2.58			11.8			
Sub-total: Primary Sector	5.44	7.91	8.16	12.17	12.21	15.24	14.05	14.04	14.91			4.1			
5 Manufacturing	3.02	6.22	11.80	16.57	13.40	19.27	23.12	28.39	23.42			8.6			
5.1 Registered	(2.64)	(5.51)	(10.78)	(14.75)	(9.87)	(13.95)	(15.90)	(21.54)	(19.66)			8.4			
5.2 Unregistered	(0.38)	(0.71)	(1.02)	(1.82)	(3.53)	(5.32)	(7.22)	(6.85)	(3.76)			9.6			
6 Construction	0.13	1.15	1.30	1.51	1.25	1.52	0.38	1.23	1.58			10.5			
7 Electricity, Gas & Water Supply	0.53	1.68	1.97	5.24	4.78	6.17	5.27	5.74	6.35			10.7			
Sub-total: Secondary Sector	3.68	9.05	15.07	23.32	19.43	26.96	28.77	35.36	31.35			9.0			
8 Transport, Storage and Communication	2.44	4.03	5.46	8.96	6.30	7.45	8.18	7.97	8.10			4.9			
8.1 Railways	(1.39)	(2.66)	(2.84)	(4.50)	(2.37)	(2.51)	(2.40)	(2.20)	(2.25)			1.9			
8.2 Other Transport & Storage	(0.85)	(1.13)	(2.35)	(3.98)	(3.32)	(4.38)	(4.87)	(4.80)	(4.72)			7.1			
8.3 Communication	(0.20)	(0.24)	(0.27)	(0.48)	(0.61)	(0.56)	(0.91)	(0.97)	(1.13)			7.2			
9 Trade, Hotels & Restaurants	2.18	2.34	2.10	0.21	2.18	6.06	6.80	4.20	9.17			5.9			
10 Banking and Insurance	0.07	0.04	0.18	0.25	0.27	0.27	0.47	0.28	0.28			5.8			
11 Real Estate, Ownership of Dwelling & Business Services	6.94	4.97	5.48	7.76	13.03	10.27	13.71	10.21	8.23			0.7			
12 Public Administration & Defense	1.51	2.31	5.21	5.35	3.12	4.71	8.15	7.06	6.58			6.0			
13 Other Services	0.54	0.95	1.14	1.61	1.51	1.57	2.18	1.72	1.63			4.5			
Sub-total: Tertiary Sector	13.68	14.64	19.57	24.14	26.41	30.33	39.34	31.44	33.99			3.7			
TOTAL: Gross Domestic Capital Formation	22.80	31.60	42.80	59.63	58.05	72.53	82.31	80.84	85.85 b/	96.39	99.82	5.5	4.7	12.3	3.6

a/ Data in 1960/61 prices have been converted into 1970/71 prices using price deflators derived from 1970/71 data in CSO, National Accounts Statistics, 1960/61 - 1974/75, October 1976.

b/ Includes Rs 5.6 billion unallocated among sectors.

Source: CSO, National Accounts Statistics, 1960/61-1974/75, October 1976; 1970/71-1975/76, January 1978; and Press Note dated January 8, 1979.

Table 2.7

GROWTH OF TOTAL AND PER CAPITA NET DOMESTIC PRODUCT BY STATES
(1960/61 to 1975/76)

	Net Domestic Product At Factor Cost at 1960/61 prices (Rs. billion)			Per Capita Net Domestic Product at Factor Cost at 1960/61 prices (Rs.)		
	1960/61	1975/76	Average Compound Growth Rate (% per annum)	1960/61	1975/76	Average Compound Growth Rate (% per annum)
Andhra Pradesh	9.83	15.87	3.2	275	330	1.22
Assam a/	3.36	6.25	4.2	315	374	1.15
Bihar	9.93	13.15 b/	1.9	215	214 b/	- 0.03
Gujarat	7.38	12.08	3.3	362	395	0.58
Haryana	2.45	5.32	5.3	327	471	2.46
Himachal Pradesh	1.01 c/	1.37	3.9	314 c/	361	1.76
Jammu & Kashmir	0.95	1.71	4.0	269	329	1.35
Karnataka d/	6.67	13.49	4.8	286	407	2.38
Kerala	4.32	6.98	3.3	259	297	0.92
Madhya Pradesh	8.32	13.05	3.0	260	281	0.52
Maharashtra	15.97	26.85	3.5	409	478	1.04
Manipur	0.12	0.25	5.0	154	201	1.79
Orissa	3.74	6.89 e/	4.2	216	288 e/	1.94
Punjab	4.04	8.15	4.8	366	551	2.76
Rajasthan	5.59	8.89	3.1	284	311	0.61
Tamil Nadu	11.12	16.30	2.6	334	358	0.46
Tripura	0.28	0.67	6.0	249	374	2.75
Uttar Pradesh	18.43	25.85	2.3	252	270	0.46
West Bengal	13.39	18.72	2.3	390	384	- 0.10
ALL-INDIA f/	133.35	218.97	3.4	307	363	1.12

Note: The estimates of net domestic product have been prepared and released by the respective State Statistical Bureaus. The estimates are prepared following, to the extent possible, the standard methodologies recommended by the Working Group on State Income. However, owing to differences in methodology, source material used and the base year for constant price series these estimates are not strictly comparable amongst the states. The estimates are as on July 31, 1978 and they are likely to undergo revision for the year 1975/76 as and when better and more recent data become available.

a/ Converted to 1960/61 prices from 1948/49 prices.
b/ World Bank estimate.
c/ Relates to 1967/68.
d/ Converted to 1960/61 prices from 1956/57 prices.
e/ Converted to 1960/61 prices from 1970/71 prices.
f/ Including States and Union Territories not listed above.

Source: Central Statistical Organization.

Table 3.1

MERCHANDISE EXPORTS
(at current prices - in US$ million)

Commodity	1950/51	1955/56	1960/61	1965/66	1968/69	1970/71	1973/74	1974/75	1975/76	1976/77	1977/78	Average Compound Growth Rate (% per annum) 1950/51-1975/76	1970/71-1977/78	1976/77	1977/78
I Agricultural Products	328.8	380.9	420.7	497.0	478.5	519.3	858.6	1,257.6	1,393.3	1,362.5	1,616.4	5.9	17.6	- 2.2	18.6
Tea	168.9	229.2	259.6	241.2	208.6	197.7	187.4	285.9	273.8	327.9	648.5	2.0	18.5	19.8	97.8
Oil Cakes	0.1	11.1	30.0	72.8	66.0	73.9	228.7	120.3	111.5	262.2	155.7	32.4	11.2	135.2	- 40.6
Coffee	2.8	3.2	15.2	27.2	24.0	53.5	59.1	64.4	77.0	141.0	223.2	14.2	31.1	83.1	58.3
Sugar	0.8	2.0	5.1	22.0	13.5	36.8	55.0	425.0	545.9	165.7	20.2	29.8	- 8.2	- 69.6	12.2
Spices	53.4	22.4	34.9	48.5	33.5	51.8	70.7	77.0	82.7	83.9	160.0	1.8	17.5	1.5	90.7
Fish	5.2	7.9	9.7	14.3	30.3	41.7	114.5	83.0	147.0	202.0	203.6	14.3	25.4	37.4	0.8
Cashew	18.0	27.3	39.7	57.5	81.2	69.4	95.5	148.1	111.1	118.7	174.6	7.6	14.1	6.8	47.1
Vegetable Oils a/	53.0	72.1	17.9	6.6	15.6	9.4	39.6	42.2	39.8	56.4	24.2	- 1.1	14.5	41.7	- 57.1
Essential Oils	26.6	5.7	8.6	4.9	5.8	5.1	8.1	11.7	4.5	4.7	6.4	- 6.9	3.3	4.4	36.2
II Crude Materials	78.3	138.0	135.4	196.8	217.2	252.7	335.8	463.6	641.1	637.2	538.8	8.8	11.4	- 0.6	- 15.4
Raw Cotton	10.4	62.3	18.2	20.4	14.8	18.6	41.6	19.1	47.7	30.2	0.8	6.3	- 36.2	-36.7	- 97.4
Unmanufactured Tobacco	29.6	22.4	30.7	41.1	44.2	41.9	87.8	100.8	107.6	108.5	132.2	5.3	17.8	0.7	22.1
Iron Ore	0.5	13.2	35.8	88.4	117.8	152.9	170.5	201.1	247.1	266.8	281.2	28.2	- 21.5	8.0	5.4
Mica	21.0	17.6	21.2	23.7	18.0	20.7	16.7	22.8	16.9	19.4	20.2	- 0.9	- 0.5	14.8	4.1
Manganese	16.8	22.5	29.5	23.2	18.0	18.6	12.1	22.1	20.2	21.4	12.6	0.7	- 5.4	5.9	- 41.1
Silver	n.a.	n.a.	n.a.	n.a.	4.4	n.a.	7.1	97.7	201.6	191.1	91.8	n.a.	n.a.	- 5.2	- 52.0
III Manufactured Items	568.8	457.3	571.7	782.4	977.2	976.3	1,543.7	1,846.6	1,992.4	2,848.6	3,282.5	5.1	18.9	43.0	15.2
Jute Manufactures	239.0	248.3	283.8	384.0	290.6	253.9	292.0	372.1	290.0	225.0	286.0	0.8	1.7	- 22.4	27.1
Cotton Textile															
i) Mill-made	225.1	101.2	110.8	98.5	87.3	90.0	208.8	162.5	140.5	238.4	164.9	- 1.9	9.0	69.7	- 30.8
ii) Handloom	22.8	17.8	10.0	17.5	6.7	10.4	41.6	36.5	45.8	60.6	94.5	2.8	37.1	32.3	55.9
Coir Manufactures	22.8	20.2	18.2	22.5	18.4	17.3	19.7	22.5	22.0	26.8	27.9	- 0.1	7.1	21.8	4.1
Clothing	0.8 d/	n.a.	1.8	13.4	19.6	40.3	127.9	173.2	234.6	372.7	584.7	25.5 e/	38.0	58.9	3.2
Cotton Yarn and Thread	4.2	9.5	9.3	14.6	19.1	29.6	14.6	22.9	7.4	31.5	35.3	2.3	2.5	325.7	12.1
Leather and Leather Manufactures	54.5 e/	48.3	56.6	72.6	206.5	108.8	239.5	207.4	263.6	264.4	306.8	6.5	16.0	0.3	16.0
Gems	n.a.	n.a.	0.3	31.0	59.7	55.8	137.2	123.4	171.6	321.1	637.4	n.a.	41.6	87.1	98.5
Other Handicrafts	n.a.	n.a.	n.a.	21.4	32.4	37.3	85.6	110.5	119.6	188.7	258.5	n.a.	30.4	57.8	26.4
Iron & Steel b/	3.3 d/	n.a.	20.3	26.5	105.2	121.6	33.6	26.4	78.6	325.0	217.6	13.5 e/	8.7	313.5	-33.0
Engineering Goods b/	1.2 d/	n.a.	37.8	41.6	89.8	155.3	258.9	447.1	477.3	633.5	720.1	27.1 e/	24.5	32.7	13.7
Chemicals c/	17.9	12.0	7.2	19.2	25.8	39.2	64.6	116.5	98.6	124.0	136.3	7.1	19.5	25.8	9.9
Mineral Fuels	n.a.	n.a.	15.6	19.6	16.1	16.8	19.7	25.6	42.8	36.9	32.5	n.a.	9.9	- 13.8	-11.9
IV Others	285.4 f/	302.7 f/	258.7	215.6	157.6	298.6	500.8	605.8	645.5	504.8	837.7	3.3	15.9	40.2	- 7.4
V TOTAL EXPORTS	1,261.3	1,278.9	1,386.5	1,691.8	1,810.5	2,046.9 h/	3,238.9	4,173.6	4,672.1	5,753.1	6,287.1 6,275.5 i/	5.4	17.4	25.1	9.1

a/ Edible oils excluding vanaspati.
b/ In accordance with the classification followed by the Ministry of Commerce. In 1972 several manufactured items formerly included under Iron & Steel were reclassified as Engineering Goods. Data from 1973/74 onwards follow the new classification and hence are not comparable with data for earlier years.
c/ Excluding essential oils and plastics.
d/ Relates to 1951/52.
e/ Excludes footwear.
f/ Includes items listed above for which data are not available.
g/ Relates to the period 1951/52 to 1975/76.
h/ Unadjusted total. Due to a change in recording technique, the DGCIS data probably overstate exports by about 5% in 1970/71.
i/ Revised total, including revised monthly data through December 1977.

Source: Ministry of Commerce, Department of Commercial Intelligence and Statistics, Monthly Statistics of the Foreign Trade of India.

Table 3.2

MERCHANDISE IMPORTS
(at current prices - in US$ million)

	1950/51	1955/56	1960/61	1965/66	1966/67	1968/69	1970/71	1973/74	1974/75	1975/76	1976/77	1977/78
Foodgrains	n.a.	n.a.	378.4	670.3	854.0	443.0	271.8	597.0	951.3	1,537.3	958.7	121.2
Wheat	112.4	25.0	321.7	556.0	564.1	346.0	231.2	444.2	875.4	1,399.0	894.1	109.3
Rice	51.5	8.4	47.1	88.0	108.9	76.6	39.8	8.3	15.3	53.8	51.4	7.2
Others	n.a.	n.a.	9.6	26.3	181.0	20.4	0.8	144.5	60.6	84.5	13.2	4.7
POL	116.4	116.7	146.0	143.2	84.1	177.1	181.2	719.1	1,450.5	1,416.9	1,581.1	1,816.6
Crude Petroleum	n.a.	18.8	36.5	73.2	48.1	127.5	141.2	535.3	1,197.2	1,215.9	1,288.3	1,442.4
Petroleum Products	n.a.	97.9	109.5	70.0	36.0	49.6	40.0	183.8	253.3	201.0	292.8	374.2
Fertilizers	25.9 a/	4.7 a/	22.3	82.1	132.2	228.7	100.9	242.8	617.6	609.5	214.4	301.5
Nitrogeneous Fertilizers	n.a.	n.a.	20.3	67.2	94.3	169.4	88.5	122.5	417.4	405.8	173.7	179.8
Phosphatic Fertilizers	n.a.	n.a.	0.1	0.5	0.1	1.5	0.1	-	n.a.	21.8	0.9	7.5
Potassic Fertilizers	n.a.	n.a.	1.9	8.7	8.6	19.1	6.1	37.8	54.3	34.2	34.3	65.7
Complex Fertilizers	n.a.	n.a.	-	5.7	29.2	38.7	6.2	82.5	145.9	147.7	5.5	50.6
Fertilizer Raw Materials b/	n.a.	n.a.	10.8	26.8	34.6	40.5	32.4	48.4	119.4	100.7	97.6	92.6
Iron and Steel	42.0	118.8	257.3	205.7	130.6	114.9	196.1	320.2	531.2	360.4	245.5	303.1
Non-Ferrous Metals	59.4	51.6	99.4	144.4	114.2	118.7	159.2	180.1	224.0	116.0	175.7	222.9
Copper	17.9	20.0	46.1	70.1	52.1	52.3	80.3	90.9	91.5	25.2	51.6	59.8
Nickel	n.a.	0.3	3.0	4.0	1.9	7.7	16.5	11.1	17.3	18.8	31.0	25.8
Aluminum	6.1	10.0	14.0	13.2	20.3	6.0	4.5	3.7	3.8	11.5	2.6	13.3
Lead	4.7	4.4	5.2	12.0	13.9	8.5	13.0	14.0	23.6	10.7	20.9	33.0
Zinc	13.8	8.7	19.3	27.0	14.5	26.5	29.3	35.6	69.4	24.6	39.8	48.3
Tin	8.5	7.5	8.2	15.1	9.3	15.4	11.7	16.2	10.8	16.5	23.0	33.4
Others	8.4	0.7	3.6	3.0	2.2	2.3	3.9	8.6	7.4	8.7	6.8	9.3
Metal Ores and Scrap	0.9	1.0	1.0	4.3	7.2	8.2	14.6	17.1	7.5	23.3	34.8	52.6
Edible Oils	n.a.	n.a.	7.4	14.9	15.0	12.9	30.7	72.9	15.3	16.1	112.0	829.4
Soyabean Oil	n.a.	n.a.	-	13.0	11.9	12.7	28.2	27.5	9.1	2.6	57.2	229.6
Palm Oil	n.a.	n.a.	7.4	1.5	2.8	0.2	0.2	32.1	5.9	5.3	19.5	254.0
Groundnut Oil	n.a.	n.a.	-	-	-	-	-	-	-	2.4	22.5	42.3
Rape, Colza and Mustard Oil	n.a.	n.a.	-	0.3	0.2	n.a.	n.a.	13.2	-	5.5	12.4	266.3
Others	n.a.	n.a.	-	0.1	0.1	n.a.	2.3	0.1	0.3	0.3	0.4	37.2
Non-Edible Oils	n.a.	n.a.	2.7	13.7	4.7	12.9	20.7	10.5	28.4	3.5	20.0	31.5
Oilseeds	4.8	16.8	24.4	18.5	6.4	4.7	8.5	9.5	12.6	9.1	3.7	15.6
Cotton (raw)	211.6	120.4	171.7	97.0	75.3	120.3	131.8	66.8	34.4	32.6	138.7	232.3
Other Fibres	n.a.	n.a.	18.8	65.1	91.4	42.3	37.2	52.4	49.7	51.8	90.6	269.1 e
Wool	11.8	3.0	2.9	10.8	15.7	15.0	21.4	26.9	34.4	29.9	29.3	33.4
Synthetic Fibres	n.a.	n.a.	0.3	4.3	1.4	1.6	9.6	3.3	3.4	7.3	33.7	223.9
Others	n.a.	n.a.	15.6	50.0	74.3	25.7	6.2	22.2	11.9	14.6	17.6	11.8
Cashewnuts (raw)	6.0	10.2	20.2	31.6	26.1	41.8	39.2	37.0	45.5	38.8	20.5	21.0
Diamonds (uncut)	n.a.	n.a.	0.7	0.2	1.9	30.0	25.2	84.7	59.9	90.5	193.1	375.3
Pulp and Paper	22.2	38.4	39.5	40.7	41.9	38.3	49.8	49.4	87.0	85.2	76.4	120.2
Pulp and Waste Paper	0.9	6.2	14.1	12.4	13.0	13.9	16.4	11.9	12.3	18.5	6.8	24.8
Paper and Paper Board	21.3	32.2	25.4	28.3	28.9	24.4	33.4	37.5	74.7	66.7	69.6	95.4
Chemicals	n.a.	n.a.	157.7	138.4	140.9	149.3	155.5	216.1	298.9	242.2	255.0	451.9
Basic Chemicals	19.8	44.6	82.6	75.0	59.4	67.4	71.3	107.1	162.6	115.0	128.5	226.8
Others	n.a.	n.a.	75.1	63.4	80.5	81.9	84.2	109.0	136.3	127.2	126.5	225.1
Precision Equipment	14.0	24.2	22.0	29.4	22.9	23.0	32.5	38.9	43.1	46.9	37.6	66.1
Machinery	192.0	273.2	547.3	885.4	685.2	596.8	437.5	714.4	707.7	898.4	980.9	1,037.1
Electrical Machinery	49.9	78.9	120.2	184.4	141.2	109.0	93.8	166.8	201.8	232.0	162.6	202.5
Non-Electrical Machinery	142.1	194.3	427.1	701.0	544.0	487.8	343.7	547.6	505.9	666.4	818.3	834.6
Transport Equipment	73.4	133.4	152.0	148.1	83.0	88.4	88.7	121.2	164.5	181.6	191.0	271.0
Railway Vehicles	26.9	31.8	53.2	52.4	21.9	20.8	18.7	32.5	31.9	39.7	19.4	20.9
Road Vehicles	20.5	30.6	76.0	70.6	40.9	43.4	31.4	45.1	63.4	66.8	48.3	58.0
Aircraft	5.4	20.7	21.3	14.8	16.0	18.4	36.0	37.4	67.2	69.1	119.9	180.1
Ships g/	20.6	50.3	1.5	10.3	4.2	5.8	2.6	6.9	2.0	6.0	3.4	12.0
Other Imports	n.a.	n.a.	306.9	198.1	219.5	253.0	165.4	194.0	216.6	223.7	258.7	401.7
Food	n.a.	n.a.	50.9	41.7	60.4	52.6	51.4	68.1	75.2	75.3	90.0	129.2
Raw Materials	n.a.	n.a.	58.8	39.2	37.1	32.5	34.3	41.5	47.9	44.4	46.9	65.5
Manufactures	n.a.	n.a.	197.2	117.2	122.0	167.9	79.7	84.4	93.5	103.8	119.8	209.4
TOTAL IMPORTS	1,365.4	1,425.6	2,393.4	2,957.9	2,771.1	2,544.8	2,178.9	3,793.2	5,665.5	6,084.3	5,676.0	7,033.1 f/ 7,084.4

a/ Includes crude fertilizers.
b/ Rock phosphate, sulphur and unroasted iron pyrites, phosphoric acid and ammonia.
g/ Excludes imports of merchant ships.
f/ Revised total, including revised monthly data through December 1977.

Sources: 1. Ministry of Commerce, Department of Commercial Intelligence and Statistics, Monthly Statistics of the Foreign Trade of India.
2. Ministry of Commerce, Office of the Economic Adviser.

Table 3.3

UNIT VALUE AND VOLUME INDICES OF EXPORTS AND IMPORTS, AND INDIA'S TERMS OF TRADE
(Base 1968/69=100)

Year (April-March)	Exports		Imports		Terms of Trade	
	Volume Index	Unit Value Index (in terms of US dollars) a/	Volume Index	Unit Value Index (in terms of US dollars) a/	Gross	Net
1950/51	73	99	50	187	68	53
1951/52	58	145	63	123	109	118
1952/53	65	102	47	121	72	84
1953/54	65	93	44	112	68	83
1954/55	68	99	52	109	76	91
1955/56	75	91	55	106	73	87
1956/57	71	96	65	110	92	87
1957	77	96	74	120	96	80
1958	70	94	66	112	94	85
1959	75	94	73	104	97	91
1960/61	70	104	85	107	121	97
1961/62	74	104	80	110	108	94
1962/63	79	101	87	106	110	96
1963/64	89	99	89	109	100	91
1964/65	93	101	97	110	104	91
1965/66	87	107	102	117	117	92
1966/67 b/	84	102	99	106	118	96
1967/68	86	102	110	96	128	106
1968/69	100	100	100	100	100	100
1969/70	100	104	84	100	84	104
1970/71	106	106	87	100	82	106
1971/72	107	109	105	94	98	116
1972/73	120	117	99	94	83	124
1973/74	125	141	114	133	91	106
1974/75	133	172	100	225	75	77
1975/76	147	171	99	243	67	70
1976/77	174	176	97	233	56	76
Average Compound Growth Rate (% per annum)						
1950/51 - 1975/76	2.8	2.2	2.8	1.1 c/		
1970/71 - 1976/77	8.6	8.8	1.8	15.1		
1975/76	10.5	0.6	-1.0	8.0		
1976/77	18.4	2.9	-2.0	-4.1		

Note: The indices available on four different base periods have been converted to the base 1968/69 by chain base method.

a/ Unit value indices in terms of rupees have been converted to US dollars using the annual average exchange rates given on the inside cover of this report.

b/ Relates to the period June-March.

c/ Note that for the base year 1950/51, the unit value index for imports was exceptionally high.

Source: Ministry of Commerce, Department of Commercial Intelligence & Statistics, Calcutta.

Table 3.4

UNIT VALUE AND VOLUME INDICES OF EXPORTS - BY MAJOR COMMODITY GROUPS
(1968/69=100) a/

Commodity Group/Sub-Group	Unit Value Index (in terms of US dollars) b/									Volume Index								
	1960/61	1965/66	1966/67 c/	1968/69	1970/71	1973/74	1974/75	1975/76	1976/77	1960/61	1965/66	1966/67 c/	1968/69	1970/71	1973/74	1974/75	1975/76	1976/77
Food	101	106	101	100	101	145	190	181	180	85	99	100	100	112	121	158	163	162
Fish and Fish Preparations	55	83	97	100	103	172	146	194	250	60	55	83	100	134	220	189	253	270
Fruits and Vegetables	72	85	93	100	104	142	175	164	183	78	84	81	100	86	84	100	96	100
Coffee	94	123	103	100	126	141	165	157	345	68	92	78	100	111	175	163	205	155
Tea and Mate	124	118	109	100	96	93	120	123	129	100	99	103	100	99	95	112	106	122
Spices	102	121	112	100	141	148	192	187	241	102	115	109	100	109	142	120	131	101
Oilseed Cake	87	110	103	100	108	235	186	136	187	53	100	96	100	104	141	98	111	203
Beverages and Tobacco	83	82	69	100	104	122	146	159	153	88	123	66	100	93	165	157	158	167
Crude Materials (including inedible oils but not fuels)	132	112	102	100	104	126	149	167	171	63	90	96	100	114	128	129	129	138
Hides, Skins and Fur	153	120	156	100	99	192	52	83	110	194	245	231	100	72	14	14	4	11
Wool and Other Animal Hair	169	167	138	100	97	207	253	203	230	125	119	98	100	91	68	56	37	51
Cotton	98	102	92	100	112	148	189	166	220	118	120	121	100	93	151	54	148	94
Crude Fertilizers & Minerals	99	106	104	100	100	80	87	122	97	116	116	97	100	120	139	195	121	194
Metalliferous Ores and Metal Scrap	135	101	95	100	100	100	129	159	110	58	79	85	100	125	132	127	127	201
Animal and Vegetable Crude Materials	102	132	109	100	120	192	253	231	201	85	76	87	100	97	98	116	88	119
Mineral Fuels and Lubricants	107	115	124	100	104	143	291	381	322	90	105	97	100	100	85	85	67	70
Coal & Coke	82	117	109	100	119	137	254	627	355	238	142	81	100	126	81	94	87	127
Animal & Vegetable Oils & Fats	85	123	122	100	132	292	258	179	153	153	49	20	100	45	86	105	141	232
Chemicals	99	88	96	100	92	99	180	158	164	48	87	69	100	167	233	229	208	254
Manufactured Goods	94	102	106	100	111	150	192	174	195	73	87	77	100	92	104	94	110	145
Leather and Leather Products	121	115	128	100	102	209	217	218	281	45	54	68	100	97	109	86	110	108
Textile Yarn and Thread	94	106	94	100	102	135	189	162	174	77	93	86	100	139	89	77	50	108
Cotton Manufactures	107	96	92	100	110	164	220	185	206	96	118	92	100	101	157	104	114	153
Jute Manufactures	83	98	100	100	105	120	157	126	112	83	103	100	100	83	83	81	78	68
Floor Coverings	82	102	100	100	108	157	190	198	222	99	78	87	100	93	123	137	137	184
Non-ferrous Metals	n.a.	n.a.	n.a.	100	112	141	188	172	177	n.a.	n.a.	n.a.	100	72	72	295	630	561
Iron & Steel	n.a.	n.a.	n.a.	100	147	168	283	238	257	n.a.	n.a.	n.a.	100	78	42	36	54	173
Manufactures of Metals	n.a.	n.a.	n.a.	100	121	141	213	206	212	n.a.	n.a.	n.a.	100	134	153	176	200	302
Machinery and Transport Equipment	165	132	84	100	104	135	118	156	152	8	29	43	100	166	188	386	325	373
Miscellaneous Manufactured Articles	87	109	98	100	108	126	142	141	139	45	67	63	100	151	283	341	410	620
Clothing etc.	n.a.	n.a.	n.a.	100	100	125	137	134	133	n.a.	n.a.	n.a.	100	205	498	633	878	1392
Footwear	n.a.	n.a.	n.a.	100	122	129	154	198	197	n.a.	n.a.	n.a.	100	102	109	136	105	137
General	104	107	102	100	106	141	172	171	176	70	87	84	100	106	125	135	147	174

a/ The indices for the years 1960/61, 1965/66 and 1966/67 available on the base 1958=100, have been converted to the base 1968/69=100 by linking the two series at 1968/69.

b/ Unit value indices in terms of rupees have been converted to US dollars using the annual average exchange rates given on the inside cover of this report.

c/ The indices are based on the average of the index numbers for the ten months from June 1966 to March 1967. Consequent to the devaluation of the Indian rupee on June 6, 1966, the figures for April & May have not been taken into account as they are not comparable with the post devaluation figures.

d/ The figures for April and May have not been taken into account.

Source: Ministry of Commerce, Department of Commercial Intelligence and Statistics, Calcutta.

Table 3.5

UNIT VALUE AND VOLUME INDICES OF IMPORTS - BY MAJOR COMMODITY GROUPS
(1968/69=100) a/

Commodity Group/Sub-Group	Unit Value Index (in terms of US dollars) b/									Volume Index								
	1960/61	1965/66	1966/67 c/	1968/69	1970/71	1973/74	1974/75	1975/76	1976/77	1960/61	1965/66	1966/67 d/	1968/69	1970/71	1973/74	1974/75	1975/76	1976/77
Food	94	93	89	100	95	167	205	230	212	73	142	162	100	71	78	101	134	92
Dairy Products and Eggs	128	98	105	100	83	141	144	127	246	49	78	83	100	86	86	109	124	90
Cereals and Cereal Preparations	93	94	89	100	93	127	215	239	223	73	152	178	100	68	77	100	145	98
Fruits and Vegetables	83	96	93	100	109	127	145	141	148	84	81	72	100	85	79	85	71	49
Beverages and Tobacco	87	82	80	100	97	111	167	133	141	124	94	67	100	28	27	51	59	35
Crude Materials (including inedible oils but not fuels)	80	110	107	100	95	113	177	149	166	158	92	102	100	111	83	61	66	92
Pulp and Waste Paper	n.a.	n.a.	n.a.	100	113	124	183	235	259	n.a.	n.a.	n.a.	100	104	69	48	58	19
Wool and Other Animal Hair	115	117	116	100	92	225	221	163	198	128	62	100	100	156	80	104	124	105
Cotton	77	110	98	100	102	120	257	125	225	183	72	67	100	107	46	11	22	54
Jute	57	82	269	100	75	92	69	61	61	222	116	82	100	2	137	55	51	100
Crude Fertilizers and Minerals	69	110	85	100	73	88	163	145	126	57	68	107	100	131	151	178	139	157
Mineral Fuels and Lubricants	137	107	91	100	80	150	444	424	451	94	119	21	100	202	427	291	299	312
Petroleum Crude etc.	131	110	85	100	101	321	692	718	776	45	91	93	100	193	230	239	234	229
Animal and Vegetable Oils & Fats	121	139	117	100	128	133	249	180	193	31	90	73	100	156	244	68	46	266
Chemicals	181	123	113	100	110	134	256	299	190	27	47	67	100	62	91	93	79	71
Chemical Elements and Compounds	109	98	82	100	109	109	219	222	201	68	70	82	100	75	113	93	85	70
Dyeing, Tanning and Colouring Materials	118	98	94	100	115	152	193	218	219	193	118	104	100	90	75	62	54	65
Fertilizers Manufactured	172	124	120	100	108	149	299	379	184	7	36	59	100	41	76	97	72	66
Plastic Materials	n.a.	n.a.	n.a.	100	140	141	209	205	186	n.a.	n.a.	n.a.	100	40	72	57	57	86
Manufactured Goods	87	90	90	100	117	131	185	200	187	165	151	111	100	118	156	155	120	121
Paper and Paper Board etc.	107	104	99	100	113	141	249	276	266	94	111	123	100	121	108	122	97	107
Textile Yarn, Fabrics etc.	293	151	108	100	98	108	163	125	140	185	148	147	100	103	67	94	119	59
Iron & Steel	87	85	94	100	113	124	173	214	183	251	208	116	100	151	218	263	144	117
Copper	61	98	121	100	130	145	185	139	138	145	138	92	100	118	119	95	35	72
Nickel	66	65	n.a.	100	153	118	139	143	167	60	80	n.a.	100	144	122	159	168	242
Aluminium	94	91	87	100	123	210	260	217	237	287	240	389	100	60	28	24	84	18
Lead	80	132	107	100	125	151	245	167	174	75	107	153	100	122	109	113	73	142
Zinc	91	115	102	100	109	191	354	259	260	80	88	56	100	101	70	74	35	58
Tin	72	120	98	100	117	173	238	208	240	73	82	61	100	65	60	29	51	62
Manufactures of Metals	96	120	115	100	103	96	152	141	164	250	175	108	100	66	159	124	151	108
Machinery & Transport Equipment	83	115	117	100	94	111	150	182	195	120	130	92	100	79	106	82	90	82
Machinery Other Than Electric	83	113	121	100	89	115	150	194	206	103	124	88	100	79	94	67	74	72
Electrical Machinery etc.	69	106	109	100	98	81	127	150	151	158	159	126	100	87	142	137	159	118
Transport Equipment	99	131	106	100	121	150	195	183	208	108	130	90	100	74	87	91	104	91
Miscellaneous Manufactured Articles	148	182	154	100	117	131	175	206	230	71	63	61	100	112	121	99	123	89
Professional Scientific Instruments etc.	n.a.	n.a.	n.a.	100	118	161	197	230	298	n.a.	n.a.	n.a.	100	120	103	91	107	76
General	107	117	106	100	100	133	225	243	233	85	102	99	100	87	114	130	99	97

a/ The indices for the years 1960/61, 1965/66 and 1966/67 available on the base 1958=100, have been converted to the base 1968/69=100 by linking the two series at 1968/69.

b/ Unit value indices in terms of rupees have been converted to US dollars using the annual average exchange rates given on the inside cover of this report.

c/ The indices are based on the average of the index numbers for the ten months from June 1966 to March 1967. Consequent to the devaluation of the Indian rupee on June 6, 1966, the figures for April & May have not been taken into account as they are not comparable with the post devaluation figures.

d/ The figures for April & May have not been taken into account.

Source: Ministry of Commerce, Department of Commercial Intelligence and Statistics, Calcutta.

Table 3.6

DESTINATION OF EXPORTS

	Value (US$ million)							Percentage Distribution						
	1950/51	1955/56	1960/61	1965/66	1970/71	1975/76	1977/78	1950/51	1955/56	1960/61	1965/66	1970/71	1975/76	1977/78
Africa (excluding U.A.R)	122.3	83.6	74.8	73.5	110.6	198.1	320.5	9.7	6.5	5.3	4.4	5.4	4.3	5.1
America	315.3	262.5	290.2	378.4	327.5	676.7	860.5	25.0	20.5	21.5	22.4	16.0	14.5	13.7
USA	233.3	183.0	215.3	310.4	276.5	600.9	786.8	18.5	14.3	15.7	18.4	13.5	12.9	12.5
Canada	27.7	29.4	37.0	42.6	37.3	52.9	53.7	2.2	2.3	2.8	2.5	1.8	1.1	0.9
Others	54.3	50.1	37.9	25.4	13.8	22.8	20.0	4.3	3.9	3.0	1.5	0.7	0.5	0.3
Asia and Oceania (including U.A.R)	407.4	436.4	413.8	450.7	725.2	1,880.1	2,249.2	32.3	34.1	26.1	26.6	35.5	40.3	35.8
(a) Middle East	n.a.	67.7	83.6	142.3	212.3	808.4	811.2	n.a.	5.3	5.5	8.4	10.4	17.3	12.9
Iran	12.6	10.9	11.3	12.6	35.5	314.7	136.2	1.0	0.8	0.8	0.7	1.8	6.7	2.2
Iraq	n.a.	4.6	6.2	9.1	12.8	73.8	55.6	n.a.	0.4	0.5	0.5	0.6	1.6	0.9
Saudi Arabia	n.a.	1.3	6.9	8.3	20.5	69.5	89.4	n.a.	0.1	0.5	0.5	1.0	1.5	1.4
Other OPEC a/	n.a.	15.4	15.8	37.3	49.8	163.5	347.3	n.a.	1.2	1.2	2.2	2.4	3.5	5.5
U.A.R.	11.4	20.1	28.1	56.8	75.2	115.7	83.7	0.9	1.6	2.1	3.4	3.7	2.5	1.3
Others b/	n.a.	15.4	15.3	18.2	18.5	71.2	99.0	n.a.	1.2	0.4	1.1	0.9	1.5	1.6
(b) Other Asia and Oceania	n.a.	368.7	330.2	308.4	512.9	1,071.7	1,438.0	n.a.	28.8	22.6	18.2	25.1	23.0	22.9
Japan	20.2	63.5	74.1	120.0	271.3	500.1	590.7	1.6	4.9	5.5	7.1	13.3	10.7	9.4
Australia	60.5	52.1	47.0	36.8	32.6	55.7	96.4	4.8	4.1	3.5	2.2	1.6	1.2	1.5
Others	n.a.	253.1	209.1	151.6	209.0	515.9	750.9	n.a.	19.8	13.6	8.9	10.2	11.1	12.0
Eastern Europe	7.6	11.1	104.1	328.8	403.2	795.3	1,012.2	0.6	0.9	7.8	19.4	23.6	17.0	16.1
USSR	2.5	6.8	60.5	195.3	279.8	481.6	767.1	0.2	0.5	4.5	11.5	13.7	10.3	12.2
Others	5.1	4.3	43.6	133.5	203.4	313.7	245.1	0.4	0.4	3.3	7.9	9.9	6.7	3.9
Western Europe	408.7	485.3	503.6	460.4	400.4	1,114.3	1,844.7	32.4	38.0	37.3	27.2	19.6	23.9	29.3
Belgium	20.2	18.9	11.1	20.0	27.1	52.5	236.2	1.6	1.5	0.8	1.2	1.3	1.1	3.8
France	17.7	15.0	18.5	23.6	24.0	99.6	170.6	1.4	1.2	1.2	1.4	1.2	2.1	2.7
West Germany	21.4	31.3	41.8	38.1	43.1	136.3	285.5	1.7	2.5	3.0	2.2	2.1	2.9	4.5
Netherlands	20.2	32.4	17.9	16.5	18.6	95.0	160.2	1.6	2.5	1.3	1.0	0.9	2.1	2.5
U.K.	282.5	348.9	362.3	306.1	227.3	486.9	610.8	22.4	27.3	27.0	18.1	11.1	10.5	9.7
Others	46.7	38.8	52.0	56.1	60.4	244.0	381.4	3.7	3.0	4.0	3.3	2.9	5.2	6.1
GRAND TOTAL	1,261.3	1,278.9	1,386.5	1,691.8	2,046.9 c/	4,664.6	6,287.1 d/ 6,275.5 d/	100.0	100.0	100.0	100.0	100.0	100.0	100.0

a/ Middle Eastern OPEC only - includes Abu Dhabi, Bahrein, Dubai, Kuwait & Qatar.
b/ Includes Israel, Jordan, Lebanon, Muscat and Oman, S. Yemen, Syria & Yemen.
c/ Unadjusted total. Due to a change in recording technique, the DGCIS data probably overstate exports by about 5% in 1970/71.
d/ Revised total, including revised monthly data through December 1977.

Sources: 1. Ministry of Commerce, Department of Commercial Intelligence & Statistics, Monthly Statistics of the Foreign Trade of India.
2. Ministry of Commerce, Office of the Economic Adviser.

Table 3.7

ORIGIN OF IMPORTS

	Value (US$ million)							Percentage Distribution						
	1950/51	1955/56	1960/61	1965/66	1970/71	1975/76	1977/78	1950/51	1955/56	1960/61	1965/66	1970/71	1975/76	1977/78
Africa (exoluding U.A.R)	177.5	99.9	108.7	75.3	173.3	109.5	310.1	13.0	7.0	4.6	2.6	8.0	1.8	4.4
America	309.9	210.0	740.0	1,194.9	781.3	1,793.4	1,296.9	22.7	14.7	31.4	40.4	35.9	29.4	18.4
USA	252.6	188.2	687.9	1,123.7	603.9	1,485.3	882.3	18.5	13.2	29.2	38.0	27.7	24.4	12.5
Canada	45.1	14.3	41.7	64.1	156.3	268.1	211.6	3.3	1.0	1.8	2.2	7.2	4.4	3.0
Others	12.2	7.5	10.4	7.1	21.1	40.0	203.0	0.9	0.5	0.4	0.2	1.0	0.6	2.9
Asia and Oceania (including U.A.R)	424.6	409.9	473.3	535.9	453.3	2,075.8	2,654.6	31.1	28.8	20.1	18.1	20.8	34.1	37.7
(a) Middle East	n.a.	146.6	153.9	146.7	223.0	1,377.3	1,578.0	n.a.	10.3	6.5	5.0	10.2	22.6	22.4
Iran	77.8	30.2	62.1	71.6	122.2	531.5	640.5	5.7	2.1	2.6	2.4	5.6	8.7	9.1
Iraq	n.a.	4.8	4.6	4.7	4.1	286.4	387.9	n.a.	0.3	0.2	0.2	0.2	4.7	5.5
Saudi Arabia	n.a.	32.0	29.8	18.2	32.2	335.3	289.3	n.a.	2.3	1.3	0.6	1.5	5.5	4.1
Other OPEC a/	n.a.	24.7	13.6	4.3	8.1	187.8	224.9	n.a.	1.7	0.6	0.2	0.4	3.1	3.2
U.A.R.	71.0	48.6	34.5	41.9	53.1	21.9	16.4	5.2	3.4	1.4	1.4	2.4	0.4	0.2
Others b/	n.a.	6.3	9.3	6.0	3.3	14.4	19.0	n.a.	0.5	0.4	0.2	0.1	0.2	0.3
(b) Other Asia and Oceania	n.a.	263.3	319.4	389.2	230.3	698.5	1,076.6	n.a.	18.5	13.6	13.1	10.6	11.5	15.3
Japan	21.8	69.9	127.6	166.6	111.2	417.4	499.0	1.6	4.9	5.4	5.6	5.1	6.9	7.1
Australia	71.0	28.5	37.4	50.8	48.8	117.5	84.0	5.2	2.0	1.6	1.7	2.3	1.9	1.2
Others	n.a.	164.9	154.4	171.8	70.3	163.6	493.6	n.a.	11.6	6.6	5.8	3.2	2.7	7.0
Eastern Europe	15.0	22.9	93.1	329.0	303.5	666.7	721.2	1.1	1.6	4.0	11.1	13.9	11.0	10.3
USSR	0.6	12.8	33.3	174.7	141.5	358.0	516.0	0.1	0.9	1.4	5.9	6.5	5.9	7.4
Others	14.4	10.1	59.8	154.3	162.0	308.7	205.2	1.0	0.7	2.6	5.2	7.4	5.1	2.9
Western Europe	438.3	682.9	940.3	822.8	467.3	1,438.9	2,050.3	32.1	47.9	39.9	27.8	21.4	23.6	29.2
Belgium	19.1	25.6	32.0	24.2	15.3	100.0	184.1	1.4	1.8	1.4	0.8	0.7	1.6	2.6
France	23.2	32.8	44.4	37.0	28.4	227.1	186.1	1.7	2.3	1.9	1.3	1.3	3.7	2.8
West Germany	21.8	126.9	257.3	288.0	143.3	427.5	647.7	1.6	8.9	10.9	9.7	6.6	7.0	9.2
Netherlands	14.0	29.6	22.1	41.4	25.5	73.8	94.0	1.0	2.1	0.9	1.4	1.2	1.2	1.3
U.K.	284.0	362.1	456.0	315.2	169.0	328.2	542.8	20.8	25.4	19.4	10.7	7.8	5.4	7.7
Others	76.2	105.9	128.5	115.9	85.6	282.3	395.6	5.6	7.4	5.4	3.9	4.0	4.7	5.6
GRAND TOTAL	1,365.4	1,425.6	2,355.4	2,957.9	2,178.9	6,084.3	7,033.1	100.0	100.0	100.0	100.0	100.0	100.0	100.0
							7,084.4 c/							

a/ Middle Eastern OPEC only - includes Abu Dhabi, Bahrein, Dubai, Kuwait & Qatar.
b/ Includes Israel, Jordan, Lebanon, Muscat and Oman, S. Yemen, Syria & Yemen.
c/ Revised total, including revised monthly data through December 1977.

Sources: 1. Ministry of Commerce, Department of Commercial Intelligence & Statistics, Monthly Statistics of the Foreign Trade of India.
2. Ministry of Commerce, Office of the Economic Adviser.

Table 3.8

EXTERNAL RESERVES
(US $ million)

End of the Year (April-March)	Gold (1)	Foreign Exchange (2)	SDRs (3)	Reserve Position in the Fund (4)	Overall Reserves (1+2+3+4) (5)	Use of IMF Credit (6)	Net Reserves (5-6) (7)
1950/51	247	1,809 a/ b/	-	- b/	2,056	72 a/	1,984
1955/56	247	1,620 b/	-	15 b/	1,882	-	1,882
1960/61	247	391	-	-	638	63	575
1965/66	243	383	-	-	626	215	411
1966/67	243	395	-	-	638	356	282
1968/69	243	526	-	-	769	340	429
1970/71	243	584	149	76	1,052	-	1,052
1971/72	264	661	269	83	1,277	-	1,277
1972/73	293	629	297	92	1,311	-	1,311
1973/74	293	736	296	92	1,417	75	1,342
1974/75	303	782	293	-	1,378	620	758
1975/76	281	1,657	234	-	2,172	807	1,365
1976/77	290	3,240	217	-	3,747	471	3,276
1977/78	318	5,305	200	-	5,823	155	5,668
End of the Month							
1977							
March	290	3,240	217	-	3,747	471	3,276
June	291	4,053	215	-	4,559	474	4,085
September	291	4,221	163	-	4,675	146	4,529
December	312	4,691	181	-	5,184	152	5,032
1978							
March	318	5,305	200	-	5,823	155	5,668
June	355	5,471	219	95	6,140	250	5,890
September	366	5,775	283	98	6,522	-	6,522
December	382	6,042	294	90	6,808	-	6,808

a/ At the end of 1950
b/ At the end of 1955

Source: IMF, International Financial Statistics.

Table 3.9

BALANCE OF PAYMENTS
(at current prices - in US$ million)

	1950/51	1955/56	1960/61	1965/66	1968/69	1969/70	1970/71	1971/72	1972/73	1973/74	1974/75	1975/76	1976/77	Provisional 1977/78	Preliminary Estimates 1978/79
Merchandise Exports (f.o.b.)	1,261	1,279	1,387	1,692	1,811	1,884	1,950	2,160	2,558	3,239	4,174	4,672	5,753	6,276	6,800
Merchandise Imports (c.i.f.) a/	-1,366	-1,425	-2,355	-2,958	-2,545	-2,109	-2,179	-2,451	-2,423	-3,793	-5,665	-6,449	-5,928	-7,237	-8,400
Trade Balance	- 105	- 146	- 968	-1,266	- 734	- 225	- 229	- 291	135	- 554	-1,491	-1,777	- 175	- 961	-1,600
Non-Factor Services (net)					53	13	10	9	57	61	215	310	360	650 e/	700 e/
Resource Balance					- 681	- 212	- 219	- 282	192	- 493	-1,276	-1,467	185	- 311	-900
Investment Income (net)	85	184	8	- 78	- 225	- 230	- 244	- 280	- 284	- 259	- 198	- 216	- 180	- 50	-
- Interest Paid on Foreign Loans					(-185)	(-192)	(-214)	(-242)	(-234)	(-251)	(-270)	(-255)	(-270)	(-295)	(-340)
- Other					(- 40)	(- 38)	(- 30)	(- 38)	(- 50)	(- 8)	(72)	(39)	(90)	(245)	(340)
Current Transfers (net)					81	79	83	112	96	158	257	470	730	1,400 e/	1,300 e/
Current Account Balance	- 20	38	- 960	-1,344	- 825	- 363	- 380	- 450	4	- 594	-1,217	-1,213	735	1,039	400
Net Aid Disbursements	- 6	121	812	1,520	1,004	875	790	794	542	764	1,246	1,810	1,393	983	1,080
- Gross Disbursements	(21)	(129)	(883)	(1,667)	(1,319)	(1,233)	(1,176)	(1,196)	(966)	(1,277)	(1,761)	(2,341)	(1,953)	(1,628)	(1,805)
- Principal Repayments	(-27)	(- 8)	(-71)	(- 147)	(- 315)	(- 358)	(- 386)	(- 402)	(-424)	(- 513)	(- 515)	(- 531)	(- 560)	(- 645)	(- 725)
Use of IMF Credit (net)	-	- 26 d/	- 20	34	- 62	- 157	- 183	-	-	75	522	242	- 337	- 330	- 158
Errors and Omissions	100	-119	44	- 113	- 66	- 29	- 270	- 119	-512	- 140	- 589	- 45	- 216	384	205
Use of Reserves (- = increase)	- 74 c/	- 14 d/	124	- 101	- 51	- 326	43	- 225	- 34	- 105	38	- 794	-1,575	-2,076	-1,527
Capital Account Balance	20	- 38	960	1,340	825	363	380	450	- 4	594	1,217	1,213	- 735	-1,039	- 400
Reserve Level (end of year)	2,056 c/	1,882 d/	638	626	769	1,095	1,052	1,277	1,311	1,416	1,378	2,172	3,747	5,823	7,350
No. of Months of Imports Covered by Reserves b/	(18)	(16)	(3)	(3)	(4)	(6)	(6)	(6)	(6)	(4)	(3)	(4)	(8)	(10)	(11)

a/ From 1975/76, DGCIS import data have been adjusted to include imports of merchant ships.
b/ Calculated by comparing the level of external reserves at the end of the year with merchandise imports during the year.
c/ Data relate to calendar year 1950.
d/ Data relate to calendar year 1955.
e/ Non-factor services and current transfers together have been estimated as a residual in both 1977/78 and 1978/79, after allowance for a small errors and omissions item based on past trends and known book value and exchange rate adjustments.

Sources: 1. Reserve Bank of India, India's Balance of Payments 1948/49 to 1961/62.
2. Ministry of Commerce, Department of Commercial Intelligence and Statistics.
3. Government of India, Economic Survey (various issues).
4. IMF, International Financial Statistics.
5. World Bank estimates.

Table 4.1

AID AND DEBT SUMMARY
(US$ million)

	1960/61	1961/62	1962/63	1963/64	1964/65	1965/66	1966/67	1967/68	1968/69	1969/70	1970/71	1971/72	1972/73	1973/74	1974/75	1975/76	1976/77	1977/78	Estimated 1978/79
I Consortium Members																			
Gross Disbursements	858	688	885	1,171	1,378	1,531	1,495	1,548	1,206	1,113	1,099	1,167	925	1,095	1,303	1,649	1,589	1,292	1,509
Of which:																			
Project Aid [a]	449	468	611	748	873	968	422	301	303	204	247	325	358	422	394	592	662	687	768
Non-Project Aid [b]							428	689	549	584	573	579	497 [d]	592 [d]	807 [d]	706	651	446	585
Food Aid [c]	409	220	274	423	505	563	645	558	354	325	279	263	70	81	102	351	276	158	156
Debt Service	108	175	160	188	232	292	302	333	406	434	465	516	541	651	673	680	679	729	812
Net Transfer	750	513	725	983	1,146	1,239	1,193	1,215	800	679	634	651	384	444	630	969	910	563	697
II Non-Consortium Countries																			
Gross Disbursements	25	54	72	115	172	136	98	95	114	120	77	29	41	182	458	692	364	336	298
Of which:																			
Project Aid [a]	25	54	72	115	172	126	85	84	107	110	74	27	41	43	34	199	105	163	282
Non-Project Aid [b]							3	1	1	1	-	-	-	-	284	455	251	147	-
Food Aid	n.a.	n.a.	n.a.	n.a.	n.a.	10	10	10	6	9	3	2	-	139	140	39	8	26	16
Debt Service	14	16	23	25	26	23	53	111	94	116	135	128	117	114	112	106	150	210	252
Net Transfer	11	38	49	90	146	113	35	- 16	19	4	- 58	- 99	- 76	68	346	586	214	126	46
III Total Consortium & Non-Consortium																			
Gross Disbursements	883	742	957	1,286	1,550	1,667	1,593	1,643	1,320	1,233	1,176	1,196	966	1,277	1,761	2,341	1,953	1,628	1,807
Of which:																			
Project Aid [a]	474	522	683	863	1,045	1,094	507	385	410	314	321	352	399	465	428	791	767	850	1,050
Non-Project Aid [b]							431	690	550	585	573	579	497 [d]	592 [d]	1,091 [d]	1,167	902	593	585
Food Aid [c]	409	220	274	423	505	573	655	568	358	334	282	265	70	220	242	383	284	184	172
Debt Service	122	191	183	213	258	315	355	444	500	550	600	644	658	765	785	786	829	939	1,064
Net Transfer	761	551	774	1,073	1,292	1,352	1,229	1,199	820	683	576	552	308	512	976	1,555	1,124	689	743
Debt Service Ratio [e] (%)	8.8	13.4	12.7	12.8	15.1	18.6	23.1	27.8	27.6	29.2	30.8	29.8	25.7	23.6	18.8	16.8	14.4	15.0	15.6

[a] Includes suppliers credits.
[b] Includes debt relief, but excludes food aid and PL 480 assistance.
[c] Includes all PL 480 assistance, both food and non-food.
[d] Includes some food aid, for which separate data were not available.
[e] Debt service divided by merchandise exports.

Sources: 1. Ministry of Finance, Department of Economic Affairs.
2. Embassies in New Delhi.

Table 4.2 (a)

GROSS AND NET AID FLOWS 1977/78
(US$ million) a/

	Gross Disbursements						Principal Repayments	Net Aid Disbursements	Interest Payments	Net Aid Transfer
	Suppliers Credits b/	Project	Debt Relief	Food	Other	Total				
A. Consortium Members										
Austria	3.9	-	1.5	-	0.5	5.9	3.0	2.9	1.1	1.8
Belgium	-	-	2.6	0.4	5.1	8.1	8.2	- 0.1	3.4	- 3.5
Canada	-	2.9	-	20.8	31.1	54.8	10.8	44.0	3.7	40.3
Denmark	-	4.4	1.3	-	4.3	10.0	2.0	8.0	0.3	7.7
France	-	18.0	6.3	-	23.7	48.0	30.9	17.1	16.8	0.3
Germany	-	63.1	13.4	-	10.6	87.1	104.8	-17.7	46.8	-64.5
Italy	1.5	-	18.0	-	-	19.5	16.9	2.6	4.9	- 2.3
Japan	9.2	12.8	-	-	65.1	87.1	62.6	24.5	39.5	-15.0
Netherlands	-	1.9	11.7	-	63.2	76.8	6.0	70.8	8.2	62.6
Norway	-	5.1	-	-	8.3	13.4	0.5	12.9	0.2	12.7
Sweden	-	14.5	1.4	-	53.8	69.7	2.8	66.9	1.2	65.7
U.K.	-	66.6	7.2	-	111.4	185.2	41.8	143.4	13.0	130.4
U.S.A.	-	-	-	137.3	-	137.3	91.7	45.6	63.6	- 18.0
Sub-total	14.6	189.3	63.4	158.5	377.1	802.9	382.0	420.9	202.7	218.2
IBRD	-	156.0	-	-	-	156.0	72.0	84.0	36.6	47.4
IDA	-	326.8	-	-	6.3	333.1	10.2	322.9	25.7	297.2
Sub-total	-	482.8	-	-	6.3	489.1	82.2	406.9	62.3	344.6
Total	14.6	672.1	63.4	158.5	383.4	1,292.0	464.2	827.8	265.0	562.8
B. East European Countries										
Bulgaria	-	-	-	-	-	-	0.2	- 0.2	n.s.	- 0.2
Czechoslovakia	4.7	5.4	-	-	-	10.1	6.0	4.1	1.2	2.9
GDR	0.1	-	-	-	-	0.1	4.7	- 4.6	1.1	- 5.7
Hungary	0.7	5.5	-	-	-	6.2	0.6	5.6	0.3	5.3
Poland	-	n.s.	-	-	-	n.s.	2.5	- 2.5	0.3	- 2.8
Rumania	-	-	-	-	-	-	3.9	- 3.9	0.8	- 4.7
USSR	1.9	28.3	-	-	-	30.2	145.2	-115.0	6.3	-121.3
Yugoslavia	17.4	-	-	-	-	17.4	11.8	5.6	3.4	2.2
Total	24.8	39.2	-	-	-	64.0	174.9	-110.9	13.4	-124.3
C. OPEC Countries										
Iran	-	68.2	-	-	124.7	192.9	-	192.9	10.8	182.1
Iraq	-	-	-	-	-	-	-	-	-	-
Kuwait	-	15.5	-	-	-	15.5	-	15.5	1.2	14.3
Saudi Arabia	-	-	-	-	-	-	-	-	-	-
UAE	-	7.1	-	-	-	7.1	-	7.1	1.6	5.5
OPEC Fund	-	-	-	-	21.8	21.8	-	21.8	0.1	21.7
Qatar	-	-	-	-	-	-	0.9	- 0.9	0.1	- 1.0
Total	-	90.8	-	-	146.5	237.3	0.9	236.4	13.8	222.6
D. Others										
Switzerland	-	5.5	-	-	-	5.5	3.4	2.1	1.7	0.4
EEC	-	2.5	-	26.4	-	28.9	-	28.9	-	28.9
Spain	-	-	-	-	-	-	1.2	- 1.2	0.2	- 1.4
Total	-	8.0	-	26.4	-	34.4	4.6	29.8	1.9	27.9
E. GRAND TOTAL	39.4	810.1	63.4	184.9	529.9	1,627.7	644.6	983.1	294.1	689.0

a/ Converted from creditor currencies using average market rates for 1977/78 as published in the IMF International Financial Statistics. Data on aid flows from East European countries have been converted from rupees. The exchange rates used are as follows (units of currency per US dollar):

Austria	16.003	France	4.8584	Netherlands	2.3845	India	8.563
Belgium	34.718	Germany	2.2420	Norway	5.3176	Kuwait	0.2841
Canada	1.0843	Italy	877.20	Sweden	4.5850	Saudi Arabia	3.5080
Denmark	5.9512	Japan	256.53	U.K.	0.5559	UAE	3.8948
						Switzerland	2.2559

b/ Coverage of data on suppliers credits is incomplete.

Sources: 1. Ministry of Finance, Department of Economic Affairs.
2. Embassies in New Delhi.

Table 4.2 (b)

ESTIMATED GROSS AND NET AID FLOWS 1978/79
(US$ million) a/

	Gross Disbursements						Principal Repayments	Net Aid Disbursements	Interest Payments	Net Aid Transfer
	Suppliers Credits b/	Project	Debt Relief	Food	Other	Total				
A. Consortium Members										
Austria	33.1	-	-	-	0.2	33.3	7.8	25.5	2.8	22.7
Belgium	-	-	-	-	10.0	10.0	8.3	1.7	3.3	- 1.6
Canada	-	10.3	-	4.4	10.3	25.0	11.1	13.9	3.0	10.9
Denmark	-	20.6 c/	1.4	-	5.3	27.3	2.1	25.2	0.2	25.0
France	-	20.3	-	-	27.1	47.4	35.2	12.2	19.2	- 7.0
Germany	-	85.0	-	-	81.2	166.2	113.7	52.5	49.7	2.8
Italy	5.4	-	-	-	-	5.4	16.9	- 11.5	4.6	- 16.1
Japan	-	33.9	14.4	-	85.3	133.6	72.3	61.3	52.2	9.1
Netherlands	-	-	-	-	84.1	84.1	7.3	76.8	10.4	66.4
Norway	-	13.1	-	-	6.9	20.0	0.5	19.5	0.1	19.4
Sweden	-	20.7	-	-	44.7	65.4	1.8	63.6	0.2	63.4
U.K.	-	26.8	-	-	212.8 d/	239.6	49.5	190.1	12.2	177.9
U.S.A.	-	0.1	-	151.4	-	151.5	101.1	50.4	65.1	-14.7
Sub-total	38.5	230.8	15.8	155.8	567.9	1,008.8	427.6	581.2	223.0	358.2
IBRD	-	170.0	-	-	-	170.0	73.0	97.0	50.9	46.1
IDA	-	328.3	-	-	1.7	330.0	10.6	319.4	27.1	292.3
Sub-total	-	498.3	-	-	1.7	500.0	83.6	416.4	78.0	338.4
Total	38.5	729.1	15.8	155.8	569.6	1,508.8	511.2	997.6	301.0	696.6
B. East European Countries										
Bulgaria	-	-	-	-	-	-	0.2	- 0.2	n.s.	- 0.2
Czechoslovakia	-	2.4	-	-	-	2.4	5.7	- 3.3	1.3	- 4.6
GDR	8.3	-	-	-	-	8.3	5.7	2.6	1.1	1.5
Hungary	-	1.3	-	-	-	1.3	1.3	-	0.4	- 0.4
Poland	n.s.	0.1	-	-	-	0.1	1.9	- 1.8	0.3	- 2.1
Rumania	-	-	-	-	-	-	4.0	- 4.0	0.8	- 4.8
USSR	2.9	36.5	-	-	-	39.4	151.9	-112.5	6.0	-118.5
Yugoslavia	19.4	-	-	-	-	19.4	14.4	5.0	3.8	1.2
Total	30.6	40.3	-	-	-	70.9	185.1	-114.2	13.7	-127.9
C. OPEC Countries										
Iran	-	121.5	-	-	-	121.5	-	121.5	19.1	102.4
Iraq	-	-	-	-	-	-	22.5	- 22.5	-	- 22.5
Kuwait	-	15.0	-	-	-	15.0	-	15.0	2.0	13.0
Saudi Arabia	-	41.8	-	-	-	41.8	-	41.8	-	41.8
UAE	-	5.1	-	-	-	5.1	-	5.1	1.8	3.3
OPEC Fund	-	14.0	-	-	-	14.0	-	14.0	0.1	13.9
Qatar	-	-	-	-	-	-	1.0	- 1.0	n.s.	- 1.0
Total	-	197.4	-	-	-	197.4	23.5	173.9	23.0	150.9
D. Others										
Switzerland	-	6.9	-	-	-	6.9	3.7	3.2	1.3	1.9
EEC	-	6.7	-	16.1	-	22.8	-	22.8	-	22.8
Spain	-	-	-	-	-	-	1.2	- 1.2	0.2	- 1.4
Total	-	13.6	-	16.1	-	29.7	4.9	24.8	1.5	23.3
E. GRAND TOTAL	69.1	980.4	15.8	171.9	569.6	1,806.8	724.7	1,082.1	339.2	742.9

a/ Converted from creditor currencies using average market rates for April through December 1978 as published in the IMF International Financial Statistics. Data on aid flows from East European countries have been converted from rupees. The exchange rates used are as follows (units of currency per US dollar):

Austria	14.387	France	4.4315	Netherlands	2.1432	India	8.211
Belgium	31.125	Germany	1.9862	Norway	5.2410	Kuwait	0.2737
Canada	1.1499	Italy	844.27	Sweden	4.4788	Saudi Arabia	3.3789
Denmark	5.4589	Japan	201.41	U.K.	0.5217	UAE	3.8666
						Switzerland	1.7409

b/ Coverage of data on suppliers credits is incomplete.
c/ Relates to the first nine months of the year only.
d/ Includes estimated PL480 title II shipments of US$ 125 million.

Sources: 1. Ministry of Finance, Department of Economic Affairs.
2. Embassies in New Delhi.

Table 4.3 (a)

PROJECT AND NON-PROJECT AID PIPELINE 1977/78 a/
(US $ million) b/

	Opening pipeline on April 1, 1977		Disbursements from the pipeline		New Commitments		Disbursements from New Commitments		Closing pipeline c/ on March 31, 1978	
	Project	Non-Project	Project	Non-Project	Project	Non-Project	Project	Non-Project	Project	Non-Project
A. Consortium Members										
Austria	-	2.7	-	2.0	-	-	-	-	-	0.7
Belgium	-	11.9	-	5.1	-	11.2	-	3.0	-	15.0
Canada	14.1	12.4	2.3	3.4	1.5	59.5	0.6	48.4	12.3	20.1
Denmark	15.4	20.2	4.0	4.3	12.4	1.3	0.4	1.3	23.4	15.9
France	136.7	66.8	18.0	23.7	-	6.3	-	6.3	118.7	43.1
Germany	191.0	17.4	63.1	10.6	109.7	50.8	-	13.4	237.6	44.2
Italy	-	18.0	-	18.0	-	-	-	-	-	n.s.
Japan	24.9	49.6	12.8	46.8	72.9	78.0	-	18.3	84.6	61.7
Netherlands	-	84.4	-	59.4	8.6	98.5	1.9	15.5	6.7	108.0
Norway	9.8	-	4.3	-	34.3	8.9	0.9	8.3	38.5	0.6
Sweden	12.8	23.6	6.0	23.5	12.0	41.7	8.5	31.7	10.3	10.1
U.K.	98.7	151.5	23.9	110.3	89.9	174.5	42.7	8.2	122.0	207.5
U.S.A.	0.1	24.7	n.s.	24.7	-	139.0	-	112.6	0.1	26.4
Sub-total	503.5	483.2	134.4	331.8	341.3	669.7	55.0	267.0	654.2	553.3
IBRD	512.1	-	109.5	-	269.0	-	46.5	-	618.8	-
IDA	1,004.2	8.0	289.2	6.3	824.0	-	37.6	-	1,499.2	1.7
Sub-total	1,516.3	8.0	398.7	6.3	1,093.0	-	84.1	-	2,118.0	1.7
Total	2,019.8	491.2	533.1	338.1	1,434.3	669.7	139.1	267.0	2,772.2	555.0
B. East European Countries										
Bulgaria	9.6	-	-	-	-	-	-	-	9.6	-
Czechoslovakia	88.2	-	5.4	-	-	-	-	-	82.8	-
GDR	-	-	-	-	-	-	-	-	-	-
Hungary	12.9	-	5.5	-	-	-	-	-	7.4	-
Poland	2.0	-	n.s.	-	-	-	-	-	2.0	-
Rumania	-	-	-	-	-	-	-	-	-	-
USSR	290.1	-	28.3	-	243.3	-	-	-	505.1	-
Yugoslavia	n.s.	-	-	-	-	-	-	-	n.s.	-
Total	402.8	-	39.2	-	243.3	-	-	-	606.9	-
C. OPEC Countries										
Iran	530.0	-	68.2	-	-	124.7	-	124.7	461.8	-
Iraq	-	-	-	-	-	-	-	-	-	-
Kuwait	30.0	-	15.5	-	-	-	-	-	14.5	-
Saudi Arabia	-	-	-	-	100.6	-	-	-	100.6	-
UAE	17.5	-	7.1	-	-	-	-	-	10.4	-
OPEC Fund	-	21.8	-	21.8	14.0	-	-	-	14.0	-
Total	577.5	21.8	90.8	21.8	114.6	124.7	-	124.7	601.3	-
D. Others										
Switzerland	20.3	-	5.5	-	-	-	-	-	14.8	-
EEC	7.5	22.2	2.5	22.1	13.4	9.2	-	4.3	18.4	5.0
Total	27.8	22.2	8.0	22.1	13.4	9.2	-	4.3	33.2	5.0
E. GRAND TOTAL	3,027.9	535.2	671.1	382.0	1,805.6	803.6	139.1	396.0	4,013.6	560.0

a/ Excluding suppliers credits, for which no pipeline data are available.
b/ Converted from creditor currencies using average exchange rates for 1977/78 as given in Table 4.2 (a).
c/ Closing pipeline equals opening pipeline plus new commitments less disbursements and deobligations (which totalled US$ 10.5 million during 1977/78).

Sources: 1. Ministry of Finance, Department of Economic Affairs.
2. Embassies in New Delhi.

Table 4.3 (b)

ESTIMATED PROJECT AND NON-PROJECT AID PIPELINE 1978/79 a/
(US$ million) b/

	Opening Pipeline on April 1, 1978 c/		Disbursements from the Pipeline		New Commitments		Disbursements from New Commitments		Closing Pipeline on March 31, 1979 d/	
	Project	Non-Project	Project	Non-Project	Project	Non-Project	Project	Non-Project	Project	Non-Project
A. Consortium Members										
Austria	-	0.8	-	0.2	-	-	-	-	-	0.6
Belgium	-	16.7	-	10.0	-	11.2	-	-	-	17.9
Canada	11.6	18.9	1.6	10.3	13.0	4.4	8.7	4.4	14.3	8.6
Denmark	25.4	17.4	9.3 e/	5.3	20.0	1.4	11.3 e/	1.4	24.8	12.1
France	130.1	47.2	20.3	27.1	-	-	-	-	109.8	20.1
Germany	268.2	50.0	85.0	48.5	128.4	52.9	-	32.7	311.6	21.7
Italy	-	n.s.	-	-	-	-	-	-	-	n.s.
Japan	107.7	78.4	32.4	71.6	8.9	44.2	1.5	28.1	82.7	22.9
Netherlands	7.5	120.1	-	77.1	-	108.7	-	7.0	7.5	144.7
Norway	39.1	0.6	13.1	0.6	1.7	6.3	-	6.3	27.7	-
Sweden	10.6	10.4	6.2	10.3	14.5	45.8 f/	14.5	34.4	4.4	11.5
U.K.	130.1	221.0	5.4	187.5	143.8	155.3	21.4	25.3	247.1	163.5
U.S.A.	0.1	26.4	0.1	26.4	58.0	127.0 g/	-	125.0 g/	58.0	2.0
Sub-total	730.4	607.9	173.4	474.9	388.3	557.2	57.4	264.6	887.9	425.6
IBRD	618.8	-	135.0	-	275.0	-	35.0	-	723.8	-
IDA	1,499.2	1.7	320.0	1.7	1,554.5	-	10.0	-	2,723.7	-
Sub-total	2,118.0	1.7	455.0	1.7	1,829.5	-	45.0	-	3,447.5	-
Total	2,848.4	609.6	628.4	476.6	2,217.8	557.2	102.4	264.6	4,335.4	425.6
B. East European Countries										
Bulgaria	10.0	-	-	-	-	-	-	-	10.0	-
Czechoslovakia	86.4	-	2.4	-	-	-	-	-	84.0	-
GDR	-	-	-	-	-	-	-	-	-	-
Hungary	7.7	-	1.3	-	-	-	-	-	6.4	-
Poland	2.0	-	0.1	-	-	-	-	-	1.9	-
Rumania	-	-	-	-	-	-	-	-	-	-
USSR	526.7	-	36.5	-	-	-	-	-	490.2	-
Yugoslavia	n.s.	-	-	-	-	-	-	-	n.s.	-
Total	632.8	-	40.3	-	-	-	-	-	592.5	-
C. OPEC Countries										
Iran	461.8	-	121.5	-	-	-	-	-	340.3	-
Iraq	-	-	-	-	-	-	-	-	-	-
Kuwait	15.0	-	15.0	-	34.3	-	-	-	34.3	-
Saudi Arabia	104.5	-	41.8	-	-	-	-	-	62.7	-
UAE	10.4	-	5.1	-	-	-	-	-	5.3	-
OPEC Fund	14.0	-	14.0	-	-	-	-	-	-	-
Total	605.7	-	197.4	-	34.3	-	-	-	442.6	-
D. Others										
Switzerland	19.1	-	6.9	-	-	-	-	-	12.2	-
EEC	18.4	5.1	6.7	5.1	-	11.0	-	11.0	11.7	-
Total	37.5	5.1	13.6	5.1	-	11.0	-	11.0	23.9	-
E. GRAND TOTAL	4,124.4	614.7	879.7	481.7	2,252.1	568.2	102.4	275.6	5,394.4	425.6

a/ Excludes suppliers credits, for which no pipeline data are available.
b/ Converted from creditor currencies using average exchange rates for April through December 1978 as given in Table 4.2 (b).
c/ Figures differ from closing pipeline data in Table 4.3 (a) due to exchange rate adjustment.
d/ Closing pipeline equals opening pipeline plus new commitments less disbursements.
e/ For the first nine months of the year only.
f/ In addition, the Swedish government wrote-off all outstanding debts, estimated at US$ 121 million.
g/ Includes estimated PL480 title II shipments of US$ 125 million.

Sources: 1. Ministry of Finance, Department of Economic Affairs.
2. Embassies in New Delhi.

Table 4.4 (a)

EXTERNAL DEBT SERVICE PAYMENTS - 1977/78
(US $ million) a/

	Principal			Interest			Total Debt Service		
	Government Loans	Suppliers Credits b/	Total	Government Loans	Suppliers Credits b/	Total	Government Loans	Suppliers Credits b/	Total
A. Consortium Members									
Austria	2.8	0.2	3.0	1.1	n.s.	1.1	3.9	0.2	4.1
Belgium	0.6	7.6	8.2	0.7	2.7	3.4	1.3	10.3	11.6
Canada	10.8	-	10.8	3.7	-	3.7	14.5	-	14.5
Denmark	1.2	0.8	2.0	0.1	0.2	0.3	1.3	1.0	2.3
France	21.9	9.0	30.9	15.1	1.7	16.8	37.0	10.7	47.7
Germany	94.0	10.8	104.8	43.1	3.7	46.8	137.1	14.5	151.6
Italy	1.7	15.2	16.9	1.2	3.7	4.9	2.9	18.9	21.8
Japan	51.4	11.2	62.6	37.2	2.3	39.5	88.6	13.5	102.1
Netherlands	4.3	1.7	6.0	7.9	0.3	8.2	12.2	2.0	14.2
Norway	-	0.5	0.5	-	0.2	0.2	-	0.7	0.7
Sweden	0.5	2.3	2.8	0.9	0.3	1.2	1.4	2.6	4.0
U.K.	41.0	0.8	41.8	12.4 d/	0.6	13.0	53.4	1.4	54.8
U.S.A.	90.2 c/	1.5	91.7	63.4 d/	0.2	63.6	153.6	1.7	155.3
Sub-total	320.4	61.6	382.0	186.8	15.9	202.7	507.2	77.5	584.7
IBRD	72.0	-	72.0	36.6	-	36.6	108.6	-	108.6
IDA	10.2	-	10.2	25.7	-	25.7	35.9	-	35.9
Sub-total	82.2	-	82.2	62.3	-	62.3	144.5	-	144.5
Total	402.6	61.6	464.2	249.1	15.9	265.0	651.7	77.5	729.2
B. East European Countries									
Bulgaria	-	0.2	0.2	-	n.s.	n.s.	-	0.2	0.2
Czechoslovakia	5.9	0.1	6.0	1.2	n.s.	1.2	7.1	0.1	7.2
GDR	-	4.7	4.7	-	1.1	1.1	-	5.8	5.8
Hungary	-	0.6	0.6	0.2	0.1	0.3	0.2	0.7	0.9
Poland	2.5	-	2.5	0.3	-	0.3	2.8	-	2.8
Rumania	-	3.9	3.9	-	0.8	0.8	-	4.7	4.7
USSR	144.0 e/	1.2	145.2	6.2	0.1	6.3	150.2	1.3	151.5
Yugoslavia	0.1	11.7	11.8	n.s.	3.4	3.4	0.1	15.1	15.2
Total	152.5	22.4	174.9	7.9	5.5	13.4	160.4	27.9	188.3
C. OPEC Countries									
Iran	-	-	-	10.8	-	10.8	10.8	-	10.8
Iraq	-	-	-	- f/	-	-	-	-	-
Kuwait	-	-	-	1.2	-	1.2	1.2	-	1.2
UAE	-	-	-	1.6	-	1.6	1.6	-	1.6
OPEC Fund	-	-	-	0.1	-	0.1	0.1	-	0.1
Qatar	0.9	-	0.9	0.1	-	0.1	1.0	-	1.0
Total	0.9	-	0.9	13.8	-	13.8	14.7	-	14.7
D. Others									
Switzerland	3.4	n.s.	3.4	1.7	-	1.7	5.1	n.s.	5.1
Spain	-	1.2	1.2	-	0.2	0.2	-	1.4	1.4
Total	3.4	1.2	4.6	1.7	0.2	1.9	5.1	1.4	6.5
E. GRAND TOTAL	559.4	85.2	644.6	272.5	21.6	294.1	831.9	106.8	938.7

a/ Converted from creditor currencies using average exchange rates for 1977/78 as given in Table 4.2 (a).
b/ Coverage of data on suppliers credits is incomplete.
c/ Excludes US$ 0.8 million paid in rupees.
d/ Excludes US$ 0.03 million paid in rupees.
e/ Includes US$ 94.9 million repayment of 1973 USSR wheat loan.
f/ US$ 4.4 million of interest due to Iraq in 1977/78 has been capitalized.

Sources: 1. Ministry of Finance, Department of Economic Affairs.
2. Embassies in New Delhi.

Table 4.4 (b)

ESTIMATED EXTERNAL DEBT SERVICE PAYMENTS 1978/79
(US$ million) a/

	Principal			Interest			Total Debt Service		
	Government Loans	Suppliers Credits b/	Total	Government Loans	Suppliers Credits b/	Total	Government Loans	Suppliers Credits b/	Total
A. Consortium Members									
Austria	3.2	4.6	7.8	1.1	1.7	2.8	4.3	6.3	10.6
Belgium	0.6	7.7	8.3	0.9	2.4	3.3	1.5	10.1	11.6
Canada	11.1	-	11.1	3.0	-	3.0	14.1	-	14.1
Denmark	1.3	0.8	2.1	0.1	0.1	0.2	1.4	0.9	2.3
France	27.1	8.1	35.2	18.1	1.1	19.2	45.2	9.2	54.4
Germany	103.7	10.0	113.7	46.3	3.4	49.7	150.0	13.4	163.4
Italy	1.8	15.1	16.9	1.4	3.2	4.6	3.2	18.3	21.5
Japan	61.7	10.6	72.3	49.6	2.6	52.2	111.3	13.2	124.5
Netherlands	5.7	1.6	7.3	10.2	0.2	10.4	15.9	1.8	17.7
Norway	-	0.5	0.5	-	0.1	0.1	-	0.6	0.6
Sweden	-	1.8	1.8	-	0.2	0.2	-	2.0	2.0
U.K.	48.7	0.8	49.5	11.7	0.5	12.2	60.4	1.3	61.7
U.S.A.	100.4	0.7	101.1	65.0	0.1	65.1	165.4	0.8	166.2
Sub-total	365.3	62.3	427.6	207.4	15.6	223.0	572.7	77.9	650.6
IBRD	73.0	-	73.0	50.9	-	50.9	123.9	-	123.9
IDA	10.6	-	10.6	27.1	-	27.1	37.7	-	37.7
Sub-total	83.6	-	83.6	78.0	-	78.0	161.6	-	161.6
Total	448.9	62.3	511.2	285.4	15.6	301.0	734.3	77.9	812.2
B. East European Countries									
Bulgaria	-	0.2	0.2	-	n.s.	n.s.	-	0.2	0.2
Czechoslovakia	5.0	0.7	5.7	1.1	0.2	1.3	6.1	0.9	7.0
GDR	-	5.7	5.7	-	1.1	1.1	-	6.8	6.8
Hungary	0.8	0.5	1.3	0.4	n.s.	0.4	1.2	0.5	1.7
Poland	1.9	n.s.	1.9	0.3	n.s.	0.3	2.2	n.s.	2.2
Rumania	-	4.0	4.0	-	0.8	0.8	-	4.8	4.8
USSR	150.5 c/	1.4	151.9	5.7	0.3	6.0	156.2	1.7	157.9
Yugoslavia	0.1	14.3	14.4	n.s.	3.8	3.8	0.1	18.1	18.2
Total	158.3	26.8	185.1	7.5	6.2	13.7	165.8	33.0	198.8
C. OPEC Countries									
Iran	-	-	-	19.1 d/	-	19.1	19.1	-	19.1
Iraq	22.5	-	22.5	- e/	-	-	22.5	-	22.5
Kuwait	-	-	-	2.0	-	2.0	2.0	-	2.0
Saudi Arabia	-	-	-	-	-	-	-	-	-
UAE	-	-	-	1.8	-	1.8	1.8	-	1.8
OPEC Fund	-	-	-	0.1	-	0.1	0.1	-	0.1
Qatar	1.0	-	1.0	n.s.	-	n.s.	1.0	-	1.0
Total	23.5	-	23.5	23.0	-	23.0	46.5	-	46.5
D. Others									
Switzerland	3.7	n.s.	3.7	1.3	-	1.3	5.0	n.s.	5.0
Spain	-	1.2	1.2	-	0.2	0.2	-	1.4	1.4
Total	3.7	1.2	4.9	1.3	0.2	1.5	5.0	1.4	6.4
E. GRAND TOTAL	634.4	90.3	724.7	317.2	22.0	339.2	951.6	112.3	1,063.9

a/ Converted from creditor currencies using average exchange rates for April through December 1978 as given in Table 4.2 (b).
b/ Coverage of data on suppliers credits is incomplete.
c/ Includes US$ 101.9 million repayment of 1973 USSR wheat loan.
d/ Excludes US$ 4.9 million of interest refunded by Iran.
e/ US$ 4.5 million of interest due to Iraq in 1978/79 has been capitalized.

Sources: 1. Ministry of Finance, Department of Economic Affairs.
2. Embassies in New Delhi.

Table 4.4 (c)

PROJECTED EXTERNAL DEBT PAYMENTS 1979/80 a/
(US$ million) b/

	Principal			Interest			Total Debt Service		
	Government Loans	Suppliers Credits c/	Total	Government Loans	Suppliers Credits c/	Total	Government Loans	Suppliers Credits c/	Total
A. Consortium Members									
Austria	2.8	4.5	7.3	1.0	1.6	2.6	3.8	6.1	9.9
Belgium	0.9	7.6	8.5	0.8	1.8	2.6	1.7	9.4	11.1
Canada	12.0	-	12.0	2.5	-	2.5	14.5	-	14.5
Denmark	1.7	0.7	2.4	0.1	0.1	0.2	1.8	0.8	2.6
France	29.9	4.5	34.4	19.1	0.6	19.7	49.0	5.1	54.1
Germany	102.4	9.2	111.6	45.0	2.7	47.7	147.4	11.9	159.3
Italy	2.0	12.9	14.9	1.4	2.2	3.6	3.4	15.1	18.5
Japan	65.8	9.0	74.8	51.0	1.9	52.9	116.8	10.9	127.7
Netherlands	7.5	1.5	9.0	11.2	0.1	11.3	18.7	1.6	20.3
Norway	-	0.4	0.4	-	0.1	0.1	-	0.5	0.5
Sweden	-	1.6	1.6	-	0.1	0.1	-	1.7	1.7
U.K.	50.1	0.8	50.9	10.3	0.4	10.7	60.4	1.2	61.6
U.S.A.	97.2	0.5	97.7	66.2	n.s.	66.2	163.4	0.5	163.9
Sub-total	372.3	53.2	425.5	208.6	11.6	220.2	580.9	64.8	645.7
IBRD	70.8	-	70.8	53.5	-	53.5	124.3	-	124.3
IDA	13.0	-	13.0	30.9	-	30.9	43.9	-	43.9
Sub-total	83.8	-	83.8	84.4	-	84.4	168.2	-	168.2
Total	456.1	53.2	509.3	293.0	11.6	304.6	749.1	64.8	813.9
B. East European Countries									
Bulgaria	-	0.2	0.2	-	n.s.	n.s.	-	0.2	0.2
Czechoslovakia	4.7	0.7	5.4	1.0	0.2	1.2	5.7	0.9	6.6
GDR	-	5.8	5.8	-	0.9	0.9	-	6.7	6.7
Hungary	1.0	0.3	1.3	0.4	n.s.	0.4	1.4	0.3	1.7
Poland	1.6	n.s.	1.6	0.3	n.s.	0.3	1.9	n.s.	1.9
Rumania	-	4.0	4.0	-	0.7	0.7	-	4.7	4.7
USSR	31.6	1.3	32.9	5.1	0.2	5.3	36.7	1.5	38.2
Yugoslavia	n.s.	13.1	13.1	n.s.	3.4	3.4	n.s.	16.5	16.5
Total	38.9	25.4	64.3	6.8	5.4	12.2	45.7	30.8	76.5
C. OPEC Countries									
Iran	52.5	-	52.5	28.8	-	28.8	81.3	-	81.3
Iraq	22.5	-	22.5	4.6	-	4.6	27.1	-	27.1
Kuwait	-	-	-	2.4	-	2.4	2.4	-	2.4
Saudi Arabia	-	-	-	1.8	-	1.8	1.8	-	1.8
UAE	-	-	-	1.9	-	1.9	1.9	-	1.9
OPEC Fund	-	-	-	0.2	-	0.2	0.2	-	0.2
Total	75.0	-	75.0	39.7	-	39.7	114.7	-	114.7
D. Others									
Switzerland	3.1	-	3.1	1.0	-	1.0	4.1	-	4.1
Spain	-	1.2	1.2	-	0.1	0.1	-	1.3	1.3
Total	3.1	1.2	4.3	1.0	0.1	1.1	4.1	1.3	5.4
E. GRAND TOTAL	573.1	79.8	652.9	340.5	17.1	357.6	913.6	96.9	1,010.5

a/ Based on estimated stock of debt outstanding on March 31, 1979.
b/ Converted from creditor currencies using average exchange rates for April through December 1978 as given in Table 4.2 (b).
c/ Coverage of data on suppliers credits is incomplete.

Sources: 1. Ministry of Finance, Department of Economic Affairs.
2. Embassies in New Delhi.

Table 5.1

CONSOLIDATED FINANCES OF CENTRAL & STATE GOVERNMENTS a/
(in Rs billion)

	1950/51	1955/56	1960/61	1965/66	1968/69	1970/71	1973/74	1974/75	1975/76	1976/77	1977/78 (Revised Estimates)	1978/79 (Budget Estimates)
Revenue Receipts	7.86	10.27	17.73	37.04	48.14	58.63	87.89	110.48	136.87	152.58	164.42	178.13
Tax Revenue	6.27	7.68	13.50	29.22	37.59	47.52	73.89	92.23	111.82	123.32	132.42	146.13
Direct Taxes	(2.31)	(2.59)	(4.02)	(7.34)	(8.40)	(10.09)	(15.52)	(18.34)	(24.93)	(25.85)	(27.28)	(29.32)
Indirect Taxes	(3.96)	(5.09)	(9.48)	(21.88)	(29.19)	(37.43)	(58.36)	(73.89)	(86.89)	(97.47)	(105.14)	(11.68)
Non-Tax Revenue	1.55	2.41	3.74	6.88	10.42	11.06	13.96	17.81	23.48	27.60	29.97	31.43
Other	0.04	0.18	0.49	0.94	0.13	0.05	0.04	0.44	1.57	0.97	2.02	0.57
Revenue Expenditures	7.31	10.30	16.98	34.18	47.13	57.17	86.70	98.82	118.47	138.63	157.29	171.56
Non-Developmental	5.19	6.12	9.53	19.76	27.83	33.52	51.27	56.62	66.64	75.85	82.45	88.90
Developmental	2.09	3.96	6.91	13.39	18.87	23.37	35.39	41.38	49.90	60.25	71.75	80.18
Other	0.03	0.22	0.54	1.03	0.43	0.28	0.04	0.82	1.93	2.53	3.09	2.48
Capital Expenditures	1.69	4.07	9.76	20.46	17.15	21.28	28.03	41.74	54.58	59.50	62.58	71.78
Non-Developmental	0.26	0.42	0.81	1.64	1.53	3.40	2.24	2.51	4.79	3.59	3.42	5.42
Developmental	1.18	2.71	5.70	10.49	8.65	12.01	17.67	25.41	31.91	32.27	39.33	45.73
Loans and Advances (net)	0.25	0.94	2.59	7.54	6.97	5.87	8.12	13.82	17.88	23.64	19.33	20.63
Other	-	-	0.66	0.79	-	-	-	-	-	-	-	-
Capital Receipts	1.19	2.10	7.52	13.62	13.51	16.23	19.09	23.54	38.24	42.15	57.83	51.73
Market Borrowings (net)	- 0.04	0.83	1.38	2.24	1.56	2.60	6.29	7.00	7.32	10.40	13.67	18.49
Small Savings (net)	0.34	0.67	1.04	1.51	1.14	1.84	4.74	2.77	3.93	4.13	4.40	4.60
Other	0.89	0.60	5.10	9.87	10.81	11.79	8.06	13.77	26.99	27.62	39.76	28.64
Overall Surplus/Deficit	0.05	- 2.00	- 1.49	- 3.98	- 2.63	- 3.59	- 7.75	- 6.54	2.06	- 3.40	2.38	- 13.48
Financing												
Treasury Bills	0.22	1.33	- 0.78	2.88	2.60	4.00	5.33	6.41	3.82	0.63	22.57	10.70
Ways & Means Advances	- 0.04	-	0.03	0.14	- 0.05	0.22	0.31	- 0.12	- 0.32	0.03	0.35	0.14
RBI Long Term Support	n.a.	0.41	2.03	0.67	- 0.50	- 0.65	2.32	- 0.37	- 1.93	- 1.94	- 0.79	0.01
Changes in Cash Balances	- 0.23	0.26	0.21	0.29	0.58	0.02	- 0.21	0.62	- 3.63	4.68	- 24.51	2.63

a/ Centre-State transfers have been netted out. In those cases where the amount of the transfers differs as between Centre and State accounts, the amount registered in the Central account has been used. Due to changes in budgetary classification, the data from 1974/75 onwards are not exactly comparable to those for previous years.

Source: Ministry of Finance.

Table 5.2

CENTRAL GOVERNMENT FINANCES [a/]
(in Rs billion)

	1950/51	1955/56	1960/61	1965/66	1968/69	1970/71	1973/74	1974/75	1975/76	1976/77	1977/78 (Revised Estimates)	1978/79 (Budget Estimates)
Revenue Receipts	4.39	5.37	10.03	23.39	27.81	33.16	50.32	64.78	79.58	86.18	95.62	105.05
Tax Revenue [b/]	3.57	4.11	7.30	17.85	20.19	24.51	39.00	50.97	60.10	65.81	71.07	80.07
Direct Taxes	(1.28)	(1.14)	(2.02)	(4.68)	(4.98)	(5.04)	(8.36)	(11.28)	(14.63)	(16.66)	(17.97)	(19.25)
Indirect Taxes	(2.29)	(2.97)	(5.28)	(13.17)	(15.21)	(19.47)	(30.63)	(39.69)	(45.47)	(49.15)	(53.10)	(60.82)
Non-Tax Revenue	0.82	1.13	2.31	4.70	7.56	8.63	11.28	13.77	18.39	19.68	23.69	24.72
Other	-	0.13	0.42	0.84	0.06	0.02	0.04	0.04	1.09	0.70	0.86	0.26
Revenue Expenditures [c/]	3.85	4.95	9.53	20.19	27.00	31.53	47.96	57.14	70.71	83.20	95.27	106.43
Non-Developmental	3.33	3.55	5.72	13.31	18.11	20.84	31.92	38.80	46.02	52.36	56.11	61.55
Developmental [c/]	0.27	0.67	1.25	2.54	3.45	4.50	6.14	7.70	10.71	13.92	17.97	19.64
Grants to States	0.25	0.60	2.13	3.50	5.39	6.17	9.86	10.60	12.89	16.22	20.33	24.97
Other	-	0.13	0.43	0.84	0.05	0.02	0.04	0.04	1.09	0.70	0.86	0.27
Capital Expenditures	1.25	3.82	7.78	16.62	11.83	15.72	20.58	30.68	39.16	40.80	43.31	51.32
Non-Developmental	0.16	0.37	0.64	1.58	1.24	3.50	2.35	2.19	4.65	3.03	2.80	5.27
Developmental	0.50	0.77	2.66	5.00	3.06	6.12	7.39	14.11	17.85	15.47	20.57	22.53
Loans and Advances (net)	0.59	2.68	3.82	9.25	7.53	6.10	10.14	14.38	16.66	22.30	19.94	23.52
Other	-	-	0.66	0.79	-	-	0.70	-	-	-	-	-
Capital Receipts	0.61	1.33	6.03	11.40	9.03	11.84	12.22	16.80	32.18	34.45	46.17	41.98
Market Borrowings (net)	- 0.11	0.35	0.72	1.24	0.79	1.44	4.64	4.81	4.56	8.45	11.83	16.50
Small Savings (net)	0.34	0.67	1.04	1.51	1.14	1.84	4.74	2.77	3.93	4.13	4.40	4.60
Other	0.38	0.31	4.27	8.65	7.10	8.56	2.84	9.22	23.69	21.87	29.94	20.88
Overall Surplus/Deficit	- 0.10	- 2.07	- 1.25	- 2.02	- 1.99	- 2.25	- 6.00	- 6.24	1.90	- 3.37	3.21	-10.71
Financing												
Treasury Bills	0.22	1.33	- 0.78	2.88	2.60	4.00	5.33	6.41	3.82	0.63	22.57	10.70
RBI Long-Term Support	n.a.	0.41	2.03	0.67	- 0.50	- 0.65	2.32	- 0.37	- 1.93	- 1.94	- 0.79	0.01
Changes in Cash Balances	- 0.12	0.36	0.25	- 0.45	- 0.48	- 0.74	- 1.21	- 0.82	- 4.80	4.72	- 25.46	-
Changes in Treasury Bills Holdings by States	n.a.	- 0.03	- 0.25	- 1.08	0.37	- 0.36	- 0.44	1.02	1.01	- 0.04	0.47	-

a/ Due to changes in budgetary classification, the data from 1974/75 onwards are not exactly comparable to those for previous years.
b/ Excluding the States' share in Central Taxes.
c/ Excluding all developmental and non-developmental expenditures financed through grants to the States.

Source: Ministry of Finance.

Table 5.3

STATE GOVERNMENT FINANCES [a/]
(in Rs billion)

	1950/51	1955/56	1960/61	1965/66	1968/69	1970/71	1973/74	1974/75	1975/76	1976/77	1977/78 (Revised Estimates)	1978/79 (Budget Estimates)
Revenue Receipts	**3.76**	**5.69**	**10.41**	**18.67**	**28.13**	**34.22**	**51.59**	**60.04**	**74.75**	**86.52**	**94.36**	**103.79**
Tax Revenue	2.69	3.56	6.23	11.37	17.36	23.01	34.81	41.30	51.72	57.41	61.56	66.16
Direct Taxes	(1.03)	(1.45)	(2.03)	(2.66)	(3.42)	(5.05)	(7.11)	(7.10)	(10.30)	(9.16)	(9.58)	(10.11)
Indirect Taxes	(1.66)	(2.11)	(4.20)	(8.71)	(13.94)	(17.96)	(27.71)	(34.20)	(41.42)	(48.24)	(51.98)	(56.05)
Non-Tax Revenue	0.76	1.34	1.88	3.35	4.97	5.35	7.08	7.78	9.66	11.82	11.53	12.46
Grants from Centre	0.27	0.73	2.24	3.84	5.73	5.83	9.70	10.59	12.85	15.85	19.69	23.55
Other	0.04	0.06	0.06	0.11	0.07	0.03	-	0.37	0.52	1.44	1.58	1.61
Revenue Expenditures	**3.74**	**6.14**	**10.16**	**19.01**	**27.93**	**34.40**	**52.77**	**56.02**	**65.22**	**75.55**	**87.59**	**95.85**
Non-Developmental	1.86	2.57	3.81	6.45	9.72	12.68	19.35	17.82	20.62	23.49	26.34	27.35
Developmental [b/]	1.82	3.29	5.66	10.85	15.42	18.87	29.25	33.68	39.19	46.33	53.78	60.54
Interest Payments to Centre	0.03	0.19	0.58	1.52	2.41	2.59	4.17	3.74	4.57	4.57	3.90	5.24
Other	0.03	0.09	0.11	0.19	0.38	0.26	-	0.78	0.84	1.16	3.57	2.72
Capital Expenditures	**0.99**	**2.69**	**4.52**	**9.82**	**8.60**	**9.06**	**13.53**	**16.92**	**20.91**	**26.96**	**30.87**	**35.36**
Non-Developmental	0.10	0.05	0.17	0.06	0.29	- 0.09	0.10	0.32	0.14	0.56	0.62	0.15
Developmental	0.68	1.94	3.04	5.49	5.59	5.89	9.93	11.30	14.06	16.80	19.25	23.20
Loans and Advances (net)	0.21	0.70	1.31	4.27	2.72	3.26	3.70	5.30	6.71	9.59	11.00	12.01
Capital Receipts	**1.12**	**3.21**	**4.03**	**8.20**	**7.76**	**7.90**	**12.96**	**12.60**	**11.54**	**15.96**	**23.27**	**24.64**
Market Borrowings (net)	0.08	0.49	0.67	1.00	0.76	1.16	1.65	2.19	2.76	1.96	1.85	1.99
Loans from Centre (net)	0.53	2.36	2.32	5.50	3.36	3.77	6.34	5.83	5.52	7.57	12.25	15.33
Other	0.51	0.19	1.04	1.70	3.64	2.97	4.97	4.58	3.26	6.43	9.17	7.32
Overall Surplus/Deficit	**0.15**	**0.07**	**- 0.24**	**- 1.96**	**- 0.64**	**- 1.34**	**- 1.75**	**- 0.30**	**0.16**	**- 0.03**	**- 0.83**	**- 2.77**
Financing												
Ways and Means Advances	- 0.04	-	0.03	0.14	- 0.05	0.22	0.31	- 0.12	- 0.32	0.03	0.35	0.14
Changes in Cash Balances	- 0.11	- 0.10	- 0.04	0.74	1.06	0.76	1.00	1.44	1.17	- 0.04	0.95	2.63
Changes in Treasury Bill Holdings	n.a.	0.03	0.25	1.08	- 0.37	0.36	0.44	- 1.02	- 1.01	0.04	0.47	

[a/] Due to changes in budgetary classification, the data from 1974/75 onwards are not exactly comparable to those for previous years.
[b/] As recorded in Central Government accounts.

Source: Ministry of Finance.

Table 5.4

TAX REVENUE - CENTRE AND STATES [a/]
(in Rs billion)

	1950/51	1955/56	1960/61	1965/66	1968/69	1970/71	1973/74	1974/75	1975/76	1976/77	1977/78 (Revised Estimates)	1978/79 (Budget Estimates)
TAX REVENUE - CENTRE												
Income Tax	1.34	1.32	1.69	2.72	3.78	4.73	7.41	8.74	12.14	11.94	10.25	11.35
Corporation Tax	0.39	0.37	1.10	3.05	3.00	3.71	5.83	7.09	8.62	9.84	12.75	14.42
Customs Duties	1.58	1.67	1.70	5.39	4.47	5.24	9.96	13.33	14.19	15.54	17.80	18.61
(of which Export Duties)	(0.47)	(0.38)	(0.13)	(0.02)	(0.98)	(0.63)	(0.85)	(0.91)	(0.83)	(1.29)	(2.48)	(2.28)
Union Excise Duties	0.68	1.45	4.16	8.98	13.21	17.59	26.02	25.28	29.88	31.93	33.40	40.24
Other	0.06	0.04	0.30	0.47	0.64	0.79	1.48	8.78	11.26	13.64	14.53	
A. Sub-total	4.05	4.85	8.95	20.61	25.10	32.06	50.70	63.22	76.09	82.71	89.05	99.30
Less: States' Share of:												
Income Tax	0.48	0.55	0.87	1.23	1.94	3.59	5.28	5.12	7.34	6.52	6.75	7.36
Excise Duties	-	0.17	0.75	1.46	2.91	3.90	6.31	7.03	8.57	10.28	11.13	11.77
Other	-	0.02	0.03	0.07	0.06	0.06	0.11	0.10	0.08	0.10	0.10	0.10
B. Tax Revenue Retained by Centre	3.57	4.11	7.30	17.85	20.19	24.51	39.00	50.97	60.10	65.81	71.07	80.07
TAX REVENUE - STATES												
Sales Tax	0.58	0.81	1.59	3.69	5.75	7.58	11.36	15.27	19.05	22.30	23.99	26.04
State Excise Duties	0.48	0.45	0.53	0.99	1.64	1.96	3.58	3.93	4.42	5.11	5.56	5.55
Stamps and Registration	0.26	0.29	0.44	0.80	1.09	1.28	1.73	2.06	2.18	2.33	2.53	2.68
Land Revenue Tax	0.50	0.78	0.97	1.20	1.25	1.21	1.59	1.62	2.34	1.87	1.73	1.83
Motor Vehicles Tax	0.08	0.15	0.34	0.60	0.86	1.10	1.49	1.77	2.05	2.40	2.61	2.88
Other	0.32	0.34	0.68	1.33	1.88	2.33	3.44	4.32	5.69	6.60	6.94	7.85
C. Sub-total	2.22	2.82	4.55	8.61	12.47	15.46	23.19	29.01	35.73	40.61	43.36	46.83
Add: States' Share of:												
Central Taxes	0.47	0.74	1.68	2.76	4.89	7.55	11.62	12.29	15.99	16.80	18.20	19.33
D. Tax Revenue Retained by States	2.69	3.56	6.23	11.37	17.36	23.01	34.81	41.30	51.72	57.41	61.56	66.16
TOTAL - CENTRE AND STATES (B + D)	6.26	7.67	13.53	29.22	37.55	47.52	73.81	92.27	111.82	123.22	132.63	146.23
Adjustment [b/]	+ 0.01	+ 0.01	- 0.03	-	+ 0.04	-	+ 0.08	- 0.04	-	+ 0.10	- 0.21	- 0.10
CONSOLIDATED TOTAL	6.27	7.68	13.50	29.22	37.59	47.52	73.89	92.23	111.82	123.32	132.42	146.13

a/ Due to changes in budgetary classification, the data from 1974/75 onwards are not exactly comparable to those for previous years.

b/ Adjustment to take into account the fact that in the consolidated statement on Centre and State finances, the States' tax revenue includes the States' share in Central taxes as recorded in the Central accounts rather than as in their own accounts.

Source: Ministry of Finance.

Table 5.5

CURRENT EXPENDITURES - CENTRE AND STATES a/
(in Rs billion)

	1950/51	1955/56	1960/61	1965/66	1968/69	1970/71	1973/74	1974/75	1975/76	1976/77	1977/78 (Revised Estimates)	1978/79 (Budget Estimates)
CENTRAL GOVERNMENT												
A Non-Developmental												
a. Tax Collection	0.10	0.13	0.23	0.30	0.39	0.48	0.65	0.85	1.12	1.19	1.33	1.45
b. Administrative Services	0.22	0.35	0.63	1.13	1.59	2.08	2.90	3.62	4.50	4.61	4.70	4.99
c. Defense	1.64	1.72	2.48	7.62	9.29	10.51	14.81	19.20	22.51	23.47	24.87	26.52
d. Interest Payments	0.71	0.96	1.93	3.71	5.28	6.06	8.82	10.01	12.28	13.74	15.61	18.40
e. Other	0.66	0.39	0.45	0.55	1.56	1.71	4.74	5.97	5.61	9.35	9.60	10.19
sub-total	3.33	3.55	5.72	13.31	18.11	20.84	31.92	38.80	46.02	52.36	56.11	61.55
B Developmental												
a. Education	0.03	0.14	0.44	0.94	0.77	1.02	1.35	1.49	1.91	2.14	2.38	2.81
b. Public Health	0.02	0.06	0.26	0.44	0.65	0.80	1.04	1.27	2.36	2.58	2.31	3.06
c. Agriculture	0.02	0.07	0.14	0.30	0.28	0.47	0.82	0.87	0.82	1.18	1.70	3.19
d. Industry	0.04	0.10	0.28	0.32	0.29	0.35	0.60	1.35	2.38	2.42	3.94	4.40
e. Other	0.16	0.30	0.13	0.54	1.46	1.86	2.33	2.72	3.24	5.60	7.64	6.18
sub-total	0.27	0.67	1.25	2.54	3.45	4.50	6.14	7.70	10.71	13.92	17.97	19.64
C Other	-	0.13	0.43	0.84	0.05	0.02	0.04	0.04	1.09	0.70	0.86	0.27
D Grants to States	0.25	0.60	2.13	3.50	5.39	6.17	9.86	10.60	12.89	16.22	20.33	24.97
Total (A + B + C + D)	3.85	4.95	9.53	20.19	27.00	31.53	47.96	57.14	70.71	83.20	95.27	106.43
STATE GOVERNMENTS												
E Non-Developmental												
a. Tax Collection	0.23	0.38	0.50	0.69	0.97	1.36	2.17	2.10	2.49	2.46	2.77	2.97
b. Administrative Services	0.99	1.23	1.67	2.84	3.64	4.35	6.09	7.20	8.15	9.17	10.34	10.46
c. Interest Payments (other than to Centre)	0.06	0.13	0.29	0.56	0.79	1.41	1.23	1.68	2.33	3.74	3.35	3.75
d. Other	0.58	0.83	1.35	2.36	4.32	5.56	9.86	6.84	7.65	8.12	9.88	10.17
sub-total	1.86	2.57	3.81	6.45	9.72	12.68	19.35	17.82	20.62	23.49	26.34	27.35
F Developmental												
a. Education	0.58	1.04	1.95	3.83	6.15	7.97	11.76	14.16	16.30	17.96	20.79	22.35
b. Public Health	0.26	0.47	0.81	1.53	2.38	3.02	4.55	5.75	6.60	8.22	8.80	9.91
c. Agriculture	0.21	0.27	0.38	1.09	1.42	1.55	2.58	3.20	4.13	4.54	5.77	7.13
d. Industry	0.05	0.16	0.21	0.30	0.28	0.33	0.53	0.57	0.64	0.87	1.04	1.22
e. Other	0.72	1.35	2.31	4.10	5.19	6.00	9.83	10.00	11.52	14.74	17.38	19.93
sub-total	1.82	3.29	5.66	10.85	15.42	18.87	29.25	33.68	39.19	46.33	53.78	60.54
G Other	0.03	0.09	0.11	0.19	0.38	0.26	0.00	0.78	0.84	1.16	3.57	2.72
H Interest Payments to Centre	0.03	0.19	0.58	1.52	2.41	2.59	4.17	3.74	4.57	4.57	3.90	5.24
Total (E + F + G + H)	3.74	6.14	10.16	19.01	27.93	34.40	52.77	56.02	65.22	75.55	87.59	95.85
TOTAL CENTRE AND STATES (net) (A + B + C + E + F + G)	7.31	10.30	16.98	34.18	47.13	57.17	86.70	98.82	118.47	137.96	158.63	172.07

a/ Due to changes in budgetary classification, the data from 1974/75 onwards are not exactly comparable to those for previous years.

Source: Ministry of Finance.

Table 5.6

TRANSFERS BETWEEN CENTRE AND STATES a/
(in Rs billion)

	1950/51	1955/56	1960/61	1965/66	1968/69	1970/71	1973/74	1974/75	1975/76	1976/77	1977/78 (Revised Estimates)	1978/79 (Budget Estimates)
States' Share in Central Taxes	0.48	0.74	1.65	2.76	4.91	7.55	11.70	12.25	15.99	16.90	17.98	19.23
Grants to States	0.25	0.60	2.13	3.50	5.39	6.17	9.86	10.60	12.89	16.22	20.33	24.97
Loans to States (gross)	0.61	2.55	3.39	8.36	9.15	10.28	15.76	10.93	12.95	14.81	20.20	25.20
Loan Repayments by States	- 0.08	- 0.24	- 0.95	- 2.76	- 5.85	- 6.58	- 9.69	- 5.07	- 7.46	- 6.56	- 8.60	- 10.30
Interest Repayments by States	- 0.03	- 0.19	- 0.58	- 1.52	- 2.41	- 2.59	- 4.17	- 3.74	- 4.57	- 3.90	- 5.24	- 5.75
Net Transfer	1.23	3.46	5.64	10.34	11.19	14.83	23.46	24.97	29.80	37.47	44.67	53.35

a/ All data are taken from Central Government accounts. Due to changes in budgetary classification, the data from 1974/75 onwards are not exactly comparable to those for previous years.

Source: Ministry of Finance.

Table 5.7

ECONOMIC CLASSIFICATION OF THE CENTRAL GOVERNMENT FINANCES
(in Rs billion)

	1960/61	1965/66	1968/69	1970/71	1973/74	1974/75	1975/76	1976/77	1977/78 (Revised Estimates)	1978/79 (Budget Estimates)
A. REVENUE	9.27	22.16	25.93	31.33	48.28	61.58	73.16	80.07	88.42	98.21
Tax Receipts	7.29	17.83	20.07	24.34	38.76	50.76	59.86	65.56	70.81	80.02
Income from Property and Enterprises	1.65	3.74	5.00	5.71	7.45	9.31	10.18	12.45	14.30	14.99
Fees and Miscellaneous Receipts	0.33	0.60	0.86	1.28	2.07	1.51	3.12	2.06	3.32	3.20
B. CURRENT EXPENDITURES	8.60	18.63	24.34	29.09	43.72	53.17	64.67	75.51	85.04	94.15
Consumption Expenditure	4.33	11.09	13.86	16.70	23.12	28.67	34.49	36.06	38.19	41.40
Transfer Payments a/	4.27	7.54	10.48	12.39	20.60	24.50	30.18	39.45	46.85	52.75
C. SAVINGS ON CURRENT ACCOUNT (A - B)	0.67	3.53	1.59	2.24	4.56	8.41	8.49	4.56	3.38	4.06
+ Retained Profits and Depreciation Provisions of Railways, Posts etc.	1.00	1.57	1.46	1.79	1.29	0.76	1.42	4.28	4.73	5.24
D. GROSS SAVINGS	1.67	5.10	3.05	4.03	5.85	9.17	9.91	8.85	8.11	9.30
+ Capital Transfers	0.39	0.80	1.02	0.55	16.86	1.17	2.97	2.88	3.60	3.91
+ Loan Repayments b/	1.21	3.73	6.91	8.93	14.64	10.76	10.86	7.40	13.84	15.86
E. TOTAL RECEIPTS	3.27	9.63	10.98	13.51	37.35	21.10	23.74	19.13	25.55	29.07
F. CAPITAL EXPENDITURE	10.73	23.85	25.15	31.51	62.95	49.91	61.19	62.48	74.41	86.82
Direct Investment	3.07	5.20	2.76	5.19	7.82	12.28	12.04	11.12	12.42	16.30
Gross Fixed Capital Formation	3.02	5.49	4.49	4.85	7.11	8.23	9.49	10.90	12.73	14.64
Increase in Inventories c/	0.05	- 0.29	- 1.73 f/	0.34	0.71	4.05	2.55	0.22	- 0.31	1.66
Indirect Investment	6.39	16.10	18.17	21.49	29.77	32.41	43.66	44.88	56.31	64.72
Capital Transfers	0.69	1.32	1.28	1.93	3.56	3.75	5.36	5.02	7.87	10.53
Investment in Shares	0.77	1.40	2.00	3.05	3.00	4.49	8.52	8.89	10.52	12.03
Loans for Capital Formation	4.26	10.32	10.74	8.82	12.83	16.77	21.38	25.54	28.97	32.54
Other Loans	0.61	2.28	3.99	6.10	10.21	7.38	6.11	4.82	8.85	7.12
Other	0.06	0.79	0.16	1.59	0.17	0.02	2.29	0.61	0.10	2.50
Debt Repayment	1.27	2.54	4.22	4.83	25.36	5.22	5.49	6.48	5.68	5.80
Amortization of Foreign Debt	0.18	0.81	1.76	1.99	19.82	3.07	3.44	3.70	4.39	4.00
Long-Term Rupee Debt	1.09	1.74	2.46	2.84	5.54	2.15	2.05	2.78	1.29	1.80
G. OVERALL DEFICIT (F - E)	7.46	14.22	14.17	18.00	25.60	28.81	37.45	43.35	48.86	57.75
Financed by:										
Market Borrowings	1.97	2.84	3.21	4.28	10.25	6.96	6.61	11.23	13.12	18.30
Foreign Debt: PL 480	2.90	2.13	1.73	1.06	1.18	- 0.51	0.36	0.40	- 0.18	- 0.22
Other	1.84	4.82	4.10	4.32	6.82	10.12	17.81	14.52	10.95	13.67
Small Savings	1.08	1.51	1.14	1.84	4.75	2.77	3.93	4.13	4.40	4.60
Other Unfunded Debt	0.43	0.91	0.46	1.56 d/	1.01	1.91	2.34	1.96	2.03	2.48
Other Debt	0.41	0.28	0.91	2.09	- 1.75	0.32	0.47	9.25	8.76	6.03
H. BUDGETARY DEFICIT (Minus = Surplus)	- 1.17	1.73	2.62	2.85	3.34	7.24	5.93	1.86	9.78	12.89
Treasury Bills e/	- 1.41	2.18	3.10	3.59	4.46	7.83	10.73	- 2.86	7.05	12.88
Change in Cash Balances (Minus = Increase)	0.24	- 0.45	- 0.48	- 0.74	- 1.12	- 0.59	- 4.80	4.72	2.73	0.01

a/ Mainly subsidies, interest payments and grants to States.
b/ Mainly from State Governments.
c/ Mainly grants or loans for capital formation by State Governments and Government enterprises.
d/ Includes compensation bonds valued at Rs. 796 million in respect of nationalized banks.
e/ Includes sales of Treasury Bills to holders other than the RBI.
f/ Mainly reduction of stocks of foodgrains and fertilizers.

Source: Ministry of Finance, Economic Classification of the Central Budget.

Table 5.8

PROJECTED AND ACTUAL PLAN OUTLAYS BY SECTOR
(Plan totals at base-year prices for projections and current prices for actuals - in Rs billion)

	First Plan (1951/52 - 1955/56)		Second Plan (1956/57 - 1960/61)		Third Plan (1961/62 - 1965/66)		Annual Plans (1966/67-1968/69)	Fourth Plan (1969/70 - 1973/74)		Fifth Plan (1974/75 - 1978/79)		(1974/75-1977/78)	New Plan (1978/79 - 1982/83)
	Projections	Actuals	Projections	Actuals	Projections a/	Actuals	Actuals	Projections	Actuals	Draft Plan Projections	Final Plan Projections	Estimates	Draft Plan Projections
I Agriculture and Allied Programs	2.83	2.35	5.06	4.55	9.64	8.55	6.79	19.57	16.83	45.45	43.02	29.76	86.00
General b/	2.83	2.35	5.06	4.55	9.64	8.55	6.66	18.04		33.70	31.09		58.00
Special Programs for Rural Development	-	-	-	-	-	-	-	1.15	16.83	4.58	5.37	26.87	15.50
Command Area Development	-	-	-	-	-	-	0.13	0.38		2.17	2.06		4.50
Hill and Tribal Area Development	-	-	-	-	-	-	-	-	-	5.00	4.50	2.89	8.00
II Irrigation and Flood Control	1.78	1.78	5.48	5.24	8.87	9.34	7.85	16.03	18.67	35.13	42.32	34.61	96.50
Major Irrigation	0.77	0.55	0.66	0.94	1.77	2.69	3.14	5.16	5.13	8.11	7.92	7.30	17.25
Major and Medium Irrigation	3.01 c/	3.09 c/	3.87	3.81	5.99	5.79	4.27	9.54	11.82	24.01	30.95	24.56	72.50
Flood Control		0.14	0.95	0.49	0.61	0.86	0.44	1.33	1.72	3.01	3.45	2.75	6.75
III Industry and Minerals	1.68	0.97	8.90	11.25	21.46	19.67	16.36	36.31	31.07	89.39	102.01	73.59	146.90
Village and Small Scale	0.27	0.42	2.00	1.87	2.64	2.41	1.26	2.93	2.43	6.11	5.35	3.86	13.50 d/
Large and Medium	1.41	0.55	6.90	9.38	18.82	17.26	15.10	33.38	28.64	83.28	96.66	69.73	133.40
of which: Coal	(n.a.)		(0.26)		(2.25)			(3.03)		(9.52)	(16.91)		(25.50)
Petroleum	(0.02)		(0.92)		(1.87)			(1.15)		(7.37)	(11.48)		(18.50)
IV Power	2.60 e/	2.60 e/	4.31	4.52	10.20	12.52	12.13	24.48	29.32	61.90	72.94	54.22	157.50
V Transport and Communications e/	4.98	5.18	13.86	12.61	16.55	21.12	12.22	32.38	30.80	71.06	68.82	52.26	105.78
Railways	2.50	2.17	9.00	7.23	9.40	13.23	5.09	10.50	9.34	25.50	22.02	15.76	33.50
Roads	1.09	1.47	2.46	2.24	3.24	4.40	3.09	8.71	9.62	17.74	13.48	11.70	21.85
Road Transport	0.09		0.17	0.18	0.26	0.27	0.55	0.93	1.28	2.85	4.61	3.67	7.40
Ports f/	0.33	0.28	0.52	0.34	1.45	1.00	0.61	2.14	2.62	4.12	6.17	4.45	5.21
Shipping	0.18	0.19	0.48	0.53	0.58	0.40	0.32	1.41	1.55	2.60	4.50	3.68	6.37
Civil Aviation	0.23	0.23	0.43	0.52	0.55	0.51	0.66	1.88	1.77	3.64	2.97	2.11	7.00
Meteorology	0.01	0.01	0.02	0.01	0.03	0.01	0.02	0.15	0.10	0.30	0.40	0.59	1.07
Communications	0.51	0.44	0.66	0.54	0.85	1.17	1.24	5.20	4.60	11.76	12.67	9.02	20.95
Broadcasting	0.04	0.02	0.09	0.05	0.11	0.08	0.11	0.40	0.27	1.20	0.94	0.58	1.37
Tourism	-	n.a.	0.03	0.01	0.08	0.05	0.06	0.36	0.40	1.13	0.74	0.13	1.09
Farakka Barage and Unallocated	-	0.37	-	0.96	-	-	0.47	0.70	0.25	0.22	0.32	0.57	-
VI Social Services	4.26	4.12	9.58	7.58	12.97	12.96	8.53	25.05	24.37	62.34	51.83	38.12	89.75
Education	1.56	1.49	3.07	2.73	5.60	5.89	3.07	8.23	7.74	17.26	12.85	9.03	19.55
Health	0.76		1.78		2.40	2.26	1.40	4.34	3.36	7.96	6.82	5.33	13.30
Family Welfare	0.01	0.98	0.05	2.28	0.27	0.25	0.70	3.15	2.78	5.16	4.97	3.77	7.65
Water Supply	0.23		0.91		1.05	1.06	1.03	4.07	4.59	10.21	9.31	7.53	15.80
Housing and Urban Development g/	0.49	0.33	1.34	0.80	1.42	1.28	0.73	2.37	2.70	11.59	11.06	7.86	22.90 h/
Nutrition i/	-	-	-	-	-	-	-	-	-	4.05	1.16	0.64	1.75
Social Welfare	-	-	0.29	0.20	0.28	0.19	0.11	0.41	0.64	2.29	0.86	0.59	1.31
Backward Classes and Harijan Welfare	0.29	0.32	0.90	0.79	1.14	0.99	0.74	1.42	1.65	2.55	3.27	2.34	5.45
Labor Welfare and Craftsmen Training	0.07	0.04	0.34	0.13	0.71	0.56	0.35	0.40	0.31	0.57	0.50	0.31	0.30
Rehabilitation	0.85	0.96	0.90	0.63	0.40	0.48	0.40	0.66	0.60	0.70	1.03	0.72	1.25
VII Other	0.56	0.60	0.81	0.97	1.80	1.61	2.37	5.20	6.73	8.55	12.09	7.35	11.37
Agricultural Buffer Stocks	-	-	-	-	-	-	1.40	2.55	1.24	1.00	-	-	-
Science and Technology	0.05		-	-	0.70	0.72	0.47	1.40	1.31	4.19	4.38	3.12	6.50
Information and Plan Publicity	-	0.60	0.13		0.12			0.13		0.38	0.28		0.47
Unallocated	0.51		0.68	0.97	0.98	0.89	0.50	1.12	4.18 j/	2.98	7.43	4.23	4.40
VIII TOTAL	20.69	19.60	48.00	46.72	80.99	85.77	66.25	159.02	157.79	373.82	393.03	289.91	693.80

Note: The investment component of plan outlays is computed on a net basis for the First through Fourth Plans, and on a gross basis subsequently.

a/ Relates to the cost of plan programs. Taking into account resource constraints, the projected plan outlays in the Third Plan totalled Rs. 75 billion.
b/ Excludes Minor Irrigation and Agricultural Buffer Stocks for all plans, but includes Local Works, Rural Works and Public Cooperation for the First through Annual Plans.
c/ Outlays on multipurpose Projects have been allocated between Major and Medium Irrigation and Power.
d/ Excludes Craftsmen Training.
e/ Excludes Information and Plan Publicity.
f/ Covers Major and Minor Ports, Lighthouses, and Inland Water Transport.
g/ Coverage of Housing and Urban Development heading has varied from plan to plan.
h/ Excludes Works.
i/ Prior to the Fifth Plan, outlays on Nutrition were included under the headings of Agriculture, Education and Social Welfare.
j/ Includes Rs 1.78 billion for Special Welfare and Employment Schemes.

Source: Planning Commission.

Table 5.9

PROJECTED AND ACTUAL PLAN OUTLAYS BY SECTOR
(Annual averages at constant 1970/71 prices - in Rs billion)

	First Plan (1951/52 - 1955/56)		Second Plan (1956/57 - 1960/61)		Third Plan (1961/62 - 1965/66)		Annual Plans (1966/67-1968/69)	Fourth Plan (1969/70 - 1973/74)		Fifth Plan (1974/75 - 1978/79)		(1974/75-1977/78)	New Plan (1978/79 - 1982/83)
	Projections	Actuals	Projections	Actuals	Projections	Actuals	Actuals	Projections	Actuals	Draft Plan Projections	Final Plan Projections	Estimates	Draft Plan Projections
I Agriculture and Allied Programs	1.33	1.02	2.17	1.70	3.26	2.57	2.63	4.42	3.05	7.94	4.93	4.18	9.26
General	1.33	1.02	2.17	1.70	3.26	2.57	2.58	4.07		5.89	3.56		6.25
Special Programs for Rural Development	-	-	-	-	-	-	-	0.26	3.05	0.80	0.61	3.77	1.67
Command Area Development	-	-	-	-	-	-	0.05	0.09		0.38	0.24		0.48
Hill and Tribal Area Development	-	-	-	-	-	-	-	-	-	0.87	0.52	0.41	0.86
II Irrigation and Flood Control	1.79	1.65	2.35	1.95	2.83	2.81	3.05	3.62	3.39	6.15	4.84	4.86	10.39
Minor Irrigation	0.36	0.24	0.28	0.35	0.60	0.81	1.22	1.16	0.93	1.42	0.91	1.02	1.86
Major and Medium Irrigation	1.42	1.35	1.66	1.42	2.02	1.74	1.66	2.15	2.14	4.20	3.54	3.45	7.81
Flood Control		0.06	0.41	0.18	0.21	0.26	0.17	0.30	0.31	0.53	0.39	0.39	0.73
III Industry and Minerals	0.79	0.42	3.82	4.20	7.25	5.90	6.35	8.19	5.63	15.63	11.68	10.32	15.82
Village and Small Scale	0.13	0.18	0.86	0.70	0.89	0.72	0.49	0.66	0.44	1.07	0.61	0.54	1.45
Large and Medium	0.66	0.24	2.96	3.50	6.36	5.18	5.86	7.53	5.19	14.56	11.07	9.78	14.37
of which: Coal	(n.s.)		(0.11)		(0.76)			(0.68)		(1.71)	(1.94)		(2.75)
Petroleum	(0.01)		(0.39)		(0.63)			(0.26)		(1.52)	(1.31)		(1.99)
IV Power	1.22	1.13	1.85	1.69	3.45	3.76	4.71	5.53	5.32	10.82	8.35	7.61	16.96
V Transport and Communications	2.34	2.26	5.95	4.71	5.59	6.33	4.74	7.31	5.58	12.42	7.88	7.33	11.40
Railways	1.18	0.95	3.86	2.70	3.18	3.97	1.98	2.37	1.69	4.46	2.52	2.21	3.61
Roads	0.51	0.64	1.06	0.84	1.09	1.32	1.20	1.97	1.56	3.10	1.54	1.64	2.35
Road Transport	0.04		0.07	0.07	0.09	0.08	0.21	0.21	0.23	0.50	0.53	0.51	0.80
Ports	0.16	0.12	0.22	0.13	0.49	0.30	0.24	0.48	0.48	0.72	0.71	0.62	0.56
Shipping	0.08	0.08	0.21	0.20	0.20	0.12	0.12	0.32	0.28	0.45	0.52	0.52	0.69
Civil Aviation	0.11	0.10	0.18	0.19	0.19	0.15	0.26	0.42	0.32	0.64	0.34	0.30	0.75
Meteorology	n.s.	n.s.	0.01	n.s.	0.01	n.s.	0.01	0.03	0.02	0.05	0.05	0.08	0.12
Communications	0.24	0.19	0.28	0.20	0.29	0.35	0.48	1.17	0.83	2.06	1.45	1.27	2.26
Broadcasting	0.02	0.01	0.04	0.02	0.04	0.02	0.04	0.09	0.05	0.21	0.11	0.08	0.15
Tourism	-	n.s.	0.01	n.s.	0.03	0.02	0.02	0.08	0.07	0.20	0.08	0.02	0.12
Farakka Barage and Unallocated	-	0.16	-	0.36	-	-	0.18	0.16	0.05	0.04	0.04	0.08	-
VI Social Services	2.00	1.80	4.11	2.83	4.38	3.90	3.31	5.65	4.42	10.90	5.93	5.35	9.67
Education	0.73	0.65	1.32	1.02	1.89	1.77	1.19	1.86	1.40	3.02	1.47	1.27	2.11
Health	0.36		0.76		0.71	0.68	0.54	0.98	0.61	1.39	0.78	0.75	1.43
Family Welfare	n.s.	0.43	0.02	0.85	0.09	0.08	0.27	0.71	0.50	0.90	0.57	0.53	0.82
Water Supply	0.11		0.39		0.35	0.32	0.40	0.92	0.83	1.78	1.07	1.06	1.70
Housing and Urban Development	0.23	0.14	0.58	0.30	0.48	0.38	0.28	0.53	0.49	2.03	1.27	1.10	2.47
Nutrition	-	-	-	-	-	-	-	-	-	0.71	0.13	0.09	0.19
Social Welfare	-	-	0.12	0.07	0.09	0.06	0.04	0.09	0.12	0.40	0.10	0.08	0.14
Backward Classes and Harijan Welfare	0.14	0.14	0.39	0.29	0.39	0.30	0.29	0.32	0.30	0.45	0.37	0.33	0.59
Labor Welfare and Craftsmen Training	0.03	0.02	0.15	0.06	0.24	0.17	0.14	0.09	0.06	0.10	0.06	0.04	0.09
Rehabilitation	0.40	0.42	0.39	0.24	0.14	0.14	0.16	0.15	0.11	0.12	0.12	0.10	0.13
VII Other	0.26	0.26	0.35	0.36	0.61	0.49	0.92	1.18	1.22	1.49	1.38	1.03	1.22
Agricultural Buffer Stocks	-	-	-	-	-	-	0.54	0.58	0.22	0.17	-	-	-
Science and Technology	0.02		-		0.24	0.22	0.18	0.32	0.24	0.73	0.50	0.44	0.70
Information and Plan Publicity	-	0.26	0.06		0.04			0.03		0.07	0.03		0.05
Unallocated	0.24		0.29	0.36	0.33	0.27	0.19	0.25	0.76	0.52	0.85	0.59	0.47
VIII TOTAL	9.74	8.54	20.60	17.43	27.36	25.76	25.71	35.90	28.61	65.35	44.99	40.67	74.72
Price Deflator a/ (1970/71=100)	42.5	45.9	46.6	53.6	59.2	66.6	85.9	88.6	110.3	114.4	174.7	178.2	185.7

Note: See footnotes to Table 5.8

a/ These price deflators, derived from the implicit price deflator for gross domestic capital formation in the National Accounts Statistics (see Statistical Appendix Table 6.12), have been used to convert the plan outlays for all sectors to constant 1970/71 prices. Plan projections have been converted from base-year prices; the base years have been taken to be 1950/51 for the First Plan, 1955/56 for the Second Plan, 1960/61 for the Third Plan, 1968/69 for the Fourth Plan, 1972/73 for the Draft Fifth Plan, 1974/75 for the 1974/75 outlays and 1975/76 for subsequent years of the Final Fifth Plan, and 1977/78 for the New Plan. Actual outlays have been converted from current prices using the unweighted average price deflator for the First through Third Plans, and the weighted (by annual outlays) price deflator for subsequent plan periods.

Source: Planning Commission.

Table 5.10

ACHIEVEMENT OF PLAN TARGETS
(%)

	First Plan (1951/52-1955/56)	Second Plan (1956/57-1960/61)	Third Plan (1961/62-1965/66)	Fourth Plan (1969/70-1973/74)	Fifth Plan[a] (1974/75-1977/78) Draft Plan Targets	Fifth Plan[a] (1974/75-1977/78) Final Plan Targets
Plan Outlays (in constant 1970/71 prices)						
Agriculture & Allied Programs	77	78	79	69	53	85
Irrigation & Flood Control	93	83	99	94	79	100
Industry & Minerals	53	110	81	69	66	88
Power	93	91	109	96	70	91
Transport & Communications	97	79	113	76	59	93
Social Services	90	69	89	78	49	90
Total	88	85	94	80	62	90
Infrastructure (increase over plan period)						
Fert.Consumption (per annum)	n.a.	n.a.	39	28	36	91
Gross Irrigated Area	30	34	48	89	81	81
Electricity						
. Installed Capacity	51	64	65	47	58	76
. Generation (per annum)	n.a.	75	66	n.a.	56	73
Railway Freight (per annum)	n.a.	66	52	-31	78	95
Annual Production (increase over plan period)						
Foodgrains[b]	187	136	-14	19	100	128
Coal and Lignite	119	76	31	27	48	61
Finished Steel	75	37	46	-6	19	19
Fertilizers	71	18	19	24	44	71
Petroleum Products	n.a.	400	92	41	37	63
Cement	95	38	62	43	64	94
Cotton Cloth	120	32	42	3	28	39
Domestic Product (annual growth rate over plan period)[c]						
Agriculture	n.a.	82	2	34	85	99
Mining & Manufacturing	n.a.	68	55	56	63	79
Other Sectors	n.a.	119	108	67	92	115
Total	178	87	56	52	83	104

a/ As the Fifth Plan was terminated one year early, targets and achievements have been compared on an annual average basis.

b/ Actual increase in foodgrain production has been calculated as difference between average production in three years centered on last year and production in base year of each plan.

c/ For actual domestic product, trend growth rates have been calculated by lease squares estimation.

Source : Appendix Table 5.9 and World Bank estimates.

Table 6.1

MONEY SUPPLY AND SOURCES OF CHANGE
(Outstanding as on the last Friday of March - in Rs billion)

	1970/71	1971/72	1972/73	1973/74	1974/75	1975/76	1976/77 a/	1977/78 a/	1978/79 b/
MONEY SUPPLY									
1. Currency with the Public	43.67	48.00	54.20	63.08	63.46	67.04	78.73	86.65	98.69
2. Deposit Money	29.54	35.20	42.64	48.64	55.61	64.39	77.36	94.19	110.13
Total	73.21	83.20	96.84	111.72	119.07	131.43	156.09	180.83	208.82
SOURCES OF CHANGE									
1. Net Bank Credit to Government of which:	52.64	64.44	77.70	87.26	95.33	101.12	110.20	129.71	141.41
RBI	(38.07)	(46.89)	(54.89)	(62.34)	(65.70)	(66.97)	(69.26)	(73.87)	(76.83)
Other Banks	(14.57)	(17.55)	(22.81)	(24.92)	(29.63)	(34.14)	(40.94)	(55.84)	(64.58)
2. Bank Credit to Commercial Sector of which:	64.55	73.68	87.29	107.01	126.71	153.92	185.08	210.04	248.27
RBI	(1.25)	(2.32)	(2.65)	(5.62)	(6.52)	(7.21)	(8.87)	(9.54)	(12.02)
Other Banks	(63.30)	(71.36)	(84.64)	(101.39)	(120.19)	(146.71)	(176.22)	(200.50)	(236.25)
3. Net Foreign Exchange Assets of Banking Sector	5.59	6.19	5.77	6.74	4.36	10.94	25.36	45.27	52.42
4. Government's Currency Liabilities to the Public	3.84	4.11	4.57	5.02	5.31	5.55	5.68	5.90	5.96
5. Non-monetary Liabilities of Banking Sector of which:	53.41	65.22	78.49	94.31	112.64	140.09	170.23	210.09	239.24
Time Deposits with Banks	(36.37)	(43.70)	(53.49)	(63.99)	(75.50)	(91.42)	(116.75)	(143.65)	(173.87)
Net Non-monetary Liabilities of RBI	(7.14)	(10.91)	(12.19)	(14.37)	(16.70)	(25.77)	(28.33)	(34.52)	(26.75)
Other	(9.90)	(10.61)	(12.81)	(15.95)	(20.43)	(23.40)	(25.14)	(31.92)	(38.62)
Total Money Supply (1+2+3+4-5)	73.21	83.20	96.84	111.72	119.07	131.43	156.09	180.83	208.82

a/ Provisional.
b/ As of January 26, 1979.

Source: Reserve Bank of India, various issues of the monthly Bulletin and Weekly Supplement.

Table 6.2

BASE MONEY AND SOURCES OF CHANGE
(Outstanding as on the last Friday of March - in Rs billion)

	1970/71	1971/72	1972/73	1973/74	1974/75	1975/76	1976/77 a/	1977/78 a/	1978/79 b/
BASE MONEY									
1. Currency with the Public	43.67	48.00	54.20	63.08	63.46	67.04	78.73	86.65	98.69
2. Other Deposits with RBI	0.44	0.79	0.51	0.45	0.78	0.54	1.00	0.70	0.90
3. Cash with Banks	1.86	2.05	2.47	2.77	3.31	3.43	3.95	4.85	5.86
4. Bank Deposits with RBI	2.17	2.96	2.97	6.30	6.31	6.31	11.76	17.19	24.33
Total	48.14	53.80	60.15	72.60	73.86	77.32	95.44	109.38	129.78
SOURCES OF CHANGE									
1. RBI Claims of which:	46.07	54.52	62.14	75.22	81.36	86.76	92.68	92.67	98.23
on Government (net)	(38.07)	(46.89)	(54.89)	(62.34)	(65.70)	(66.97)	(69.26)	(73.87)	(76.83)
on Banks	(6.75)	(5.31)	(4.60)	(7.26)	(9.14)	(12.58)	(14.55)	(9.26)	(9.38)
on Commercial Sector	(1.25)	(2.32)	(2.65)	(5.62)	(6.52)	(7.21)	(8.87)	(9.54)	(12.02)
2. Net Foreign Exchange Assets of RBI	5.38	6.08	5.63	6.72	3.90	10.78	25.42	45.32	52.34
3. Government's Currency Liabilities to the Public	3.84	4.11	4.57	5.02	5.31	5.55	5.68	5.90	5.96
4. Net Non-monetary Liabilities of RBI	7.14	10.91	12.19	14.37	16.70	25.77	28.33	34.52	26.75
Total Base Money (1+2+3-4)	48.14	53.80	60.15	72.60	73.86	77.32	95.44	109.38	129.78

a/ Provisional.

b/ As of January 26, 1979.

Source: Reserve Bank of India, various issues of the monthly Bulletin and Weekly Supplement.

Table 6.3

GOVERNMENT MARKET BORROWING (NET)
(in Rs billion)

Year	Centre	States	Total
1956/57	0.77	0.64	1.41
1960/61	0.83	0.67	1.50
1965/66	1.04	1.07	2.11
1966/67	0.80	0.97	1.77
1967/68	0.94	0.68	1.62
1968/69	0.78	0.70	1.48
1969/70	1.39	0.81	2.20
1970/71	1.34	1.00	2.34
1971/72	2.95	1.03	3.98
1972/73	4.78	1.33	6.11
1973/74	4.71	1.67	6.38
1974/75	4.94	2.12	7.06
1975/76	4.53	2.74	7.27
1976/77	8.45	1.79	10.23
1977/78	11.91	1.78	13.69
1978/79 (budget)	16.50	1.99	18.49
1978/79 (revised)	16.53	n.a.	n.a.

Sources: 1. Reserve Bank of India, various issues of the Report on Currency and Finance.
2. Ministry of Finance.

Table 6.4

SELECTED MONETARY POLICY INSTRUMENTS [a/]

Year	& Month	Bank Rate	Minimum [b/] Cash Deposit Ratio	Statutory [c/] Liquidity Ratio	Net [d/] Liquidity Ratio
1965	January	6	3	25	28
1968	March	5	3	25	28
1970	February	5	3	26	31
	April	5	3	27	32
	August	5	3	28	33
1971	January	5	3	28	34
	June	6	3	28	34
1972	August	6	3	29	34
	November	6	3	30	36
1973	March	6	3	30	37
	May	7	3	30	37
	June	7	5	30	39
	September 8	7	6	30	40
	September 22	7	7	30	40
	December	7	7	32	40
1974	April	7	7	32	40
	June 29	7	5	33	40
	July 23	9	5	33	40
	December 14	9	4.5	33	40
	December 28	9	4	33	39
1975	November 1	9	4	33	e/
1976	September 4	9	5	33	-
	November 13	9	6 f/	33	-

a/ Dates given are those of the effectiveness of the announced measures.
b/ Minimum cash resources to be deposited with the RBI as percentage of aggregate demand and time liabilities.
c/ The ratio of liquid assets (exclusive of those under b/) to aggregate demand and time liabilities.
d/ Liquid assets as defined under c/ minus borrowing from RBI, SBI and IDBI as percentage of aggregate demand and time liabilities.
e/ Starting from November 1, the net liquidity ratio was abolished as a guideline for access to refinance.
f/ In addition to the existing liquidity requirements, the commercial banks have to deposit with the RBI 10% of the additional deposits accruing since January 14, 1977.

Source: Reserve Bank of India, Report on Currency and Finance 1977/78, and various issues of the Bulletin.

Table 6.5

INTEREST RATES - SHORT TERM COMMERCIAL BANKING RATES
(in percent)

		1955/56	1960/61	1965/66	1968/69	1970/71	1972/73	1973/74	1974/75	1975/76	1976/77	1977/78
I	Bank Rate	3.5	4.0	6.0	5.0	5.0/6.0	6.0	6.0/7.0	7.0/9.0	9.0	9.0	9.0
II	Treasury Bill Rate		2.65	3.5		3.0/3.5	3.5	3.5/4.0	4.25/4.6	4.6	4.6	4.6
III	Call Money Rate											
	(a) State Bank of India											
	- Scheduled Banks	3.5	4.0/6.0	7.5/9.0	8.5	8.5/12.0	10.0	10.0/10.5	10.5/15.0	15.5	15.5	15.5/15.0
	- Cooperative Banks	3.5	4.0/4.5	6.75/8.0	7.5	7.5/8.5	8.5/9.0	9.0/9.5	9.5/14.0	14.5	14.5	14.50/13.50
	(b) Other Major Scheduled Commercial Banks											
	- Bombay	2.75	4.24	6.26	3.75	6.38	4.15	7.83	12.82	10.55	10.84	9.28
	- Calcutta	3.16	4.30	6.81	4.05	6.91	3.70	8.84	14.24	11.12	10.71	7.17
	- Madras	2.93	3.74	6.06	4.06	6.45	4.14	8.08	14.16	9.73	11.17	9.82
IV	Bazaar Bill Rate											
	- Bombay	10.125	9.0/12.0	12.0/15.0	15.0	15.0	15.0	15.0/17.0	17.0/21.0	21.0	n.a.	n.a.
	Hundi Rate											
	- State Bank of India	4.5/5.0	5.25/6.5	9.25/9.75	9.5	9.5	8.75/10.5	8.0/13.0	9.5/16.5	14.0/16.5	14.0/16.0	n.a.
V	Commercial Bank Rates											
	(a) Deposit Rates - Ceiling											
	- 1 year		3.75	6.0		6.0	6.0	6.0	8.0	8.0	8.0	8.0/6.0
	- 3 years		4.00	6.25		6.5	6.5	7.0	9.0	9.0	9.0	9.0/7.5
	- 5 years		4.50	7.0		7.25	7.25	7.5	10.0	10.0	10.0	10.0/9.0
	(b) Key Lending Rates											
	Ceiling											
	- General		-	10.0		a/	a/	a/	a/	16.5	16.5	16.5/15.0
	- Exports		-	-		-	7.0	8.0	9.0/11.5	11.5	11.5	11.5/11.0
	- Food Procurement		-	-		-	-	8.5	9.0/12.0	12.0	12.0	12.0/11.0
	- On deferred payments		-	-		-	6.0	6.0	7.0/8.0	8.0	8.0	8.0
	Minimum											
	- General		-	-		-	-	10.0/11.0	12.5	12.5	12.5	12.5
	- Selective Controls		-	-		-	12.0	12.0/13.0	14.0/15.0	14.0/15.0	14.0/15.0	14.0/15.0

a/ Ceiling was lowered to 9.5% in 1968, but withdrawn in January 1970.

Source: Reserve Bank of India - Report on Currency and Finance 1970/71, 1974/75 and 1977/78.

Table 6.6

INTEREST RATES - LONG TERM RATES
(in percent)

	1960/61	1965/66	1970/71	1972/73	1973/74	1974/75	1975/76	1976/77	1977/78
Term Lending Institutions									
Prime Lending Rates									
IDBI	-	8.0	8.5	8.5	9.0	10.25	11.0	11.0	11.0
IFCI	7.0	8.5	9.0	9.0	9.5	11.25	12.0	11.0	11.0
ICICI	6.5	8.0	8.5	8.5	9.0	10.25	11.0	11.0	11.0
IRCI	-	-	-	-	8.5	8.5	8.5	8.5	8.5
SFC	-	8.0/9.0	7.5/10.5	8.5/10.5	9.0/11.0	8.0/13.0	8.0/14.5	8.0/15.5	8.0/15.5
(rates charged to small scale)			(7.0/8.5)	(7.5/9.75)	(7.5/10.5)	(8.0/10.5)	(8.0/11.0)	(8.0/11.0)	(8.0/11.0)
UTI Dividend Rate	-	7.0	8.0	8.5	8.5	8.6	8.75	9.0	9.0
Corporate Borrowing Rates									
(a) Preference - Ceiling	8.5/9.3	9.5	9.5	9.5	9.8	11.0	11.0	11.0	11.0
(b) Debentures - Ceiling	7.0/7.5	7.0	8.0	8.0	8.5	10.5 a/	10.5 a/	10.5 a/	10.5 a/
(c) 1 year	-	-	-	7.5/15.0	8.0/12.0	9.0/14.0	9.0/13.5	9.0/15.0	9.0/15.0
(d) 2 years	-	-	-	8.0/15.0	8.0/13.0	9.0/15.0	10.0/14.5	10.0/16.0	10.0/15.5
(e) 3 years	-	-	-	8.0/15.0	8.5/13.0	9.5/16.0	9.5/16.5	11.0/16.0	11.0/16.5
(f) 5 years	-	-	-	8.0/15.0	9.0/12.5	10.0/16.0	9.0/16.0	12.0/16.0	11.5/16.0
Industrial Securities									
Ordinary Shares	4.88	8.11	5.53	6.86	5.59	4.23	5.43	6.14	6.47
Debentures - Running Yield	-	6.68	7.31	7.46	7.98	8.07	8.39	8.55	8.89
Government Securities									
Short-term (1 - 5 years)	3.44/3.85	4.10/6.11	3.85/4.28	4.46/4.98	4.47/5.05	5.00/5.65	5.20/6.04	5.18/5.59	5.06/5.59
Medium-term(5 -15 years)	3.60/4.17	4.60/5.92	4.32/4.84	4.08/5.28	4.74/5.34	5.18/5.99	5.47/6.02	5.43/5.97	5.42/5.98
Long-term (15 years and over)	3.99/4.18	4.61/5.53	4.77/5.53	5.00/5.74	5.00/5.74	5.00/6.39	5.00/6.48	5.00/6.47	5.00/6.46

a/ Effective September 12, 1974 and for a term exceeding 7 years. 10 percent for a term less than 10 years.

Source: Reserve Bank of India - Report on Currency and Finance 1970/71, 1974/75 & 1977/78.

Table 6.7

PUBLIC SECTOR BANKS - ADVANCES TO PRIORITY SECTORS
(in Rs million)

	June 1969		June 1970		June 1975		June 1976		June 1977		June 1978 [a/]	
	Amount	Percent	Amount	Percent	Amount	Percent	Amount	Percent	Amount	Percent	Amount	Percent
Advances - Priority Sector												
I Agriculture	1,623	5.4	3,016	8.2	7,680	10.0	10,039	10.1	12,751	11.0	16,577	12.5
of which:												
Direct Finance to Farmers [b/]	402	1.3	1,604	4.3	5,115	6.7	7,263	7.3	9,507	8.2	12,360	9.4
II Small Scale Sector	2,760	9.1	4,584	12.8	11,903	15.5	14,668	14.8	17,940	15.4	22,419	17.0
Small Scale Industries	2,511	8.3	3,695	10.3	9,427	12.3	10,992	11.1	13,153	11.3	16,410	12.4
Road Transport Operators	55	0.2	244	0.7	1,134	1.5	1,934	1.9	2,528	2.2	3,055	2.3
Retail Trade and Small Business	194	0.6	645	1.8	1,342	1.7	1,742	1.8	2,259	1.9	2,954	2.2
III Other Priority Sectors	27	0.1	87	0.3	406	0.5	578	0.6	774	0.7	928	0.7
Professionals and Self Employed Persons	19	0.1	66	0.2	367	0.5	531	0.5	716	0.6	863	0.6
Education	8	n.s.	21	0.1	39	n.s.	47	0.1	58	0.1	65	0.1
IV Sub-total above	4,410	14.6	7,687	21.3	19,989	26.1	25,285	25.5	31,465	27.0	39,924	30.2
V Total Bank Advances	30,168	100.0	35,776	100.0	76,540	100.0	99,280	100.0	116,430	100.0	132,150	100.0

a/ Provisional.
b/ Excludes advances to plantations, other than developmental finance.

Source: Government of India, Economic Survey 1978/79.

Table 6.8

ASSISTANCE BY TERM-LENDING INSTITUTIONS TO THE INDUSTRIAL SECTOR
(in Rs million)

	Assistance Sanctioned											Assistance Disbursed										
	Annual Average a/ 1956/57-1960/61		1960/61	Annual Average 1961/62-1965/66	1965/66	1968/69	1970/71	1973/74	1974/75	1975/76	1976/77	1977/78 b/	Annual Average a/ 1956/57-1960/61		1960/61	Annual Average 1961/62-1965/66	1965/66	1968/69	1970/71	1973/74	1974/75	1975/76	1976/77	1977/78 b/
Loans																								
IDBI c/				223	543	461	705	1,634	2,148	2,382	4,669	6,200				153	325	274	511	1,134	1,639	1,695	2,726	3,236
IFCI d/		275		262	401	196	285	388	257	478	704	1,127		74		156	230	177	165	303	360	327	529	539
ICICI		117		166	239	295	384	545	573	656	856	1,002		31		108	223	114	258	401	428	563	606	852
IRCI								72	76	53	100	115								52	81	46	108	94
SFCs		92		181	234	193	490	1,021	1,412	1,623	1,630	1,655		48		120	161	179	331	541	794	995	1,049	1,072
SIDCs				3	3	19	171	230	213	257	422	567				1	3	20	95	161	198	200	246	296
Sub-Total		484		835	1,420	1,164	2,035	3,894	4,679	5,449	8,380	10,666		153		538	942	764	1,360	2,592	3,500	3,826	5,264	6,089
LIC		e/		33	154	33	20	171	212	292	499	414		e/		4	18	39	27	106	438	228	274	327
Total	210	484		868	1,574	1,197	2,055	4,065	4,891	5,742	8,879	11,080	140	153		542	960	803	1,387	2,698	3,938	4,054	5,538	6,416
Underwriting and Direct Subscription to Shares and Debentures																								
IDBI				27	87	26	28	82	90	72	235	340				6	28	9	47	48	27	54	68	113
IFCI		19		40	58	31	38	31	35	35	62	71		11		25	41	17	9	15	10	20	20	36
ICICI		17		46	57	75	54	67	56	129	88	81		16		23	30	49	31	34	26	48	64	64
SFCs				17	19	3	6	9	5	6	4	5				13	19	5	4	5	2	6	3	2
SIDCs				22	14	25	22	48	122	111	119	167				10	11	15	16	45	69	71	103	141
Sub-Total		36		152	235	160	148	237	308	354	507	664		27		77	129	95	107	148	134	200	258	356
UTI				22	22	103	108	77	70	71	90	265				19	18	103	51	77	76	51	60	69
LIC		e/		104	96	144	158	89	226	318	69	113		e/		89	79	116	54	93	103	47	115	101
Total	32	36		278	353	407	414	403	604	741	666	1,042	13	27		185	226	314	212	318	313	298	433	526
Total Assistance																								
IDBI				250	630	486	733	1,720	2,238	2,455	4,902	6,540				159	353	282	558	1,182	1,666	1,749	2,794	3,349
IFCI		294		302	459	227	323	419	292	513	766	1,197		85		181	271	195	174	319	370	347	549	575
ICICI		134		212	296	370	439	611	629	786	944	1,083		47		131	253	162	289	435	454	611	670	916
IRCI								72	76	53	100	115								52	81	46	108	94
SFCs		92		198	253	196	496	1,031	1,418	1,629	1,633	1,661		48		134	180	184	335	546	796	1,001	1,052	1,074
SIDCs				24	17	44	193	279	335	367	541	735				11	14	35	111	206	267	271	349	437
Sub-Total		520		986	1,655	1,323	2,184	4,131	4,987	5,802	8,887	11,330		180		616	1,071	858	1,467	2,739	3,633	4,025	5,522	6,445
UTI				22	22	103	107	77	70	71	90	265				19	18	103	51	77	76	51	60	69
LIC		e/		138	250	177	178	259	438	610	568	527		e/		93	97	155	81	200	541	275	389	428
GRAND TOTAL	242	520		1,146	1,927	1,603	2,469	4,468	5,495	6,483	9,545	12,122	153	180		728	1,186	1,116	1,599	3,016	4,250	4,352	5,971	6,942

a/ Data for the period 1956/57-1960/61 relate to the operations of the financial institutions then in existence namely, IFCI, ICICI and the SFCs.
b/ Provisional.
c/ Includes direct loans, refinance to banks and rediscounts; exclusive of refinance to SFCs to avoid double counting.
d/ Including disbursements on account of guarantees.
e/ Data not compiled for 1960/61. The total assistance figures for the year 1960/61 include loans and underwriting by the LIC.

Sources 1. Reserve Bank of India, Report on Currency & Finance, 1967/68, 1970/71, 1972/73, 1974/75 to 1977/78.
2. The World Bank, Economic Situation and Prospects of India, April 17, 1978.

Table 6.9

INDEX NUMBERS OF WHOLESALE PRICES - BY YEARS [a]
(Base 1970/71=100)

Year (April - March)	Food Articles			Industrial Raw Materials			Fuel, Power, Light & Lubricants	Manufactured Products							All Commodities
	Total	Foodgrains	Other Food	Total	Non-Food Articles	Minerals		Total	Food Products	Beverages & Tobacco	Textiles	Chemical & Chemical Products	Basic Metals, Alloys & Metal Products	Machinery & Transport Equipment	
Weights =	(297.99)	(129.22)	(168.77)	(118.68)	(106.21)	(12.47)	(84.59)	(498.74)	(133.22)	(27.08)	(110.26)	(55.48)	(59.74)	(67.18)	(1000.00)
Average of Months															
1950/51	47.5	51.4	44.5	42.6	45.6	47.3	46.9	47.4	49.5	37.1	51.0	52.8	30.8	46.1	47.5
1955/56	36.1	35.3	36.7	35.0	35.9	67.3	49.3	45.3	31.7	38.7	52.5	49.7	42.6	57.4	40.8
1960/61	48.1	49.3	47.2	51.8	52.7	74.8	61.0	60.1	51.4	43.1	65.7	59.7	54.3	65.5	55.1
1965/66	71.3	74.4	68.9	67.5	68.6	78.8	76.9	74.5	71.1	61.6	75.7	73.8	72.5	79.7	72.7
1968/69	92.5	97.1	89.0	79.7	83.0	98.5	91.1	93.7	105.6	87.1	85.3	87.9	85.2	89.9	91.3
1970/71	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1973/74	136.6	141.9	132.5	154.9	146.6	225.4	130.6	139.5	171.1	122.0	134.8	116.4	139.0	122.7	139.7
1974/75	172.1	195.8	154.0	191.0	163.7	423.5	198.3	168.8	186.9	148.2	159.8	168.8	172.6	156.4	174.9
1975/76	163.6	174.1	155.6	171.4	139.8	440.4	219.2	171.2	181.4	164.7	147.3	175.6	184.8	172.6	173.0
1976/77	155.3	152.7	157.3	197.0	167.4	449.4	230.8	175.2	189.1	168.2	155.3	171.4	190.1	170.1	176.6
1977/78	173.6	170.4	176.1	209.4	178.0	477.0	234.2	179.2	184.3	171.2	172.8	172.8	193.8	172.6	185.8
1978/79 [b]	173.9	172.9	174.0	201.0	168.9	483.6	244.4	178.4	159.3	177.7	176.6	176.3	209.0	181.3	185.1
Average Compound Growth Rate (% per annum)															
1950/51 - 1975/76	5.1	5.0	5.1	5.7	4.6	9.3	6.4	5.3	5.4	6.1	4.3	6.6	7.7	5.4	5.3
1970/71 - 1977/78	8.2	7.9	8.4	11.1	8.6	25.0	12.9	8.7	9.1	8.0	8.1	8.1	9.9	8.1	9.3
1976/77	- 5.1	-12.3	0.1	14.9	19.7	2.0	5.3	2.3	4.2	2.1	5.4	- 2.4	2.9	- 1.4	2.1
1977/78	11.8	11.6	11.9	6.3	6.3	6.1	1.5	2.3	- 2.5	1.7	11.3	0.8	2.0	1.5	5.2
1978/79 [c]	- 0.1	2.3	- 2.2	- 5.1	- 6.7	1.7	4.8	- 1.1	-16.5	4.7	3.0	2.0	8.3	5.6	- 0.9

[a] The indices prior to 1970/71, available on different base periods, have been converted to base 1970/71.
[b] Based on returns for the first 9 months of the year.
[c] Percentage increase April-December 1978 over April-December 1977.

Sources: 1. Ministry of Industry, Office of the Economic Adviser.
2. H.L. Chandhok, Wholesale Price Statistics 1947-1978, published by the Economic and Scientific Research Foundation 1979.

Table 6.10

INDEX NUMBERS OF WHOLESALE PRICES - BY QUARTERS
(Base 1970/71=100)

	Food Articles			Industrial Raw Materials			Fuel, Power, Light & Lubricants	Manufactured Products							All Commodities
	Total	Foodgrains	Other Food	Total	Non-Food Articles	Minerals		Total	Food Products	Beverages & Tobacco	Textiles	Chemical & Chemical Products	Basic Metals, Alloys & Metals Products	Machinery & Transport Equipment	
Weights =	(297.99)	(129.22)	(168.77)	(118.68)	(106.21)	(12.47)	(84.59)	(498.74)	(133.22)	(27.08)	(110.26)	(55.48)	(59.74)	(67.18)	(1000.0)
Average of Months															
1975															
Ist Quarter	174.4	203.1	153.4	181.2	153.3	419.0	204.3	170.5	179.1	152.5	159.2	177.7	176.2	165.9	175.8
2nd Quarter	173.9	194.8	157.9	176.4	147.2	425.2	206.3	174.3	189.9	162.0	157.1	179.0	178.7	175.0	177.1
3rd Quarter	170.3	184.3	159.6	171.8	141.4	431.0	217.9	175.4	197.2	162.5	146.1	175.9	186.2	175.3	177.0
4th Quarter	162.2	165.8	159.4	169.6	136.0	455.6	223.9	172.2	186.6	165.9	144.3	174.9	186.8	171.8	173.3
1976															
Ist Quarter	148.2	151.6	145.6	167.6	134.5	449.9	228.9	162.9	151.5	168.0	145.0	172.6	187.4	172.1	164.6
2nd Quarter	149.9	145.0	153.7	176.0	144.7	442.9	229.5	168.5	172.0	170.0	146.5	170.0	188.7	170.8	169.0
3rd Quarter	156.8	152.3	160.2	194.6	165.4	442.9	230.4	178.9	204.2	170.0	152.8	171.4	190.6	170.7	178.5
4th Quarter	153.8	152.6	154.7	200.8	172.4	443.0	231.0	176.6	192.4	166.5	158.1	171.6	190.5	169.5	177.3
1977															
Ist Quarter	160.9	161.1	160.7	216.8	187.2	468.9	232.1	176.8	180.3	166.4	173.2	173.1	193.4	169.3	181.5
2nd Quarter	172.8	162.8	180.5	216.6	186.8	470.9	232.6	180.0	193.1	167.8	169.3	172.2	192.5	170.4	186.6
3rd Quarter	176.3	171.2	180.2	211.7	184.2	475.6	233.5	181.8	196.1	170.7	171.6	172.9	193.3	171.2	188.4
4th Quarter	171.2	173.8	172.7	204.5	172.1	480.6	234.1	179.2	183.3	170.9	173.7	172.6	193.8	173.6	185.1
1978															
Ist Quarter	172.0	173.7	170.7	201.8	169.0	480.8	236.7	175.8	164.5	175.5	176.5	173.3	195.5	175.0	182.9
2nd Quarter	175.0	169.9	175.4	200.1	166.8	483.8	242.4	175.5	157.3	177.4	174.2	175.4	200.5	179.3	183.3
3rd Quarter	176.0	173.9	178.6	201.9	168.6	485.6	245.3	179.2	160.8	177.8	176.3	176.1	212.0	181.6	186.7
Percentage Change in Wholesale Price Index (over corresponding quarter of previous year)															
1977															
Ist Quarter	8.6	6.3	10.4	29.4	39.2	4.2	1.4	8.5	19.0	- 1.0	19.4	0.3	3.2	- 1.6	10.3
2nd Quarter	15.3	12.3	17.4	23.1	29.1	6.3	1.4	6.8	12.3	- 1.3	15.6	1.3	2.0	- 0.2	10.4
3rd Quarter	12.4	12.4	12.5	9.8	11.4	7.4	1.3	1.6	- 4.0	0.4	12.3	0.9	1.4	0.3	5.5
4th Quarter	12.6	13.9	11.6	1.8	- 0.2	8.5	1.3	1.5	- 4.7	2.6	9.9	0.6	1.7	2.4	4.4
1978															
Ist Quarter	6.9	7.8	6.2	- 6.9	- 9.7	2.5	2.0	- 0.6	- 8.8	5.5	1.9	0.1	1.1	3.4	0.8
2nd Quarter	0.1	4.4	- 2.8	- 7.6	-10.7	2.7	4.2	- 2.5	-18.5	5.7	2.9	1.9	4.2	5.2	- 1.8
3rd Quarter	- 0.2	1.6	- 0.9	- 5.5	- 8.5	2.1	5.1	- 1.4	-18.0	4.2	2.7	1.9	9.7	6.1	- 1.9

Source: Ministry of Industry, Office of the Economic Adviser.

Table 6.11

PRICE INDICES OF SELECTED AGRICULTURAL COMMODITIES [a]
(Base 1970/71=100)

Commodity	Weight (All commodities=1000)	1950/51	1955/56	1960/61	1965/66	1968/69	1970/71	1973/74	1974/75	1975/76	1976/77	1977/78	April-December 1978/79	Average Compound Growth Rates (% per annum) 1950/51-1975/76	1970/71-1977/78
Cereals	107.43	53.3	37.0	51.2	73.3	98.3	100.0	134.8	191.8	172.6	154.1	161.3	157.1	4.4	7.0
of which:															
Rice	51.31	48.4	37.0	51.2	67.9	97.6	100.0	140.2	183.2	178.8	156.9	162.0	161.2	5.4	7.1
Wheat	34.17	53.2	38.1	47.4	71.5	97.9	100.0	108.2	183.1	159.6	152.0	156.5	151.3	4.5	6.6
Jowar	8.39	77.2	31.4	56.9	88.0	97.3	100.0	151.2	203.2	175.6	163.6	157.4	155.0	3.3	6.7
Pulses	21.79	42.1	28.2	42.1	79.6	92.8	100.0	176.9	215.7	181.6	145.8	215.2	250.1	6.0	11.6
of which:															
Gram	10.39	50.5	25.8	45.8	86.4	91.7	100.0	201.3	246.3	204.8	134.5	198.6	228.9	5.8	10.3
Vegetables & Fruits	61.32	35.1	36.6	43.1	69.9	93.1	100.0	143.2	152.8	138.8	148.0	176.6	165.4	5.7	8.5
of which:															
Potatoes	10.12	n.a.	39.0	40.8	64.9	74.2	100.0	107.2	109.1	87.1	115.8	146.7	135.4	4.1 [c]	5.6
Bananas	6.48	n.a.	35.0	43.0	74.0	102.1	100.0	157.5	184.6	167.0	179.9	178.6	182.9	8.1 [c]	8.6
Oranges	4.30	n.a.	34.2	45.4	77.0	93.4	100.0	120.1	127.4	117.8	105.9	136.6	138.6	6.4 [c]	4.6
Cashew Nuts	3.10	35.1	50.8	50.1	50.1	88.2	100.0	154.5	173.6	158.9	200.0	367.2	273.5	7.1	
Condiments & Spices	10.94	33.9	23.5	27.3	40.6	61.7	100.0	99.5	154.7	186.5	155.8	189.4	181.7	7.1	9.6
of which:															
Chillies	5.02	42.5	22.1	35.6	45.0	39.6	100.0	86.2	135.4	217.5	114.5	128.5	136.7	6.7	3.7
Fibers	31.73	47.2	42.8	61.4	66.2	83.7	100.0	136.8	160.8	139.8	184.9	185.2	170.5	4.4	9.2
of which:															
Raw Cotton	22.46	49.7	42.7	49.2	56.8	73.9	100.0	138.3	168.8	136.4	197.5	193.0	170.1	4.1	
Raw Jute	4.29	44.8	45.3	81.2	90.5	114.5	100.0	98.5	103.5	116.8	126.6	148.6	148.9	3.9	5.8
Oilseeds	42.01	39.2	23.7	41.6	67.1	71.8	100.0	157.6	172.4	125.8	150.8	183.5	161.9	4.8	9.1
of which:															
Groundnut	18.21	40.2	23.8	40.4	66.0	69.6	100.0	165.7	173.3	129.1	142.2	171.8	147.4	4.8	8.0
Rape & Mustard	8.22	49.7	27.4	44.4	74.9	82.1	100.0	162.4	185.5	119.9	163.8	228.7	205.2	3.6	
Other Commodities	45.59	68.7	56.8	70.1	75.2	99.8	100.0	119.8	143.9	148.3	166.4	156.64	164.5	3.1	6.6
of which:															
Tea	11.49	80.8	75.4	90.9	89.2	90.2	100.0	110.5	161.9	175.0	214.1	252.2	209.7	3.1	14.1
Coffee	1.61	39.5	43.7	46.6	63.1	81.0	100.0	85.8	108.2	117.0	133.1	128.6	120.2	4.4	3.6
Sugarcane	16.42	50.0	52.5	58.6	67.8	100.1	100.0	117.0	118.4	124.1	125.8	125.0	132.4	3.7	3.3
Tobacco	8.07	72.8	51.8	75.2	87.1	130.0	100.0	140.9	168.8	173.7	203.1	145.5	135.7	3.5	5.5
Rubber	1.28	39.8	65.3	67.7	82.7	94.1	100.0	104.7	166.3	153.2	125.2	135.3	194.9	5.5	4.4
Timber	3.34	48.7	45.4	57.8	65.5	87.2	100.0	140.9	168.8	173.7	203.1	145.5	278.2	5.2	5.5
TOTAL	320.81 [b]	48.1	37.5	50.7	70.7	90.98	100.0	139.1	172.3	154.4	156.8	173.5	168.8	4.8	8.2

a/ Excludes fisheries, livestock, and dairy products.

b/ Total food articles (297.49) plus non-food industrial raw materials (106.21) less weightage of milk & dairy products, fisheries and hides & skins (83.39).

c/ For the years 1955/56 - 1975/76.

Sources: 1. Ministry of Industry, Office of the Economic Adviser.
2. H.L. Chandhok, Wholesale Price Statistics 1947-1978, published by the Economic and Scientific Research Foundation 1979.

Table 6.12

INVESTMENT PRICE INDICES
(Base 1970/71 = 100)

Year (April - March)	Wholesale Price Index of Fuels Power, Light & Lubricants and Manufactured Products a/	Implicit Price Deflator of Gross Domestic Capital Formation
1950/51	48.6	42.5
1951/52	56.6	45.4
1952/53	49.9	44.8
1953/54	51.0	45.2
1954/55	50.0	47.7
1955/56	49.0	46.6
1956/57	53.6	48.5
1957/58	54.8	48.5
1958/59	55.7	55.6
1959/60	57.5	56.4
1960/61	62.7	59.2
1961/62	63.8	61.4
1962/63	65.9	63.1
1963/64	68.9	66.3
1964/65	70.9	68.9
1965/66	75.9	73.4
1966/67	82.3	82.3
1967/68	85.6	86.7
1968/69	87.9	88.6
1969/70	93.0	93.4
1970/71	100.0	100.0
1971/72	109.0	105.7
1972/73	120.2	114.4
1973/74	138.2	130.8
1974/75	173.1	164.5
1975/76	178.2	176.2
1976/77	183.3	180.3
1977/78	187.2	185.7
1978/79	188.3 b/	
Average Compound Growth Rate (% per annum)		
1950/51 - 1975/76	5.3	5.9
1970/71 - 1977/78	9.4	9.2
1976/77	2.9	2.3
1977/78	2.1	3.0
1978/79	0.1 c/	

a/ The combined weight of these items is 58.333 % in the all-commodity wholesale price index. Indices for the years 1950/51 to 1969/70 are based on different base periods but have been linked to the 1970/71 base by chain base method.

b/ Based on returns for the first nine months of the year.
c/ Percentage increase April-December 1978 over April-December 1977.

Sources: 1. World Bank estimates.
2. Ministry of Planning, CSO.

Table 6.13

CONSUMER PRICE INDEX FOR INDUSTRIAL WORKERS, URBAN NON-MANUAL EMPLOYEES AND AGRICULTURAL LABORERS

Year (April - March)	Industrial Workers		Urban Non-Manual Employees	Agricultural Laborers c/	
	Food Index (1960=100)	General Index (1960 = 100)	(1960 = 100)	Food Index (1960/61=100)	General Index (1960/61 = 100)
Average of Months					
1950/51	87	84	n.a.	n.a.	n.a.
1955/56	81	79	n.a.	n.a.	n.a.
1960/61	108	102	100 b/	100	100
1965/66	150	139	132	169	158
1968/69	193 a/	174 a/	161	201	185
1970/71	201	186	174	206	192
1973/74	279	250	221	313	283
1974/75	358	317	270	413	368
1975/76	342	313	277	345	317
1976/77	317	301	277	324	302
1977/78	346	324	296	349	323
1978/79	347 e/	330 e/	306 f/	342 g/	318 g/
Average of Weeks					
1977					
March	332	312	285	334	311
June	341	320	291	345	319
September	356	331	299	362	332
December	353	330	301	358	330
1978					
March	336	321	297	342	318
June	344	327	303	334	312
September	354	336	309	346	321
December					
Average Compound Growth Rate (% per annum)					
1950/51 - 1975/76	5.6	5.4	5.2 d/	6.4 d/	5.9 d/
1970/71 - 1977/78	8.1	8.3	7.9	7.8	7.4
1976/77	- 7.3	- 3.7	0.0	- 6.1	- 4.7
1977/78	9.1	7.6	6.9	7.7	7.0
1978/79 h/	0.2	2.0	3.7	- 2.9	- 2.0
Percentage Change in Index over the corresponding Month of previous year					
1978					
March	1.2	2.9	4.2	2.4	2.3
June	0.9	2.2	4.1	- 3.2	- 2.2
September	- 0.6	1.5	3.3	- 4.4	- 3.3
December	n.a.	n.a.	2.3	n.a.	n.a.

a/ Based on four months figures in the interim series (1949=100) and eight months figures as estimated from the new series of index on base 1960=100.
b/ Relates to the period January to March 1961.
c/ Indices relate to Agricultural Years (July-June).
d/ Relates to the period 1955/56 - 1975/76.
e/ Based on returns for the first seven months of the year.
f/ Based on returns for the first nine months of the year.
g/ Based on returns for the first eight months of the year.
h/ Percentage increase for periods noted in footnotes e to g, over corresponding period of 1977/78.

Sources: 1. Reserve Bank of India, various issues of the monthly *Bulletin* and *Report on Currency and Finance* 1977/78.
2. Ministry of Labour, Labour Bureau, Simla.
3. Central Statistical Organization.

Table 7.1

PRODUCTION OF PRINCIPAL CROPS

Commodity/Commodity Group	Unit	Annual Average 1951/52-1955/56	1956/57-1960/61	1961/62-1965/66	1966/67-1970/71	1971/72-1975/76	1975/76	1976/77	1977/78
Foodgrains	million tons	63.18	73.99	81.03	94.24	105.54	121.03	111.17	125.60
(a) Cereals	million tons	53.14	62.24	69.89	83.37	94.73	107.99	99.81	113.81
Rice	million tons	25.03	30.33	35.15	38.09	42.94	48.74	41.92	52.68
Wheat	million tons	7.90	9.74	11.07	18.10	25.18	28.85	29.01	31.33
Jowar	million tons	7.49	8.60	8.85	9.38	8.74	9.50	10.52	11.82
Bajra	million tons	3.41	3.43	3.95	5.36	5.15	5.74	5.85	4.71
Maize	million tons	2.71	3.57	4.59	6.00	6.02	7.26	6.36	5.95
Others	million tons	6.60	6.49	6.28	6.44	6.70	7.91	6.15	7.32
(b) Pulses	million tons	10.04	11.75	11.14	10.87	10.81	13.04	11.36	11.80
of which: Gram	million tons	4.69	6.00	5.13	4.93	4.72	5.88	5.42	5.45
Non-Foodgrains									
(a) Oilseeds [a/]	million tons	5.52	6.71	7.35	7.71	8.58	9.91	7.83	8.93
of which:									
Groundnuts	million tons	3.53	4.73	5.12	5.20	5.61	6.75	5.26	6.07
Rapeseed & Mustard	million tons	0.91	1.09	1.27	1.54	1.83	1.94	1.55	1.62
(b) Sugarcane (in terms of gur)	million tons	5.54	8.11	11.13	11.78	13.59	14.41	15.85	18.78
(c) Cotton	million bales	3.66	4.54	3.10	5.36	6.42	5.95	5.84	7.10
(d) i. Jute	million bales	3.93	4.44	5.68	5.04	5.16	4.44	5.35	5.34
ii. Mesta	million bales	0.85	1.36	1.68	1.16	1.31	1.47	1.75	1.78

a/ Five major oilseeds - groundnuts, rape & mustard, linseed, castorseed and sesamum.

Source: Ministry of Agriculture and Irrigation.

Table 7.2

INDEX NUMBERS OF AGRICULTURAL PRODUCTION
(Base: Triennium ending 1969/70=100)

Crop	Weight	1950/51	1955/56	1960/61	1965/66	1968/69	1970/71	1973/74	1974/75	1975/76	1976/77	1977/78	Average Compound Growth Rate (% per annum) 1950/51-1975/76	1970/71-1977/78	1976/77	1977/78
A. Foodgrains	68.12	57.1	72.6	86.1	75.8	97.3	112.9	110.3	104.3	127.2	115.7	132.8	3.2	2.3	- 9.0	14.8
(a) Cereals	60.05	53.8	68.5	82.6	74.2	98.2	114.1	113.2	106.4	128.8	117.8	136.6	3.6	2.6	- 8.5	16.0
of which:																
Rice	33.98	56.3	73.2	88.3	78.1	101.1	107.4	112.7	101.3	124.7	107.2	134.7	3.2	3.3	-14.0	25.7
Wheat	12.16	37.8	49.2	60.9	57.6	96.9	132.1	120.7	133.6	159.9	160.8	173.6	5.9	4.0	0.6	8.0
Jowar	4.86	63.4	68.3	100.4	76.9	99.4	82.3	92.2	105.5	96.3	106.6	119.7	1.7	5.5	10.7	12.3
(b) Pulses	8.07	81.6	103.4	112.3	88.0	90.2	104.4	88.5	88.8	115.3	100.3	104.2	1.4	-0.03	-13.0	3.9
of which:																
Gram	3.58	73.3	103.8	119.9	80.9	79.2	99.7	78.7	77.1	112.9	104.2	104.7	1.7	0.7	- 7.7	0.5
Tur	1.35	101.9	110.2	117.8	97.4	98.6	105.8	79.1	103.0	117.9	96.9	106.0	0.6	0.03	-17.8	9.4
B. Non-Foodgrains	31.88	62.0	70.1	88.1	91.3	97.4	108.7	117.0	118.3	121.3	118.2	132.6	2.7	2.9	- 3.0	12.2
(a) Oilseeds	10.96	66.1	72.9	89.8	85.6	92.4	116.1	114.5	114.9	124.7	104.1	116.5	2.6	0.05	-16.5	11.9
of which:																
Groundnuts	4.82	64.3	71.3	91.0	82.6	89.7	118.4	114.9	99.1	130.9	102.0	117.6	2.9	-0.1	-22.1	15.3
Rapeseed & Mustard	1.73	51.4	57.5	90.2	86.9	90.2	132.3	114.2	150.8	129.6	103.8	108.3	3.8	-2.8	-19.9	4.3
(b) Fibres	4.03	57.8	79.5	96.3	88.5	89.1	89.3	115.4	119.4	103.4	106.3	123.3	2.4	4.7	2.8	16.0
Cotton (lint)	3.01	54.3	75.5	99.2	86.7	97.4	85.1	112.7	127.8	106.2	104.2	126.8	2.7	5.9	- 1.9	21.7
Jute	0.81	70.4	89.9	83.2	90.1	59.0	99.6	125.4	90.2	89.5	107.9	107.6	1.0	1.1	20.6	- 0.3
Mesta	0.15	59.7	104.4	100.9	118.0	82.1	113.7	132.0	123.5	127.0	150.4	153.3	3.1	4.4	18.4	1.9
(c) Plantation Crops	2.28	62.7	68.6	78.3	91.7	103.0	114.8	125.8	130.9	129.9	139.3	152.2	3.0	4.1	7.2	9.3
Tea	1.85	70.1	72.4	81.6	93.1	102.3	106.4	120.0	124.4	123.7	130.0	142.2	2.3	4.2	5.1	9.4
Coffee	0.24	39.2	68.5	86.1	98.5	113.4	170.1	133.4	142.8	129.6	157.8	188.7	4.9	1.5	21.8	19.6
Rubber	0.19	20.6	32.2	36.7	69.7	98.0	127.1	172.7	179.5	190.2	206.5	202.9	9.3	6.9	8.6	- 1.7
(d) Condiments and Spices	2.31	83.3	88.2	91.0	92.3	94.9	116.4	115.4	112.5	121.2	106.9	115.6	1.6	-0.1	-11.8	8.1
(e) Fruits & Vegetables	3.97	42.7	47.9	67.9	87.8	104.0	103.2	112.2	125.1	136.6	135.7	144.6	4.8	4.9	- 0.7	6.6
(f) Miscellaneous Crops	8.33	60.1	64.5	93.3	101.6	104.2	106.9	121.4	117.2	116.9	131.4	151.8	2.7	5.1	12.4	15.5
of which:																
Sugarcane	7.01	58.1	61.3	94.1	105.3	105.7	106.4	118.3	120.7	118.2	130.0	154.0	2.9	5.4	10.0	18.5
Tobacco	1.14	72.3	83.9	84.5	82.4	101.5	101.8	129.9	102.0	98.4	117.8	125.2	1.2	3.0	19.7	6.3
ALL-CROPS	100.00	58.5	71.9	86.7	80.8	97.3	111.5	112.4	108.8	125.5	116.5	132.7	3.1	2.5	- 7.2	13.9

Source: Ministry of Agriculture and Irrigation.

Table 7.3

GROWTH RATES IN AREA, PRODUCTION AND YIELD OF SELECTED CROPS FROM 1949/50 TO 1977/78 a/
(% per annum)

	Weight in the Production Index	Area				Production				Yield			
		1949/50 to 1976/77	1949/50 to 1964/65	1964/65 to 1976/77	1977/78	1949/50 to 1976/77	1949/50 to 1964/65	1964/65 to 1976/77	1977/78	1949/50 to 1976/77	1949/50 to 1964/65	1964/65 to 1976/77	1977/78
A. Foodgrains	68.12	0.9	1.2	0.4	2.3	2.8	3.0	2.6	14.8	1.9	1.8	2.2	12.2
(a) Cereals	60.05	1.0	1.2	0.6	2.2	3.1	3.2	2.8	16.0	2.1	2.0	2.2	13.5
of which:													
Rice	33.98	0.9	1.2	0.5	3.8	2.7	3.5	1.6	25.7	1.8	2.3	1.1	21.0
Wheat	12.16	3.0	2.3	3.9	1.4	6.4	4.8	8.5	8.0	3.3	2.4	4.4	6.6
Jowar	4.86	0.1	1.1	-1.0	3.2	2.5	3.2	1.7	12.3	2.4	2.1	2.7	8.8
(b) Pulses	8.07	0.7	1.3	-0.2	2.4	0.8	0.8	0.9	3.9	0.1	-0.5	1.1	1.5
of which:													
Gram	3.58	0.2	0.7	-0.5	3.5	3.6	4.2	2.8	0.5	3.4	3.5	3.3	-2.9
Tur	1.35	0.4	0.8	-0.1	2.3	1.5	1.4	1.6	9.4	1.1	0.6	1.7	6.9
B. Non-Foodgrains	31.88	1.8	3.1	0.3	5.1	2.9	3.9	1.5	12.2	1.1	0.8	1.2	6.8
(a) Oilseeds	10.96	1.1	2.9	-1.2	6.8	3.3	5.3	0.8	11.9	1.9	2.3	2.0	8.6
of which:													
Groundnuts	4.82	2.4	4.6	-0.4	1.9	3.4	4.5	2.0	15.3	1.0	-0.1	2.4	13.2
Rapeseed & mustard	1.73	2.0	2.9	0.9	13.0	4.5	6.1	2.5	4.3	2.4	3.1	1.6	-7.7
(b) Fibres	4.03	1.5	3.8	-1.5	12.2	3.5	5.7	0.8	16.0	2.0	1.8	2.3	3.4
of which:													
Cotton (lint)	3.01	1.4	3.8	-1.6	13.4	4.2	6.7	1.1	21.7	2.8	2.8	2.7	7.2
Jute	0.81	3.8	6.0	1.2	7.8	5.8	6.6	4.8	-0.3	1.9	0.6	3.6	-7.5
(c) Plantation Crops	2.28	2.3	2.4	2.1	0.7	3.0	2.6	3.8	9.3	0.7	0.2	1.7	-7.9
Tea	1.85	0.6	0.3	0.9	0.0	2.6	2.5	2.7	9.4	2.0	2.2	1.8	9.4
Coffee	0.24	2.5	2.5	2.7	0.0	5.1	7.0	3.9	19.6	2.5	4.4	1.2	19.6
Rubber	0.19	7.6	8.9	5.7	2.9	9.6	6.7	10.8	-1.7	1.9	-2.0	4.8	-4.5
(d) Condiments & Spices	2.31	1.5	1.7	1.1	9.2	1.6	1.9	1.5	8.1	0.1	0.2	0.4	-1.0
(e) Fruits and Vegetables	3.97	3.6	4.1	2.6	2.7	4.8	4.5	4.1	6.6	1.2	0.4	1.5	3.8
(f) Miscellaneous Crops	8.33	2.1	3.0	2.5	-1.2	3.2	4.3	2.5	15.5	1.1	1.3	0.0	16.9
of which:													
Sugarcane	7.01	3.2	4.4	1.6	12.3	6.4	5.6	7.4	18.5	3.1	1.1	5.7	5.5
Tobacco	1.14	0.9	1.7	0.1	4.1	2.0	2.4	1.6	6.3	1.1	0.7	1.5	2.1
ALL CROPS	100.00	1.1	1.5	0.4	2.9	2.7	3.2	2.1	13.9	1.6	1.7	1.7	10.7

a/ Average annual compound growth rates have been estimated by fitting semi-logarithmic least squares time trends to the relevant index number data.

Sources: 1. Ministry of Agriculture and Irrigation.
2. Reserve Bank of India Bulletin, June 1978.

Table 7.4

STATEWISE GROWTH IN PRODUCTION OF SELECTED CROPS FROM 1964/65 TO 1977/78

State	Cereals			Pulses			5 Major Oilseeds a/			Sugarcane (gur)			Cotton		
	1964/65	1977/78	Average Compound Growth Rate	1964/65	1977/78	Average Compound Growth Rate	1964/65	1977/78	Average Compound Growth Rate	1964/65	1977/78	Average Compound Growth Rate	1964/65	1977/78	Average Compound Growth Rate
	(million tons)		(% per annum)	(million tons)		(% per annum)	(million tons)		(% per annum)	(million tons)		(% per annum)	(million bales)		(% per annum)
Andhra Pradesh	7.36	8.24	0.9	0.34	0.33	- 0.2	1.02	1.08	0.4	1.22	1.46	1.4	0.14	0.23	3.9
Assam	1.94	2.39	1.6	0.04	0.04	0.0	0.06	0.09	3.2	0.13	0.15	1.1	0.01	0.02	-11.6
Bihar	6.29	9.19	3.0	1.24	0.67	- 4.6	0.09	0.09	0.0	0.69	0.50	- 2.4	n.s.	n.s.	
Gujarat	2.69	3.72	2.5	0.19	0.15	- 1.8	1.70	1.91	0.9	0.24	0.35	2.9	1.55	1.94	1.7
Haryana	1.72	4.36	7.4	0.99	1.00	0.1	0.08	0.10	1.7	0.68	0.90	2.2	0.29	0.46	3.6
Himachal Pradesh	0.82	0.89	0.6	0.03	0.04	2.2	0.01	0.01	0.0	0.01	0.01	0.0	n.s.	n.s.	
Jammu & Kashmir	0.54	1.02	5.0	0.02	0.02	0.0	0.02	0.03	3.2	n.s.	n.s.		n.s.	n.s.	
Karnataka	4.50	6.55	2.9	0.34	0.56	3.9	0.71	0.72	0.1	0.67	1.11	4.0	0.52	0.80	3.4
Kerala	1.14	1.28	0.9	0.02	0.02	0.0	0.02	0.03	3.2	0.04	0.04	0.0	0.01	0.01	0.0
Madhya Pradesh	8.40	10.04	1.4	1.84	2.03	0.8	0.60	0.59	- 0.1	0.18	0.24	2.2	0.49	0.27	- 4.5
Maharashtra	5.89	9.44	3.7	0.86	1.01	1.2	0.91	0.69	- 2.1	1.21	2.58	6.0	1.25	1.26	0.1
Orissa	4.51	4.81	0.5	0.44	0.57	2.0	0.12	0.25	5.8	0.20	0.26	2.0	n.s.	0.01	
Punjab	3.34	8.87	7.8	0.70	0.34	- 5.4	0.22	0.23	0.3	0.44	0.65	3.0	0.81	1.22	3.2
Rajasthan	4.17	5.13	1.6	1.14	2.03	4.5	0.25	0.42	4.1	0.06	0.28	12.6	0.18	0.45	7.3
Tamil Nadu	5.58	7.91	2.7	0.11	0.18	3.9	0.95	1.15	1.5	0.88	1.95	6.3	0.36	0.40	0.8
Uttar Pradesh	11.56	18.40	3.6	3.72	2.43	- 3.2	1.74	1.46	- 1.3	5.62	8.08	2.8	0.04	0.02	- 5.2
West Bengal	5.85	8.67	3.1	0.41	0.33	- 1.7	0.05	0.06	1.4	0.19	0.18	- 0.4	n.s.	n.s.	
ALL-INDIA	76.94	113.81	3.1	12.42	11.80	- 0.4	8.56	8.93	0.3	12.49	18.78	3.2	5.68	7.10	1.7

a/ Groundnut, rapeseed & mustard, linseed, castorseed and sesamum.

Source: Ministry of Agriculture & Irrigation.

Table 7.5

AVAILABILITY OF CEREALS AND PULSES

Calendar Year	Cereals (million tons) Production	Net Imports	Withdrawals (-) from Govt. Stocks	Net Availability	Pulses (million tons) Net Availability	Net Availability Per Person Per Day (in grams) Cereals	Pulses	Total
1954	53.55	0.83	(+) 0.20	54.18	9.76	387.7	69.8	457.5
1956	50.44	1.39	(-) 0.60	52.43	10.23	360.6	70.4	430.9
1958	49.46	3.22	(-) 0.27	52.95	8.87	350.2	58.7	408.9
1960	56.89	5.13	(+) 1.40	60.62	10.38	382.8	65.5	448.3
1961	60.77	3.49	(-) 0.17	64.43	11.14	398.7	69.0	468.7
1962	62.27	3.64	(-) 0.36	66.27	10.24	402.0	62.0	461.6
1963	60.18	4.55	(-) 0.02	64.75	10.08	384.4	59.8	443.8
1964	61.76	6.26	(-) 1.24	69.26	8.81	401.0	51.0	452.6
1965	67.31	7.45	(+) 1.06	73.70	10.85	418.6	61.6	430.2
1966	54.60	10.34	(+) 0.14	64.80	8.68	360.0	48.2	408.2
1967	57.65	8.66	(-) 0.26	66.57	7.30	361.7	39.7	401.4
1968	72.58	5.69	(+) 2.04	76.23	10.57	404.1	56.0	460.1
1969	73.14	3.85	(+) 0.46	76.53	9.09	397.9	47.3	445.2
1970	76.83	3.58	(+) 1.11	79.30	10.20	403.2	51.9	455.1
1971	84.53	2.03	(+) 2.57	83.99	10.32	417.7	51.3	469.1
1972	82.31	(-) 0.49	(-) 4.69	86.52	9.70	420.3	47.1	467.3
1973	76.23	3.59	(-) 0.31	80.13	8.67	382.3	41.4	423.7
1974	82.82	4.83	(-) 0.40	88.05	8.75	411.6	40.9	452.8
1975	78.59	7.39	(+) 5.56	80.42	8.76	368.5	40.1	408.6
1976	94.50	6.44	(+)10.27	90.67	11.40	406.6	51.1	457.7
1977	87.33	0.39	(-) 1.25	88.97	9.94	393.1	43.9	437.0
1978 a/	99.58	(-) 0.95	(+) 0.09	98.54	10.32	428.1	44.8	472.9

Notes: 1. Net production has been taken as 87.5 per cent of the gross production, 12.5 per cent being for feed, seed requirements and wastage.

2. Figures in respect of change in stocks with traders and producers over a year are not known. The estimates of net availability given above should not therefore be taken to be strictly equivalent to consumption.

3. Net Availability = Net Production + Net Imports + Changes in Government Stocks.

a/ Provisional.

Source: Ministry of Agriculture and Irrigation.

Table 7.6

PUBLIC DISTRIBUTION OF FOODGRAINS [a/]
(in thousand tons)

	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978 [b/]
Opening Stock	674	1,927	1,815	1,695	3,893	4,387	5,334	7,879	3,410	2,945	2,538	7,983	18,563	17,403
Rice	361	528	417	665	1,182	1,724	1,834	2,310	1,357	1,409	1,094	2,804	5,629	5,709
Wheat	306	1,276	1,033	760	2,126	2,329	3,127	5,031	1,900	1,018	1,221	4,769	12,253	11,532
Procurement	4,031	4,009	4,462	6,805	6,381	6,714	8,857	7,665	8,424	5,645	9,563	12,853	9,959	11,000
Rice	2,951	3,100	2,785	3,373	3,581	3,043	3,462	2,550	3,462	3,482	5,042	5,999	4,642	4,901
Wheat	375	219	779	2,373	2,417	3,183	5,088	5,024	4,531	1,885	4,098	6,618	5,170	5,471
Imports	7,462	10,358	8,672	5,694	3,872	3,631	2,054	445	3,614	4,874	7,407	6,515	555	- 945
Rice	783	787	453	446	487	206	240	131	-	-	130	149	8	- 53
Wheat	6,583	7,784	6,400	4,766	3,090	3,425	1,814	314	2,414	4,203	7,016	5,832	547	- 892
Issues	10,079	14,077	13,166	10,221	9,385	8,841	7,816	11,487	11,414	10,790	11,253	9,174	11,677	9,990
Rice	3,586	4,131	3,010	3,287	3,405	3,050	3,230	3,586	3,206	3,753	3,211	3,643	4,660	2,086
Wheat	5,939	8,134	7,366	5,755	5,195	5,347	4,455	6,608	7,130	5,669	7,545	5,015	6,229	6,635
Closing Stock	1,927	1,815	1,695	3,893	4,387	5,334	7,879	3,410	2,945	2,538	7,983	18,563	17,403	17,468
Rice	528	417	665	1,182	1,724	1,834	2,310	1,357	1,409	1,094	2,804	5,629	5,709	8,471
Wheat	1,276	1,033	760	2,126	2,329	3,127	5,031	1,900	1,018	1,221	4,769	12,253	11,532	9,476

Note: By definition Opening Stock + Procurement + Imports = Issues + Closing Stock. In practice the right hand side of the equation is invariably smaller than the left. This is due to stocks in transit and stock losses.

a/ Individual position for the two main cereals, rice and wheat has been shown, the balance in total foodgrain being accounted for by other foodgrains.

b/ Provisional.

Source: Ministry of Agriculture and Irrigation, Department of Food.

Table 7.7

IRRIGATION SUMMARY
(in million hectares)

	Surface Irrigation				Ground Water	Total Irrigated Area (utilized)
	Major & Medium		Minor	Total		
	Potential	Utilization	Surface	Utilized		
Ultimate Potential	57	57	15	72	40	112
Position at the end of:						
1950/51	9.7	9.7	6.4	16.1	6.5	22.6
Ist Plan	12.2	11.0	6.4	17.4	7.6	25.0
2nd Plan	14.3	13.1	6.5	19.6	8.3	27.9
3rd Plan	15.6	15.2	6.5	21.7	10.1	31.8
1968/69	18.1	16.8	6.5	23.3	12.6	35.9
4th Plan	20.7	18.7	7.0	25.7	16.5	42.2
1974/75	21.5	19.4	7.1	26.5	17.2	43.7
1975/76	22.5	20.1	7.2	27.3	18.0	45.3
1976/77	23.5	20.7	7.3	28.0	18.9	46.9
1977/78	25.0	22.2	7.5	29.7	19.8	49.5
1978/79 (Target)	26.4	23.3	7.7	31.0	21.1	52.1
1982/83 (Target)	33.0	28.2	9.5	37.7	26.8	64.5
Average Annual Increase						
Ist Plan	0.5	0.3	0.02	0.3	0.2	0.5
2nd Plan	0.4	0.4	0.04	0.5	0.1	0.6
3rd Plan	0.3	0.4	0.04	0.5	0.4	0.9
Annual Plans	0.8	0.5	0.03	0.5	0.8	1.3
4th Plan	0.5	0.4	0.10	0.5	0.8	1.3
1974/75	0.8	0.7	0.1	0.8	0.7	1.5
1975/76	1.0	0.8	0.1	0.8	0.8	1.6
1976/77	1.0	0.6	0.1	0.7	0.9	1.6
1977/78	1.5	1.5	0.2	1.7	0.9	2.6
1978/79 (Target)	1.4	1.1	0.2	1.3	1.3	2.6
1978/79 - 1982/83 (Target)	1.6	1.6	0.4	2.0	1.4	3.2

Sources: 1. Report of Irrigation Commission 1972.
2. Report of National Commission on Agriculture.
3. Planning Commission.
4. Ministry of Agriculture and Irrigation.

Table 7.8

STATEWISE IRRIGATED AREA - ULTIMATE POTENTIAL & POTENTIAL CREATED BY 1977/78
(in million hectares)

	Major & Medium			Minor Surface Water & Ground Water			Total		
	Ultimate Potential	Potential created by 1977/78	Potential to be created	Ultimate Potential	Potential created by 1977/78	Potential to be created	Ultimate Potential	Potential created by 1977/78	Potential to be created
Andhra Pradesh	6.5	2.9	3.6	4.20	1.74	2.46	10.70	4.64	6.06
Assam	1.0	0.1	0.9	1.70	0.35	1.35	2.70	0.45	2.25
Bihar	9.2	2.3	6.9	5.90	2.10	3.80	15.10	4.40	10.70
Gujarat	2.2	1.0	1.2	1.75	1.34	0.41	3.95	2.34	1.61
Jammu & Kashmir	0.2	0.1	0.1	0.55	0.31	0.24	0.75	0.41	0.34
Karnataka	2.0	1.0	1.0	2.10	0.92	1.18	4.10	1.92	2.18
Kerala	1.0	0.4	0.6	1.10	0.29	0.81	2.10	0.69	1.41
Madhya Pradesh	5.6	1.3	4.3	4.20	1.35	2.85	9.80	2.65	7.15
Maharashtra	2.4	1.2	1.2	3.20	1.46	1.74	5.60	2.66	2.94
Orissa	3.6	1.4	2.2	2.30	0.56	1.74	5.90	1.96	3.94
Punjab & Haryana	4.9	3.9	1.0	4.80	3.98	0.82	9.70	7.88	1.82
Rajasthan	3.2	1.3	1.9	2.40	1.76	0.64	5.60	3.06	2.54
Tamilnadu	1.6	1.2	0.4	2.40	1.82	0.58	4.00	3.02	0.98
Uttar Pradesh	11.2	5.5	5.7	13.20	7.75	5.45	24.40	13.25	11.15
West Bengal	2.3	1.4	0.9	3.80	1.30	2.50	6.10	2.70	3.40
Sub-Total	57.0	25.0	32.0	53.60	27.03	26.57	110.60	52.03	58.57
Other States and Union Territories	-	-	-	1.40	0.27	1.13	1.40	0.27	1.13
ALL-INDIA	57.0	25.0	32.0	55.00	27.30	27.70	112.00	52.30	59.70

Source: Ministry of Agriculture & Irrigation.

Table 8.1

INDEX OF INDUSTRIAL PRODUCTION - BY INDUSTRIAL GROUPS
(Base 1970 = 100)

	Industry Group	Weight	1951	1955	1960	1965	1968	1970	1973	1974	1975	1976	1977	January-September 1977	January-September 1978	Average Compound Growth Rate (% per annum) 1951-1975	1970-1977	1977	% Increase January-September 1978 over January-September 1977
I	Mining & Quarrying	9.69	44.7	50.1	67.1	88.4	96.8	100.0	105.3	113.1	127.4	136.8	139.9	139.2	141.4	4.5	4.9	2.3	1.6
II	Manufacturing	81.08	30.5	41.3	55.9	86.1	88.7	100.0	112.2	113.0	116.7	127.5	135.1	134.9	143.6	5.7	4.5	6.0	6.4
	Food Industries	7.74	41.8	47.4	62.5	76.4	74.4	100.0	98.0	98.0	107.0	110.5	118.4	118.7	142.6	4.0	2.4	7.1	20.1
	Beverage Industries	0.69	33.0	35.1	56.9	84.1	93.9	100.0	187.9	185.1	174.5	298.9	347.0	355.5	403.6	5.3	19.5	16.1	13.5
	Tobacco Industries	2.21						100.0	102.4	104.7	96.1	106.6	107.7	106.6	108.8		1.1	1.0	2.1
	Textiles	17.43	72.1	85.1	90.4	103.8	101.7	100.0	103.6	98.9	101.3	105.6	103.8	102.9	110.0	1.4	0.5	- 1.7	6.9
	Footwear & Other Wearing Apparels etc.	0.34	39.4	25.7	62.0	105.0	119.1	100.0	92.5	89.9	90.9	90.6	80.4	82.9	75.3	3.5	-3.1	-11.3	-9.2
	Wood & Cork except Furniture	0.49	19.8	16.7	45.4	106.8	109.1	100.0	119.7	124.4	110.4	114.2	132.9	129.8	124.8	7.4	4.1	16.4	-3.9
	Paper Products	2.24	17.7	25.7	46.1	67.8	85.2	100.0	109.9	118.1	109.8	110.7	112.8	112.0	121.3	7.9	1.7	1.9	8.3
	Leather & Fur Products except Footwear	0.32	118.7	108.7	163.9	201.1	169.2	100.0	114.0	109.7	124.2	110.7	104.2	116.3	67.7	0.2	0.6	- 5.9	-41.8
	Rubber Products	2.22	25.9	30.2	46.2	73.7	93.4	100.0	112.8	119.8	122.6	122.7	127.8	130.7	140.6	6.7	3.6	4.2	7.6
	Chemical & Chemical Products	10.90	18.2	25.8	42.9	65.5	88.9	100.0	128.1	125.3	131.7	155.5	171.6	170.4	178.1	8.6	8.0	10.4	4.5
	Petroleum Products	1.62	3.7	18.8	33.5	53.1	86.9	100.0	111.4	112.8	119.1	124.8	132.7	132.6	137.3	15.6	4.1	6.3	3.5
	Non-Metallic Mineral Products	3.33	19.9	27.5	51.1	76.2	78.9	100.0	117.6	117.8	124.4	139.1	147.4	147.7	151.1	7.9	5.7	6.0	2.3
	Basic Metal Industries	8.84	22.1	25.4	47.6	86.1	92.7	100.0	98.4	98.7	115.4	137.9	144.5	144.1	145.4	7.1	5.4	4.8	0.9
	Metal Products excluding Machinery & Transport Equipment	2.77	12.6	22.1	40.9	84.1	73.7	100.0	116.3	125.9	126.8	133.7	137.0	134.9	154.9	10.1	4.6	2.5	14.8
	Manufacture of Machinery except Electrical Machinery	5.55	5.4	8.7	24.5	78.6	82.0	100.0	139.3	146.1	152.7	164.8	179.8	178.1	196.2	14.9	8.7	9.1	10.2
	Electrical Machinery, Apparatus & Appliances	5.30	7.1	13.2	27.1	56.4	75.3	100.0	123.3	129.3	120.2	126.5	145.5	147.6	150.7	12.5	5.5	15.1	2.1
	Transport Equipment	7.39	14.7	74.3	74.9	153.8	104.6	100.0	109.6	116.9	111.9	122.3	124.5	124.3	124.0	8.8	4.8	2.8	- 0.2
	Miscellaneous Industries	1.70	14.2 a/	27.8	83.3	110.6	73.8	100.0	90.2	83.9	71.9	72.9	101.0	99.9	106.1	7.3 b/	0.1	38.5	6.2
III	Electricity Generated	9.23	10.7	15.4	29.9	57.1	79.7	100.0	117.7	126.3	138.0	160.0	165.4	163.5	180.8	11.2	7.5	5.4	10.6
	General Index	100.00	29.7	39.4	54.3	83.5	88.4	100.0	112.0	114.3	119.7	131.4	138.3	138.0	146.6	6.0	4.7	5.3	6.2

Note: The indices prior to 1970, available on different bases, have been converted to base 1970.

a/ Relates to 1952.
b/ Relates to period 1952 to 1975.

Sources:
1. CSO, Monthly Statistics of the Production of Selected Industries of India, July & August 1967 (supplement).
2. CSO, Statistical Abstract, India, 1970 & 1972.
3. CSO, Monthly Abstract of Statistics, January 1976 & November 1978.
4. Government of India, Economic Survey, 1978/79.

Table 8.2

INDEX OF INDUSTRIAL PRODUCTION - BY USE BASE AND INPUT BASE
(Base 1970 = 100)

Industry Group	Weight	1960	1965	1968	1970	1973	1974	1975	1976	1977	January - June 1977	January - June 1978	Average Compound Growth Rate (% per annum) 1960-1975	1970-1977	1977	% Increase January - June 1978 over January - June 1977
A. Use-Based Classification																
1. Basic Industries	32.28	45.1	74.0	87.8	100.0	109.5	115.8	129.0	147.5	154.2	155.7	161.2	7.3	6.4	4.5	3.5
2. Capital Goods Industries	15.74	44.5	108.7	93.6	100.0	123.6	129.5	130.1	143.8	156.9	157.5	156.4	7.4	6.6	9.1	- 0.7
3. Intermediate Goods Industries	20.95	63.0	88.3	93.3	100.0	114.2	112.3	113.7	122.2	127.5	126.9	131.7	4.0	3.5	4.3	3.8
4. Consumer Goods Industries	31.03	64.6	82.4	85.3	100.0	107.8	109.7	107.4	118.4	126.4	127.8	143.4	3.4	3.4	6.8	12.2
(i) Durable Goods	(2.92)	(40.1)	(66.7)	(85.1)	(100.0)	(113.0)	(125.2)	(106.0)	(120.0)	(135.9)	(135.5)	(145.4)	(6.7)	(4.5)	(13.3)	(7.3)
(ii) Non-Durable Goods	(28.11)	(72.6)	(87.6)	(85.3)	(100.0)	(107.2)	(107.8)	(107.6)	(118.1)	(125.3)	(127.0)	(143.2)	(2.7)	(3.3)	(6.1)	(12.8)
B. Input-Based Classification																
1. Agro-Based Industries	33.68	76.3	92.5	90.7	100.0	105.5	104.5	106.1	112.2	116.1	117.3	126.7	2.2	2.2	3.5	8.0
2. Metal-Based Industries	21.93	42.4	97.6	89.4	100.0	119.9	126.1	123.1	135.4	149.5	150.3	155.1	7.4	5.9	10.4	3.2
3. Chemical-Based Industries	12.86	40.8	62.6	84.0	100.0	125.0	123.0	128.9	151.0	165.0	163.8	173.0	8.0	7.4	9.3	5.6
C. Sectoral Indicators																
1. Transport Equipment & Allied Industries	10.79	58.7	114.0	99.6	100.0	111.5	118.4	116.1	132.6	138.2	137.9	131.8	4.7	4.4	4.2	- 4.4
2. Electricity & Allied Industries	14.53	29.0	57.3	78.5	100.0	119.7	127.4	131.5	147.8	158.5	161.2	n.a.	10.6	6.8	7.2	n.a.
3. Energy Output	18.51	n.a.	n.a.	n.a.	100.0	112.3	119.3	132.0	146.6	151.4	151.4	162.6	n.a.	6.1	3.3	7.4
D. General Index	100.00	55.3	85.1	89.1	100.0	112.0	114.3	119.7	131.4	138.3	141.3	147.6	5.3	4.7	5.3	4.5

Note: 1. Data prior to 1970 available with base 1960 = 100 have been converted to base 1970.
2. Some of the industries represented in the series of Index Numbers of Industrial Production (1970=100) do not find place in any of the groups B & C and some occur in both the classifications.

Sources 1. Reserve Bank of India, Report on Currency & Finance, various issues.
2. Reserve Bank of India, Bulletin, August 1978.

Table 8.3

PRODUCTION OF SELECTED INDUSTRIES

	Unit	1950/51	1955/56	1960/61	1965/66	1968/69	1970/71	1973/74	1974/75	1975/76	1976/77	1977/78 a/	April-September 1977	April-September 1978	Average Compound Growth Rate (% per annum) 1950/51-1975/76	1970/71-1977/78	1977/78	% Increase April-Sept.1978 over April-Sep.1977
I MINING																		
Coal	million tons	32.8	39.9	55.7	70.3	75.4	74.3	81.9	91.6	102.7	104.8	104.7	48.1	48.7	4.7	5.0	-0.1	1.2
Iron Ore	million tons	3.0	4.3	18.7	24.5	28.1	32.5	35.7	37.0	42.2	42.2	44.0	22.4	n.a.	11.2	4.4	4.3	n.a.
II METALLURGICAL INDUSTRIES																		
Pig Iron	million tons	1.70	1.95	4.31	7.09	7.29	6.99	7.00	7.58	8.55	10.06	9.51	5.22	4.74	6.7	4.5	-5.5	-9.2
Steel Ingots	million tons	1.47	1.74	3.42	6.53	6.51	6.14	5.76	6.43	7.25	8.12	7.74	3.75	4.05	6.0	3.4	-4.7	8.0
Finished Steel	million tons	1.04	1.30	2.39	4.51	4.70	4.48	4.47	4.91	1.00	7.41	5.08	2.41	3.07	7.9	1.8	-31.4	27.4
Aluminium (virgin metal)	'000 tons	4.0	7.4	18.3	62.1	125.3	166.8	147.9	126.6	187	209	179	82	99	16.6	1.0	-14.4	20.7
Copper (virgin metal)	'000 tons	7.1	7.6	8.5	9.4	9.5	9.3	12.9	15.8	20.5	23.7	21.1	9.3	8.4	4.5	12.4	-11.0	-9.7
III MECHANICAL ENGINEERING INDUSTRIES																		
Machine Tools	million rupees	3	8	70	294	254	430	673	925	1,137	1,149	1,033	460	529	26.8	13.3	-10.1	15.0
Sugar Mill Machinery	million rupees	n.a.	2	44	77	118	139	223	270	330	401	513	366	151	29.1 c/	20.5	27.9	-59.7
Cotton Textile Machinery	million rupees	n.a.	40	104	216	143	303	458	727	781	1,042	889	298	515	16.0 c/	29.8	-14.7	72.8
Cement Machinery	million rupees	n.a.	4	6	49	74	42	81	90	57	123	226	103	169	14.2 c/	27.2	83.7	64.1
Railway Wagons	'000 numbers	2.9 b/	15.3 b/	11.9	33.5	16.5	11.1	12.2	11.0	12.2	12.0	12.2	5.3	4.9	5.9	1.4	1.7	-7.5
Automobiles	'000 numbers	16.5	25.3	55.0	70.7	79.5	87.9	99.8	81.7	72.7	91.3	84.3	42.7	50.0	6.1	-0.6	-7.7	17.1
i) Commercial Vehicles	'000 numbers	(8.6)	(9.9)	(28.4)	(35.3)	(35.9)	(41.2)	(42.9)	(40.2)	(43.8)	(46.4)	(40.9)	(18.5)	(25.3)	(6.7)	(-0.1)	(-11.9)	(36.8)
ii) Passenger Cars & Jeeps	'000 numbers	(7.9)	(15.4)	(26.6)	(35.4)	(43.6)	(46.7)	(56.9)	(41.0)	(28.9)	(44.9)	(43.4)	(24.2)	(24.7)	(5.3)	(-1.0)	(- 3.3)	(2.1)
Motor Cycles & Scooters	'000 numbers	n.a.	0.9 b/	19.4	40.7	70.8	97.0	124.0	149.0	183.0	229.5	227.4	108.9	114.0	23.7 c/	12.9	-0.9	4.7
Power Driven Pumps	'000 numbers	35	37	109	244	317	259	339	282	274	309	352	168	185	8.6	4.5	13.9	10.1
Diesel Engines (stationary)	'000 numbers	5.5	10.4	44.7	93.1	119.5	65.7	138.1	110.5	135.5	111.5	133.1	66.2	64.9	13.7	10.6	19.4	-2.0
Diesel Engines (vehicular)	'000 numbers	n.a.	n.a.	10.8	8.1	2.5	3.2	2.6	2.9	4.2	4.5	3.2	1.5	4.8	-6.1 c/	0.0	-28.9	220.0
Sewing Machines	'000 numbers	33	111	303	430	429	235	257	327	269	385	366	187	118	8.8	6.5	- 4.9	-36.9
Bicycles	million numbers	0.1	0.5	1.1	1.6	2.0	2.0	2.6	2.4	2.3	2.7	3.2	1.6	1.8	13.4	6.9	18.5	12.5
IV ELECTRICAL ENGINEERING INDUSTRIES																		
Power Transformers	million k.v.a.	0.2	0.6	1.4	4.5	4.7	8.1	12.4	12.5	13.7	15.1	16.1	7.6	9.1	18.4	10.3	6.6	19.7
Electric Motors	million h.p.	0.1	0.3	0.7	1.7	1.9	2.7	3.2	3.6	3.5	3.7	4.0	1.9	1.8	15.3	4.7	8.1	-5.3
Electric Fans	million numbers	0.2	0.3	1.1	1.4	1.5	1.7	2.1	2.2	2.1	2.6	3.4	1.7	1.5	9.9	10.4	30.8	-11.8
Electric Lamps	million numbers	14.0	25.0	48.5	72.1	97.8	119.3	120.6	134.0	133	162	170	82	96	9.4	5.2	4.9	17.1
Radio Receivers	million numbers	0.05	0.1	0.3	0.6	1.5	1.8	1.8	1.9	1.5	1.7	1.9	0.9	1.0	14.6	0.8	11.8	11.1
Cables - Aluminium	'000 tons	1.7	9.4	23.6	40.6	56.1	64.2	46.4	28.6	59.8	84.1	57.6	28.3	31.0	15.3	-1.5	-31.5	9.5

a/ Provisional.

b/ Relates to calendar year.

c/ Relates to the period 1955/56 to 1975/76.

d/ Relates to the period 1960/61 to 1975/76.

Table 8.3 (continued)

PRODUCTION OF SELECTED INDUSTRIES

	Unit	1950/51	1955/56	1960/61	1965/66	1968/69	1970/71	1973/74	1974/75	1975/76	1976/77	1977/78 a/	April-September a/ 1977	1978	Average Compound Growth Rate (% per annum) 1950/51-1975/76	1970/71-1977/78	1977/78	% Increase April-Sept. 1978 over April-Sep.1977
V CHEMICAL & ALLIED INDUSTRIES																		
Nitrogenous Fertilizers	'000 tons	9	80	98	233	543	830	1,058	1,185	1,535	1,900	2,015	971	990	22.8	13.5	6.1	2.0
Phosphatic Fertilizers	'000 tons	9	12	52	111	210	229	319	327	320	480	670	328	370	15.4	16.6	39.6	12.8
Sulphuric Acid	'000 tons	101	167	368	662	1,034	1,053	1,343	1,417	1,416	1,650	2,082	1,020	1,057	11.1	10.2	26.2	3.6
Soda Ash	'000 tons	45	82	152	331	408	449	480	516	555	568	574	272	272	10.6	3.6	1.1	0.0
Caustic Soda	'000 tons	12	36	101	218	314	371	419	426	467	507	527	259	266	15.8	5.1	3.9	2.7
Paper and Paper Board	'000 tons	116	190	350	558	658	755	776	836	836	899	965	466	497	8.2	3.6	7.3	6.7
Refractories	'000 tons	237	293	567	695	629	683	710	753	729	790	824	405	n.a.	4.6	2.7	0.6	n.a.
Rubber Tyres and Tubes																		
i) Automobile Tyres	million numbers	n.a.	0.90	1.44	2.31	3.41	3.79	4.66	4.83	5.40	6.25	6.17	3.11	3.51	9.4 c/	7.2	1.0	12.9
ii) Automobile Tubes	million numbers	n.a.	0.80	1.35	2.27	3.04	3.45	4.18	4.18	4.53	5.56	5.25	2.70	2.67	9.1 c/	6.2	-5.6	-1.2
iii) Bicycle Tyres	million numbers	n.a.	5.80	11.15	18.46	24.57	19.20	24.03	25.05	24.47	22.90	28.28	14.30	15.79	7.5 c/	5.7	23.5	10.4
iv) Bicycle Tubes	million numbers	n.a.	5.59 b/	13.27	18.62	17.75	13.81	16.22	18.53	16.56	15.92	15.37	7.29	8.20	5.6 c/	1.5	-3.5	12.5
Cement	million tons	2.7	4.7	8.0	10.8	12.2	14.4	14.7	14.7	17.2	18.8	19.3	9.4	9.4	7.7	4.3	2.7	0.0
Refined Petroleum Products	million tons	0.2	3.4	5.8	9.4	15.4	17.1	19.7	19.6	21.0	21.6	23.2	11.4	11.5	20.5	4.5	7.4	0.9
VI TEXTILE INDUSTRIES																		
Jute Textiles	'000 tons	837	1,071	1,097	1,302	998	958	1,074	1,049	1,302	1,186	1,178	564	564	1.8	3.0	-0.7	0.0
Cotton Yarn	'000 tons	534	744	801	907	972	929	1,000	1,025	1,049	1,105	1,057	519	605	2.7	1.9	-4.3	16.6
Cotton Cloth	billion metres	4.2	6.3	6.7	7.4	7.9	7.6	7.9	8.3	8.3	8.4	8.4	4.1	n.a.	2.8	1.4	-0.0	n.a.
i) Mill Sector	billion metres	(3.4)	(4.7)	(4.6)	(4.4)	(4.3)	(4.1)	(4.1)	(4.5)	(4.2)	(4.2)	(4.1)	(2.1)	(n.a.)	(0.9)	(0.0)	(-2.4)	(n.a.)
ii) Decentralised Sector	billion metres	(0.8)	(1.6)	(2.1)	(3.0)	(3.6)	(3.5)	(3.8)	(3.8)	(4.1)	(4.2)	(4.3)	(2.0)	(n.a.)	(6.8)	(3.0)	(1.0)	(n.a.)
VII FOOD INDUSTRIES																		
Sugar d/	'000 tons	1,134	1,890	3,029	3,510	3,558	3,740	3,748	4,792	4,262	4,840	6,472	770	1,957	5.4	8.1	33.7	154.2
Coffee	'000 tons	21.0	29.0	54.1	62.1	66.6	72.7	72.1	90.2	90.7	89.4	n.a.	n.a.	n.a.	6.0	n.a.	n.a.	n.a.
Vanaspati	'000 tons	170	280	340	401	466	558	449	353	500	541	572	288	331	4.4	0.4	5.7	14.9
Tea	million kgs.	277	308	322	376	398	421	468	494	483	519	560	401	392	2.4	4.2	7.9	-2.2
VIII ELECTRICITY GENERATED e/	billion kwh	5.3	8.8	16.9	33.0	47.4	55.8	66.5	70.6	79.8	89.2	92.2	44.2	50.1	11.5	7.5	3.4	13.3

a/ Provisional.

b/ Relates to calendar year.

c/ Relates to the period 1955/56 to 1975/76.

d/ Annual figures relate to the sugar season which is October-September from 1967/68 season. Earlier it was November-October.

e/ Relates to public utilities only.

Source: Ministry of Industry, Office of the Economic Adviser.

Table 8.4

TRENDS IN CAPACITY UTILIZATION OF SELECTED INDUSTRIES
(in percentages)

	1970	1973	1974	1975	1976	1977
A. Basic Industries						
Soda Ash	95	92	100.5	85.4	89.2	91.8
Cement	82	76	71.8	76.9	87.0	88.5
Caustic Soda	102	94	84.2	77.8	72.9	74.5
Sulphuric Acid	56	65	60.9	52.7	60.3	63.8
Aluminium Sheets & Circles	71	74	63.3	50.8	57.1	n.a.
Steel Castings	35	43	39.1	37.5	32.1	45.1
B. Capital Goods Industries						
Machine Tools	66	67	69.8	95.3	105.3	94.2
Power Transformers	113	76	60.5	50.4	70.2	79.6
Motor Vehicles (Automobiles)	131	136	68.6	58.6	66.7	68.6
Electric Motors	109	50	62.1	57.3	52.1	69.7
C. Intermediate Goods Industries						
Tyres (Automobiles)	108	113	115.7	102.7	103.7	96.6
Tubes (Automobiles)	93	107	115.0	96.6	98.7	92.8
Storage Batteries	109	97	76.3	76.4	81.0	96.0
Ceramics Refractories	61	63	64.4	61.7	70.1	54.2
Tyres (Cycles)	86	62	71.8	70.1	68.4	66.9
Paints & Varnishes	98	60	46.0	51.0	58.8	69.2
Tubes (Cycles)	71	47	63.3	55.8	55.1	46.1
Dry Cells	104	95	51.6	42.1	46.4	52.5
D. Consumer Goods Industries						
Soaps	189	98	93.7	118.5	118.0	129.8
Electric Lamps (incandescent Filament)	126	150	84.1	75.8	101.9	86.8
Matches	99	101	100.6	94.3	99.8	79.1
Cigarettes	110	105	90.1	79.6	88.9	89.3
Electric Fans	85	80	75.6	69.4	81.5	92.2
Footwear (Rubber)	68	75	72.1	71.0	75.5	79.4
Glass & Glassware (sheet glass)	80	65	43.3	72.2	74.7	72.4
Bicycles	94	59	64.5	55.0	65.8	76.6
Footwear (Western type)	177	52	50.2	64.7	58.9	61.5
Radio Receivers	77	64	74.6	52.6	58.5	62.7
Hurricane Lanterns	114	77	131.4	35.8	58.3	63.0
Vanaspati	64	43	31.7	35.8	41.2	n.a.

Source: Reserve Bank of India, Report on Currency and Finance 1972/73 to 1977/78.

Table 8.5

CAPITAL MARKET - SELECTED INDICATORS [a/]
(Assistance Disbursed by Financial Institutions)
(in Rs million)

	1961/62	1965/66	1968/69	1970/71	1973/74	1974/75	1975/76	1976/77	1977/78	April - September 1977	April - September 1978
IFCI	83	271	195	174	302	370	347	549	577	222	461
ICICI [b/]	86	258	162	298	433	454	611	670	916	349	503
IDBI		353	282	558	1,182	1,666	1,750	2,794	3,349	1,552	2,184
IRCI					54	86	46	108	94	22	73
SFC	90	188	184	335	546	796	1,001	1,052	1,064	427 [c/]	433 [c/]
SIDC		14	35	110	185	267	264	350	437	n.a.	223 [c/]
UTI		17	102	51	78	76	52	60	69	37	27
LIC											
(a) Cooperative Institutions [d/]		2	(155		18	121	44	80	64	23	18
(b) Corporate Sector	39	97	(	81	178	420	230	309	364	142	112
Total	298	1,200	1,115	1,518	2,797	3,836	3,880	5,648	6,934	2,774	4,034

a/ Relates to debentures, preference shares and ordinary shares of joint stock companies and also loans to companies in both public and private sectors.

b/ Excludes guarantee assistance.

c/ Provisional.

d/ Relates to loans to sugar cooperatives and industrial societies.

Source: Government of India, Economic Survey, 1971/72, 1977/78 & 1978/79.

Table 8.6

CAPITAL MARKET - SELECTED INDICATORS
Capital Raised by Non-Government Companies & Deposits with Joint Stock Companies
(in Rs million)

	Capital Raised by Private Sector [a/]				Deposits with Companies [b/]	
	Bonus	Loans	Equity & Debentures	Total	No. of Companies	Value of Deposits
1961/62	75	159	852	1,085	1,208	975
1965/66	62	166	831	1,060	1,964	2,285
1969/70	293	104	734	1,131	1,535	4,514
1970/71	518	68	637	1,223	1,472	4,322
1971/72	318	40	500	859	2,234	4,808
1972/73	363	61	931	1,355	1,962	5,174
1973/74	506	51	1,028	1,584	3,048	7,246
1974/75	792	106	751	1,649	n.a.	n.a.
1975/76	745	85	1,000	1,830	n.a.	n.a.
1976/77	936	661	1,062	2,659	n.a.	n.a.
1977/78	1,148	130	1,111	2,389	n.a.	n.a.
1978/79	619	19	533	1,171	n.a.	n.a.

a/ Capital raised against consents--Under the capital issues Control Order, the present exemption limit for issue of capital without consent is Rs 5 million. Data relate to calendar years.

b/ Non-financial joint stock companies.

Source: Government of India, Economic Survey 1978/79.

Table 8.7

INVESTMENT IN PUBLIC SECTOR ENTERPRISES [a]
(in Rs million)

Item	1961	1965	1968	1970	1972
Steel	6,180	8,900	11,790	14,190	16,940
Engineering	)	3,550	8,330	9,940	9,860
Chemicals	b/)	1,980	3,500	4,890	6,140
Petroleum	)	2,410	3,780	5,990	3,940
Mining & Minerals	b/)	1,580	2,730	3,680	4,840
Aviation & Shipping	470	1,010	1,430	1,850	3,200
Building and Repairing Shops	)	100	180	260	360
Trading	b/)	840	710	3,140	5,540
Other	b/)	n.a.	880	1,070	1,700
TOTAL	9,530	20,370	33,330	43,010	52,520

INVESTMENT ACCORDING TO REVISED CLASSIFICATION [c]

	1972	1973	1974	1975	1976	1977	1978
A. Enterprises Producing and Selling Goods							
Steel	11,937	18,403	20,290	22,177	25,704	28,643	32,566
Minerals & Metals [d]	5,972	7,208	8,726	10,247	13,824	19,813	23,790
Petroleum	3,939	3,783	3,600	4,346	4,662	6,897	8,168
Chemicals & Pharmaceuticals	5,537	6,909	8,181	10,659	14,707	20,762	25,288
Heavy Engineering	6,588	6,574	6,748	6,924	7,762	8,038	8,267
Medium & Light Engineering	1,060	1,225	1,463	1,681	1,937	2,158	2,428
Transportation Equipment	1,824	2,012	2,274	2,702	3,027	3,354	3,675
Consumer Goods	393	525	674	829	1,082	1,781	3,444
Agro-based Enterprises	78	90	92	91	105	115	140
Sub-total	42,328	46,719	52,048	59,656	72,810	91,564	105,766
B. Service Enterprises							
Trading & Marketing Services	3,805	2,926	3,090	3,164	4,676	5,277	5,651
Transportation Services	3,218	4,220	5,281	6,396	8,607	9,333	10,796
Contracts & Construction Services	129	158	159	226	291	381	481
Industrial Development & Technical Consultancy Services	70	60	46	41	53	39	68
Development of Small Industries	268	296	341	368	426	463	338
Tourist Services	104	145	177	183	202	201	209
Financial Services	396	897	1,273	1,699	2,661	3,708	5,203
Rehabilitation of Sick Industries	211	266	338	374	-	-	-
Sub-total	8,194	8,988	10,705	12,951	16,916	19,401	22,746
TOTAL (A + B)	50,522	55,707	62,753	72,607	89,726	110,965	128,512

Note: This breakdown of investment by industry consists of equity participation and loans disbursed from the Central and State Governments and from private parties both local and foreign. Excluded from the totals are working capital (generally financed by the State Bank of India) and investment financed by the enterprises out of their own net earnings.

a/ Cumulative - As of March 31 each year.
b/ Breakdown of investment is not available separately. Investment in these categories have been included in the total.
c/ The classification of investment was revised in 1974. For past years data on this basis were available only for the years 1972 and 1973.
d/ Including coal.

Source: Ministry of Finance, Bureau of Public Enterprises, various issues of the Annual Report on the Working of Industrial and Commercial Undertakings of the Central Government.

Table 8.8

CAPITAL EMPLOYED, GROSS PROFIT AND NET PROFIT OF SELECTED PUBLIC SECTOR ENTERPRISES
(in Rs million)

Undertaking	1966/67 Capital Employed [a]	1966/67 Gross Profit [b]	1966/67 GP as % CE [c]	1966/67 Net Profit	1968/69 Capital Employed [a]	1968/69 Gross Profit [b]	1968/69 GP as % CE [c]	1968/69 Net Profit	1971/72 Capital Employed [a]	1971/72 Gross Profit [b]	1971/72 GP as % CE [c]	1971/72 Net Profit	1973/74 Capital Employed [a]	1973/74 Gross Profit [b]	1973/74 GP as % CE [c]	1973/74 Net Profit	1977/78 [d] Capital Employed [a]	1977/78 [d] Gross Profit [b]	1977/78 [d] GP as % CE [c]	1977/78 [d] Net Profit
STEEL & ENGINEERING																				
Hindustan Steel	6,932	18	0.3	-197	8,589	-119	-1.4	-394	8,273	-200	-2.4	-456	7,788	300	3.9	47	8,535	742	8.7	468
Heavy Engineering Corporation	n.a.	-49	n.a.	- 61	1,449	- 89	-6.4	-141	1,652	- 71	-4.3	-149	1,886	4	0.2	72	1,934	-181	-9.4	-303
Hindustan Machine Tools	308	22	7.1	14	372	3	0.6	8	455	33	7.3	11	518	21	4.0	10	1,160	128	11.0	49
Mining & Allied Machinery Corporation					270	- 44	-16.3	- 64	262	- 23	-8.6	- 36	331	16	4.8	3	247	-210	-85.0	- 249
Indian Telephone Industries	147	29	19.7	13	173	38	21.9	15	296	66	22.2	32	496	71	14.3	32	857	144	16.8	58
Hindustan Aeronautics	263	23	8.7	14	949	52	5.3	22	1,665	86	5.1	48	1,762	123	7.0	93	2,006	140	7.0	44
Bharat Earth Movers	66	4	6.0	1	136	25	18.4	12	373	52	13.9	26	531	61	11.5	29	688	124	18.0	31
Bharat Electronics	115	27	23.5	13	169	47	27.8	24	313	72	23.1	30	511	84	16.4	39	594	121	20.4	37
Bharat Heavy Electricals	n.a.	-48	n.a.	- 57	357	16	4.5	- 34	1,666	96	5.7	31	3,326 [e]	340 [e]	10.2 [e]	270 [e]	4,167 [e]	814 [e]	19.5 [e]	255 [e]
Heavy Electricals	532	-30	-5.6	- 52	657	- 22	- 3.4	- 59	728	39	5.4	- 14								
CHEMICALS																				
Fertilizer & Chemicals Travancore	91	10	10.9	4	264	10	3.8	3	307	- 15	-4.9	- 28	322	- 1	-0.3	-20	897	- 29	-3.2	- 89
Fertilizer Corporation of India	795	13	1.6	- 12	879	66	7.5	40	1,591	49	3.1	19	1,078	7	0.6	-13	3,005	-499	-16.6	-672
Hindustan Photofilms					107	- 15	-14.0	- 21	112	- 15	-13.0	- 27	118	-16	-13.6	-27	232	49	21.3	16
Indian Drugs & Pharmaceuticals	43	- 4	-9.3	- 6	385	- 64	-16.7	- 91	530	- 7	- 1.4	- 47	518	6	1.2	-18	935	146	15.7	80
MINING & MINERALS																				
Coal India																	n.a.	- 7	n.a.	- 14
Neyveli Lignite Corporation	1,104	-49	-4.4	- 79	1,340	19	1.4	- 24	1,385	- 66	- 4.8	-133	1,341	-64	4.8	-122	1,271	128	10.1	84
National Mineral Development Corporation	86	3	3.5	- 3	240	- 7	- 2.9	- 18	353	- 24	- 6.8	- 32	424	22	5.2	16	1,358	-50	- 3.7	-118
Hindustan Zinc Limited	n.a.	4	n.a.	0	109	4	3.7	1	186	4	2.0	- 3	222	49	22.1	45	1,111	48	4.3	- 3
Bharat Aluminium Company													701	-55	- 7.8	- 66	1,317	7	0.5	- 39
Hindustan Copper													1,315	75	5.7	24	1,512	-209	-13.8	-311
PETROLEUM																				
Oil & Natural Gas Commission	n.a.	122	n.a.	112	1,557	153	9.8	137	2,207	148	6.7	122	2,204	268	12.2	245	4,352	741	17.2	517
Indian Oil Corporation	1,100	114	10.4	77	1,526	238	15.6	194	1,744	394	22.6	300	1,777	317	17.8	98	1,696	1,027	60.5	492
Cochin Refineries					268	46	17.2	35	233	25	10.6	17	270	5	1.8	-	166	82	49.6	24
TRADING																				
State Trading Corporation	179	42	23.4	20	377	113	29.9	25	208	146	70.2	47	280	140	50.0	42	500	402	80.4	129
Minerals & Metals Trading Corporation	185	82	44.3	35	165	- 6	-3.6	- 7	210	155	73.8	45	412	362	87.9	115	961	469	48.8	170
Food Corporation of India	n.a.	47	n.a.	10	1,408	143	10.2	5	6,359	393	6.2	6	5,356	106	2.0	5	23,598	2,915	12.4	12
TRANSPORTATION																				
Moghul Lines	24	2	8.3	2	102	6	5.9	3	147	3	2.1	-	216	15	6.9	8	941	- 31	- 3.3	- 91
Air India	400	56	14.0	38	536	56	10.5	22	1,288	18	1.4	- 20	1,379	67	4.9	3	2,097	348	16.6	285
Indian Airlines	276	-23	- 8.3	- 35	437	37	8.5	16	671	- 9	-1.4	- 51	714	35	4.9	-11	2,058	244	11.9	143
Shipping Corporation of India	417	57	13.7	45	573	65	11.3	50	1,237	111	9.0	81	2,305	204	8.8	139	5,891	130	2.2	- 148
TOTAL (for above concerns)	13,843	460	3.5	-106	24,761	808	3.3	- 859	36,188	1,435	3.9	-239	37,543	2,508	6.7	890	74,086	7,593	10.3	808

a/ Capital employed is fixed assets less depreciation, plus working capital, not including items under construction or expansion. Capital employed is as at the beginning of the year.

b/ Gross profit represents excess of income over expenditure after depreciation but before tax and interest on loan. Net profit represents Gross profit minus interest and tax. It is not adjusted to non operating and prior period receipts and expenses.

c/ Gross profit as per cent of capital employed.

d/ For 1977/78 these companies represented 65% of the total capital employed by all central public sector enterprises and 80% of gross profits. Net loss for all public sector enterprises was Rs. 144.2 million. Enterprises producing goods incurred a net loss of Rs. 925.5 million, but this was offset by profits of Rs. 781.3 million by enterprises rendering services. Overall return on capital employed was 8.3%.

e/ Heavy Electricals has been merged with Bharat Heavy Electricals Limited.

Source: Ministry of Finance, Bureau of Public Enterprises, various issues of the Annual Report on the Working of Industrial and Commercial Undertakings of the Central Government.

Table 8.9

PRODUCTION OF SALEABLE STEEL - BY MAIN PRODUCERS
(in 000 tons)

Year (April-March)	TISCO	IISCO	BHILAI	DURGAPUR	ROURKELA	BOKARO	Sub-Total	MYSORE	A.S.P DURGAPUR	Total
1950/51	796	207					1,003	20		1,023
1955/56	812	460					1,272	37		1,309
1960/61	1,263	722	332	118	104		2,539	41		2,580
1965/66	1,568	723	1,028	684	782		4,785	64	n.s.	4,849
1968/69	1,465	640	1,345	500	773		4,723	86	24	4,833
1970/71	1,375	508	1,549	413	684		4,529	69	39	4,637
1971/72	1,387	493	1,568	432	598		4,478	95	34	4,607
1972/73	1,456	351	1,744	477	765		4,793	102	36	4,931
1973/74	1,200	360	1,682	374	741		4,357	111	35	4,503
1974/75	1,463	407	1,707	514	694	1	4,786	92	37	4,915
1975/76	1,476	500	1,850	751	1,041	150	5,779	85	46	5,910
1976/77	1,550	542	2,019	901	1,174	736	6,922	81	52	7,055
1977/78	1,601	506	1,930	865	1,178	815	6,895	73	49	7,017
Average Compound Growth Rate (% per annum)										
1950/51 - 1975/76	2.5	3.6	12.1 a/	13.1 a/	16.6 a/		7.3	6.0		7.3
1970/71 - 1977/78	2.2	- 0.1	3.2	11.1	8.1		6.2	0.8	3.3	6.1
1976/77	5.0	8.4	9.1	20.0	12.8	390.7	21.0	- 4.7	13.0	19.4
1977/78	3.3	- 6.6	- 4.4	- 4.0	0.3	10.7	- 0.4	- 9.9	- 5.8	- 0.5

a/ Relates to the period 1960/61 to 1975/76.

Source: Steel Authority of India.

Table 8.10

PRODUCTION, IMPORTS AND CONSUMPTION OF FERTILIZERS
(000' nutrient tons)

Year (April-March)	Nitrogenous			Phosphatic a/			Potassic		Total		
	Production	Imports	Consumption	Production	Imports	Consumption	Imports	Consumption	Production	Imports	Consumption
1951/52	28.9	28.8	58.7	9.8	15.5	6.9	7.7	-	38.7	52.0	65.6
1955/56	76.9	53.0	107.5	12.4	-	13.0	10.0	10.3	89.2	63.0	130.8
1960/61	112.0	399.0	211.7	53.7	-	53.1	20.0	29.0	165.7	419.0	239.9
1965/66	237.9	326.0	574.8	118.8	14.0	132.5	73.0	77.3	356.7	413.0	784.6
1968/69	563.0	844.0	1,208.6	213.2	138.0	382.1	213.0	170.0	776.2	1,195.0	1,760.7
1970/71	832.5	477.0	1,479.0	228.1	32.0	541.0	120.0	236.3	1,060.6	629.0	2,256.0
1971/72	949.2	481.0	1,798.0	290.3	248.0	558.2	268.0	300.0	1,239.6	997.0	2,656.3
1972/73	1,054.5	665.0	1,839.0	330.3	204.0	581.3	325.0	347.5	1,384.8	1,194.0	2,767.8
1973/74	1,049.9	659.0	1,829.0	324.5	213.0	649.7	370.0	359.8	1,374.1	1,242.0	2,838.6
1974/75	1,186.6	884.8	1,765.7	331.2	286.0	471.5	437.0	336.1	1,517.2	1,607.8	2,573.3
1975/76	1,508.0	996.0	2,148.6	319.7	361.0	466.8	278.0	278.3	1,827.7	1,635.0	2,893.7
1976/77	1,909.5	750.1	2,457.1	478.3	22.8	635.3	277.8	318.6	2,387.8	1,050.7	3,411.0
1977/78	2,037.0	758.1 b/	2,913.0	669.9	163.9 b/	866.6	598.9 b/	506.2	2,706.9	1,520.9 b/	4,285.8
Average Compound Growth Rate (% per annum)											
1951/52 - 1975/76	17.9	15.9	16.2	15.6	14.0	19.2	16.1	17.9 c/	17.4	15.5	17.1
1970/71 - 1977/78	13.6	6.8	10.2	16.6	26.3	7.0	25.8	11.5	14.3	13.4	9.6
1976/77	26.6	-24.7	14.4	49.6	-93.7	36.1	- 0.1	14.5	30.7	-35.7	17.9
1977/78	6.7	1.1	18.6	40.1	618.9	36.4	115.6	58.9	13.4	44.8	25.7

Note: For the years 1951/52 to 1960/61 distribution figures are taken for consumption.

a/ Excludes data in respect of bonemeal and rockphosphate.
b/ Provisional.
c/ Relates to 1955/56 - 1975/76.

Source: The Fertiliser Association of India, Fertilizer Statistics, 1977/78, P.1-178.

Table 8.11

GENERATION OF ELECTRICITY BY REGION
(in GWH)

	1971/72	1972/73	1973/74	1974/75	1975/76	1976/77	1977/78 a/	April - December 1977	April - December 1978	% change b/
I. Thermal										
Northern	5,915	6,634	6,410	8,322	9,838	11,300	11,170	8,587	8,448	- 1.6
Western	10,557	13,370	12,530	13,600	14,295	16,172	18,429	13,862	16,557	19.4
Southern	4,880	4,924	5,645	6,248	6,557	8,637	7,692	5,549	5,532	- 0.3
Eastern	10,112	11,009	10,392	11,574	12,136	13,521	13,107	9,830	10,037	2.1
North-Eastern	248	280	344	366	476	615	616	442	501	13.3
All-India	31,712	36,217	35,321	40,110	43,302	50,245	51,014	38,270	41,085	7.4
II. Hydro										
Northern	8,243	8,765	9,420	7,314	10,110	11,464	11,349	8,423	12,386	47.0
Western	5,518	4,660	5,386	6,494	6,439	7,651	8,650	5,987	6,741	12.6
Southern	12,286	12,029	11,930	11,969	13,639	13,077	14,846	10,745	14,072	31.0
Eastern	1,784	1,521	2,036	1,874	2,932	2,456	2,910	2,114	1,998	- 5.5
North-Eastern	193	221	200	224	182	188	245	170	186	9.4
All-India	28,024	27,196	28,972	27,875	33,302	34,836	38,000	27,439	35,383	29.0
III. Nuclear										
Northern	-	-	487	748	533	1,095	198	198	177	-10.6
Western	1,189	1,133	1,909	1,458	2,094	2,157	2,074	1,761	1,774	0.7
All-India	1,190	1,133	2,396	2,206	2,627	3,252	2,272	1,959	1,951	- 0.4
IV. Utilities - All India (I through III)	60,926	64,546	66,689	70,191	79,231	88,333	91,286	67,668	78,419	15.9
V. Self Generation in Industry and Railways	5,459	5,970	6,107	6,488	6,695	7,282	7,400	n.a.	n.a.	n.a.
VI. Total - All India (IV and V)	66,385	70,516	72,796	76,679	85,926	95,615	98,686	n.a.	n.a.	n.a.

a/ Provisional.
b/ Percentage change during April-December 1978 over the corresponding period of the previous year. The figures are, however, not exactly comparable to those given for the full year.

Sources: 1. 1971/72 to 1976/77; Central Electricity Authority, Public Electricity Supply-All India Statistics-General Review, 1976/77.
2. 1977/78; Central Electricity Authority, Commercial Directorate.
3. April-December, 1977 & 1978; Central Electricity Authority, relevant issues of Power Supply Position in the Country.

Table 8.12

ELECTRICITY CONSUMPTION BY SECTOR
(in 000 GWH)

Year (April - March)	Mining & Manufacturing a/	Transport	Domestic	Agriculture	Others	Total
1953/54	5.00	0.60	0.70	0.20	1.10	7.60
1955/56	6.30	0.70	0.80	0.30	1.30	9.40
1960/61	11.60	0.80	1.50	0.80	2.20	16.90
1968/69	29.93	1.32	3.18	3.46	3.57	41.46
1970/71	34.35	1.43	3.83	4.54	4.50	48.65
1971/72	36.46	1.67	4.11	5.00	4.68	51.92
1972/73	37.54	1.79	4.31	5.92	4.86	54.42
1973/74	37.91	1.57	4.64	6.31	5.28	55.71
1974/75	38.42	1.56	5.17	7.76	5.47	58.38
1975/76	43.46	1.89	5.82	8.72	6.28	66.17
1976/77	47.92	2.22	6.29	9.68	6.99	73.10
1977/78 b/	48.97	2.44	6.90	10.06	7.11	75.48
Average Compound Growth Rate (% per annum)						
1953/54 - 1975/76	10.3	5.4	10.1	18.7	8.2	10.3
1970/71 - 1977/78	5.2	7.9	8.8	12.0	6.8	6.5
1976/77	10.3	17.5	8.1	11.0	11.3	10.5
1977/78	2.2	9.9	9.7	3.9	1.7	3.3

a/ Includes industrial power from utilities plus net generation in the non-utilities.

b/ Provisional.

Sources: 1. 1953/54 to 1970/71: Report of the Fuel Policy Committee, 1974.
2. 1971/72 to 1975/76: Planning Commission, Power and Energy Division.
3. 1976/77 & 1977/78: Central Electricity Authority.

Table 8.13

INDIAN RAILWAYS - FREIGHT & PASSENGER TRAFFIC

Year	Revenue Earning Freight Traffic			Passenger Traffic					
				Non-Suburban Traffic			Suburban Traffic a/		
	Originating Tonnage (million tons)	Net Tons - Kilometers (million)	Average Lead (kilometers)	Passengers Originating (million)	Passenger-Kilometers (million)	Average Lead (kilometers)	Passengers Originating (million)	Passenger-Kilometers (million)	Average Lead (kilometers)
1950/51	73.2	37,565	513	872	59,966	68.8	412	6,551	15.9
1955/56	92.2	50,435	541	780	54,273	69.6	495	8,127	16.4
1960/61	119.8	72,333	603	914	65,895	72.1	680	11,770	17.3
1965/66	162.0	98,978	611	1,064	79,130	74.4	1,018	17,164	16.9
1970/71	167.9	110,696	659	1,212	95,136	78.5	1,219	22,984	18.9
1971/72	170.1	116,894	687	1,261	101,079	80.2	1,275	24,250	19.0
1972/73	175.3	121,164	691	1,268	106,931	84.3	1,385	26,596	19.2
1973/74	162.1	109,391	675	1,217	107,627	88.5	1,437	28,037	19.5
1974/75	173.6	121,374	699	1,056	99,097	93.8	1,373	27,157	19.8
1975/76	196.8	134,874	685	1,306	115,899	88.7	1,639	32,862	20.1
1976/77	212.6	144,030	677	1,498	126,754	84.6	1,802	37,082	20.6
1977/78	210.8	150,250	713	1,576	137,271	87.1	1,928	39,433	20.4
Average Compound Growth Rate (% per annum)									
1950/51 to 1975/76	4.0	5.3	1.2	1.6	2.7	1.0	5.7	6.7	0.9
1970/71 to 1977/78	3.3	4.5	1.1	3.8	5.4	1.5	6.8	8.0	1.1
1976/77	8.0	6.8	- 1.2	14.7	9.4	- 4.6	10.0	12.8	2.5
1977/78	- 0.8	4.3	5.3	5.2	8.3	3.0	7.0	6.3	- 1.0

a/ Passengers booked between stations within the suburban areas of Bombay, Calcutta and Madras.

Source: Railway Board, Indian Railway Year Book, 1977/78.

Table 8.14

FINANCES OF INDIAN RAILWAYS
(in Rs million)

	1950/51	1955/56	1960/61	1965/66	1968/69	1970/71	1973/74	1974/75	1975/76	1976/77	1977/78	Revised Estimates 1978/79	Budget Estimates 1979/80
A Gross Traffic Receipts	2,630.1	3,162.9	4,568.0	7,335.7	8,988.4	10,066.9	11,378.9	14,081.9	17,670.1	20,361.1	21,234.2	21,651.5	24,561.5
of which:													
Passengers	978.4	1,077.1	1,315.9	2,191.7	2,651.0	2,954.9	3,671.5	4,125.5	5,141.2	5,692.9	6,216.5	6,630.0	7,565.2
Goods	1,430.1	1,802.8	2,861.4	4,654.9	5,627.9	6,182.3	6,804.1	9,175.1	11,502.7	13,259.1	13,484.5	13,591.5	15,543.4
B Ordinary Working Expenses	1,802.3	2,129.5	3,131.5	4,858.5	6,367.8	7,323.4	9,353.3	11,862.9	14,701.7	15,489.6	15,705.8	16,856.8	18,278.3
of which:													
Maintenance	n.a.	n.a.	1,170.5	1,794.4	2,338.4	2,743.6	3,785.1	4,777.9	5,837.5	6,228.5	6,382.0	6,442.0	6,914.5
Fuel	n.a.	n.a.	721.6	1,135.0	1,527.5	1,619.9	1,716.4	2,089.9	2,690.7	3,039.7	3,141.7	3,091.2	3,763.3
add													
Pension Fund				120.0	99.0	148.5	158.5	158.5	242.5	344.0	393.5	492.0	640.0
Depreciation	300.0	450.0	450.0	850.0	950.0	1,000.0	1,150.0	1,150.0	1,150.0	1,350.0	1,400.0	1,450.0	2,000.0
C Total Working Expenses	2,102.3	2,579.5	3,581.5	5,828.5	7,416.8	8,471.9	10,661.8	13,171.3	16,094.2	17,183.5	17,499.3	18,798.8	20,918.3
D Net Traffic Receipts (A - C)	527.8	583.4	986.5	1,507.2	1,571.6	1,595.0	717.0	910.6	1,575.9	3,177.6	3,734.9	2,852.7	3,643.2
E Net Miscellaneous Expenses	52.2	80.0	107.8	158.8	143.5	147.7	162.9	174.2	205.6	214.6	207.0	270.6	304.0
of which:													
Payment to Worked Lines	2.5	2.6	0.9	1.9	2.5	1.5	1.5	1.6	2.0	2.0	1.9	1.9	2.0
F Net Revenue (D - E)	475.6	503.4	878.7	1,348.5	1,428.1	1,447.3	554.1	736.4	1,370.3	2,962.9	3,527.9	2,582.1	3,339.1
G Payments to General Revenue	325.1	361.2	558.6	1,162.8	1,506.7	1,645.7	1,709.1	1,874.7	1,981.4	2,090.5	2,265.6	2,304.8	2,454.3
H Net Surplus/Deficit (F - G)	+ 150.5	+ 142.2	+ 320.1	+ 185.6	- 78.6	- 198.4	- 1,155.0	- 1,138.3	- 611.1	+ 872.4	+ 1,262.3	+ 2,773.1	+ 884.9
Operating Ratio a/	80.0	81.6	78.4	79.5	82.5	84.2	93.7	93.5	91.1	84.4	83.0	86.8	85.0
Ratio of Net Revenue to Capital at Charge b/	5.8	5.2	5.8	5.0	4.6	4.3	1.4	1.8	3.1	6.5	7.4	5.0	6.1

a/ Percentage of total working expenses plus payment to worked lines to gross traffic receipts.

b/ Capital at charge represents payments to general revenues.

Source: Ministry of Railways, Railway Budgets for various years.