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Preface

"The self-respect of the loin-cloth we have bartered away for sumptuous apartments and imposing embassies in foreign capitals. We are running after the discarded clothes of the West to hide our shame instead of relying upon our own resources"—said an unidentified economist more than a decade ago.*

When one takes a bird's eye-view of India's national scene, one can only shudder at the state to which the country has been reduced. One is reminded of the anguish of Joseph Mazzini, the apostle of Italian resurgence in the nineteenth century when, on seeing his country develop under the leadership of Cavour along lines entirely different from what he had envisaged, he exclaimed :

"I want to see before dying, another Italy, the ideal of my soul and life, starting up from her three hundred years' grave. This is only the phantom, the mockery of Italy that I see passing before my eyes."

Independent India inherited four problems which are inter-related with each other : poverty, unemployment and underemployment, wide disparities in personal incomes, and attitudes militating against hard work—born out of a wrong philosophy of life, on the one hand, and a long spell of foreign or minority rule on the other. Attainment of Independence has not helped solve any of these problems, on the contrary, they have assumed more serious proportions. A fifth has been added, viz, corruption of every possible form in the highest reaches, both political and administrative.

Who is responsible ? The answer is clear : a political leadership which has had no understanding of the real issues involved, which had no rapport with the mud-huts or the slums where the country lives, which wanted to apply copy-book maxims borrowed from foreign lands to solve our problems, irrespective of our conditions, and which wanted

* Amiya Rao and B.G. Rao : *Six Thousand Days*, Sterling Publishers Private Ltd., New Delhi, p. 32.

to create a communistic economic set-up within the frame-work of a political democracy.

India's present plight stems largely from a grievous choice made after Independence to go immediately 'industrial'. The Father of the Nation, Mahatma Gandhi, had sought to give first priority to agriculture, accompanied by cottage industry or handicrafts, followed by light or small-scale industry and, then, heavy industry. But Gandhi's ideas were rejected by his heir who "adopted policies of prestige which did not in the least bit correspond to the internal situation." The Indian National Congress, under the leadership of Pt. Jawaharlal Nehru formally turned 'socialist' overnight at its annual session held at Avadi in January, 1955. Thereafter, big industrial units and expansion of the public sector have been the craze with Congress leaders and regarded as a sign of progress in the country.

Gandhi had sought to build India from the bottom upward, that is, from the poorest and the weakest, and hence followed the centrality of the village : Nehru, exactly the reverse. He wanted to build India from the top downward, that is, from the industrialists, managers and technicians, and hence followed the centrality of the town. The latter lived to regret his decision, but it was at the fag end of his life, when little time was left for him to reverse the gear even if he would.

The essential genius of Gandhiji was his down-to-earth grass-root planning. India could be better and more expeditiously served by agriculture which provides food and clothing and domestic or small-scale technology which requires an increase, and not a reduction in manual labour, uses the simplest devices or equipment, and is based on purely local materials and local talent. But instead of agriculture and labour-intensive and short-gestation-period schemes, Nehru had a preference for huge, expensive, capital-intensive schemes which were not merely time-consuming, but also extravagant in the use of scarce resources such as steel, cement, sophisticated technical expertise and foreign exchange.

The steadily deepening economic crisis, visible even in the mid-fifties, failed to open our eyes to the mistake we were committing. All the warning signals were ignored. Rejection of the Gandhian approach in the field of restructuring our economy after Independence was accompanied by our persistence with wholly alien models of economic development. This helped only to compound our misery.

Broadly speaking, the economic conditions of any country are an expression of the relation that its physical resources and the level of their exploitation bear to the size of its population and the rate of population growth. Although the quantity and quality of physical resources are largely beyond human control, the level of their exploitation can vary and be raised. Similarly, although man can do nothing about the existing size of a country's population, at least its rate of growth can be checked. We have, therefore, to address ourselves to the tasks which alone are open to us, viz., to better exploitation of our physical resources and to checking

the growth of our human 'resources' in order to bring about an improvement in our economic conditions. India has, however, not been able to achieve significant success in either.

Poverty means lack of goods and services that go to satisfy man's necessities, basic or non-basic. These goods and services are derived both from agricultural and non-agricultural resources. Although agricultural development will get a fillip by non-agricultural development, the former does not depend upon the latter—at least in the initial stage. On the other hand, non-agricultural resources cannot at all be developed unless agricultural resources have been first or are simultaniously 'developed' —in other words, unless production of food and raw materials has increased, and, consequently, unless the purchasing power of the rural masses has increased and workers are released from agriculture for absorption in the non-agricultural sector. However, as the reader will find, realisation of this truth or, at least, of the fact that, in our circumstances, comparatively more attention and more financial resources were, and still are, needed for agricultural development, has been lacking on the part of our political leadership all along.

Increasing disparities in incomes and emergence of monopolies, on one hand, and increasing unemployment (which includes underemployment), on the other, are largely the results of increasing mechanisation and automatisation of manufacturing industry, construction and services —emphasis on capital-intensive projects and industries, on the one hand, and neglect of cottage industries and other labour-intensive enterprises, on the other.

Neither agricultural nor non-agricultural resources can be developed, nor population controlled, unless our people are prepared to change their old ways, old attitudes, customs and institutions, and to put in harder, better and longer work than they have been doing. For example, we need to shed our fatalism, abolish the caste system, practise birth control, and give a fresh look to the parlimentary democracy that we have given ourselves. But, alas ! there is no realisation of any such need on the part of either our working force, or our elite, or our leadership. Nor has any practical step been taken to overhaul or even reform our educational system-although everybody pays lip-service to its need.

The reader will find in the succeeding pages of this book that the principal obstacle to economic growth in India lies in the fact that our political leadership—in fact, all our planners and economists—have sprung from the urban elite and are fascinated with Marxian theories which are hopelessly out of time with the present-day economic realities of our country.

The fundamental fact of the Indian economy today is that there is a microscopic but powerful minority which systematically diverts huge real resources from provision of basic minimum needs to the poor, to building up, maintaining and expanding modern facilities for the affluent. Even foreign aid has been consistently used to boost the living standards

of this minority. Whatever is done, whatever is set up, is quickly converted into just another establishment to create a mini New York in this, the poorest land on earth.

To those in the villages who have no work for the most part of the year, to those living in more than two lakhs of villages who do not get clean drinking water or can get it only after trekking a long distance, and to those in the villages whose children always go to sleep half-hungry, the transfer of large economic resources to air-conditioning plants, synthetic fibre factories, big airports, modern hotels, skyscrapers, an endless range of domestic gadgets and the like, makes no sense at all. Yesterday they suffered; today they are bewildered; and for tomorrow they have no hopes. Only if they knew how to react!

Referring to the economic conditions of India, in a paper on 'The Human Dimensions of Economic Growth : Challenge of Stagnation in Under-developed Countries' presented by him at the One-Asia Assembly held in New Delhi in the first week of February, 1973, the world-famous economist and social scientist, Prof. Gunnar Myrdal said as follows :

> "Gandhi was certainly a planner, and a rationalistic planner, but his planning was all-embracing and laid main stress on sanitation and health ; the raising of nutritional levels by more intensive agriculture; a redirection and not only an expansion of education so that it became 'basic' and not merely literary and 'academic'; and a redistribution of land and wealth to create greater equality.
>
> "It is only in the latest years that we have more generally come back to Gandhi's ideas, when even some economists have been moved to press for an 'integrated planning' which is the modern term for what Gandhi was all the time teaching. My Indian friends will not be offended when I say that if Indian planning has not been more successful than it has actually been, the main explanation is that they have not kept as close as they should, to the fundamentals of the teachings of the Father of the Nation."*

It is heartening to note that, as the national crisis has deepened, the alternative of a Gandhian solution has been advanced by various persons in the country, working in different walks of life—administrators, educators, scientists, scholars and politicians many of whom cannot be regarded—nor do they themselves claim to be regarded as 'Gandhians'.

To India's misfortune, ideologues had taken over its mansion of planning and made common sense vacate it. They would have been entitled to our pity rather than condemnation, had the fate of hundreds of millions of people not been involved.

The book pleads for a framework of economic policy which is revolutionary in the sense that it is human personality which has been

* The 'Nagpur Times', February 16, 1973.

assigned the first or central place—not money or machines. The primacy given to agriculture under a system of peasant proprietorship, the priority accorded to handicrafts and cottage industries, the emphasis on decentralisation and self-reliance, and, above all, the anxiety to prescribe as minimal a role as possible, under the circumstances, to the state agencies in the ordering of the economy, have all but one aim, and that is to translate into reality the fundamental maxim of democracy as a "rule of the people, by the people, for the people."

To the extent to which the course followed by, and direction given to the Indian economy hitherto, signified a near-total rejection of what Gandhi had envisaged, it is inevitable that any advocacy for a move "towards Gandhi" will necessarily have to be critical of the model of economic growth, fashioned under Nehru's stewardship. But, in my humble opinion, such criticism of the Nehruvian approach as is indeed inevitable, has to be understood in the correct perspective and should not be interpreted to mean even remotely any attempt to whittle down the memorable contribution made by Nehru in the formative years of our Independence.

At the same time, however, does anyone seriously dispute that there were basic differences in the views of the Father of the Nation and his 'heir' ? And did not the Janata Party give promise of a return to Gandhiji after three decades of experiment with Nehru ? Yet, the argument goes on about how urbanism is not so bad. Gandhiji called it a parasitical, blood-suckling process. Have we turned, or do we even now want to turn, our back on this process ? Let us ponder.

History has often been a relentless persecutor. Sentiments have seldom influenced its verdict. One of the basic functions of history is to teach succeeding generations the lessons it holds forth. If sentiments blind our eyes to the correct lessons from history, we will only be untrue not only to ourselves but also to our forebears and their memory and the contributions which we hold as imperishable and dear. The verdict of history in this case will be but one, viz., 'modernisation' has resulted in a collapse of India's rural economy—or whatever of it was left after the end of the foreigner's rule : a rising tide of unemployment in the towns and in the villages, and the growth of a city proletariat without nourishment of either body or soul.

I have not attempted to project the Gandhian alternative for the solution of India's economic problems in any contentious spirit of polemics. I have no desire to run down what has been achieved in India. All I mean to say, and emphatically, is that Gandhi and Nehru cannot be hyphenated—whether in academic debate in real life.

I shall feel more than satisfied if what I have sought to suggest in a rather imperfectly worked out policy framework provokes a nation-wide debate, out of which, I am sure, will emerge a broad consensus as to how we, as the second most populous nation, set about the noble task of solving our most pressing economic and human problems.

The writer is not an economist but a public worker of the ordinary run, though having the good fortune of being born in the home of a small peasant farmer and some experience of administration in the biggest State of the Union, Uttar Pradesh, where 86 per cent of the people live in villages. He claims no originality for his views, but has only sincerely, however imperfectly, attempted to spell out Mahatma Gandhi's economic policy for India in terms of what the Mahatma had reiterated and had also written extensively and in depth. Indeed, in very many respects, Gandhi's writings on some of the important aspects of free India's economic policy are at once exhaustive and detailed. Our misfortune has been that we, as a nation, have ignored them and sought to cheat ourselves and the rest of the world by deifying this great soul but consigning his eminently practical guidelines to cold storage. We have been content to pay lip-service to him.

Perhaps it is unnecessary to add that whatever has been said in this book does not necessarily reflect the views of the political party to which the writer has the honour to belong, and that he will feel amply repaid if this labour of his serves to stimulate public interest again in the teachings of the Father of the Nation.

New Delhi,
May 28, 1981

CHARAN SINGH

Contents

PART THREE

Part One

1

The State of the Nation

Gandhiji had seen Independence as an opportunity to wipe the tear from every eye. Just before mid-night on August 14, 1947, Nehru recalled this phrase and made the following declaration :

> "Long years ago we made a tryst with destiny and now the time comes when we shall redeem our pledge, not wholly or in full measures, but very substantially. At the stroke of the mid-night hour, when the world sleeps, India will awake to life and freedom. A moment comes, which comes but rarely in history, when we step out from the old to the new, when an age ends, and when the soul of a nation long suppressed finds utterance. It is fitting that at this solemn moment we take the pledge of dedication to the service of India and her people and to the still larger cause of humanity."

Nehru's 'tryst with destiny', however, has turned out to be 'a date with despair'.

Now that more than three decades have passed since the attainment of Independence, it is time we examined how far the dream of Gandhiji has been realised and whether the pledge given by Nehru has been 'substantially' redeemed.

The basic premise of our five year plans, particularly of the Second and the Third Plan, was "development along socialist lines to secure rapid economic growth and expansion of employment opportunities, reduction of disparities in income and wealth, prevention of concentration of economic power and creation of the values and attitudes of a free and equal society."

However, as will gradually appear in the succeeding pages, none of the four objectives has been achieved. After three decades of effort, the goals the country set for itself, seem actually to have receded from view. Every one of the Planning Commission's projections has turned out to be hopelessly wrong.

For making an assessment of our achievement since the attainment of political independence we will have to take a look at the past, which can be divided into two parts, viz., (i) the period before the English sneaked into our country as traders and when India had a stable government ; and (ii) the period which began with the first War of Independence and ended with the ouster of the foreigner from our land.

The economic slow-down in the country began with the decline of the traditional industries immediately after the advent of the British in the latter half of the eighteenth century. This declination manifested itself not only in a tendency of increasing pressure of population on land but in continuously diminishing rates of real wages. For example, the compiler of the first District Gazetteer of the Bareilly District in the late nineteenth century in the then North-Western Provinces noted that while the wages of various classes of workers (such as field-labourers, herdsmen, tailors, masons etc.) were very nearly the same as they were in 1826, prices had risen substantially between the two dates.

In fact the distinguished economist Colin Clark's study based on various historical documents, indicates that real wages in 1895 were only one-fourth of what they were in Jehangir's time.

Raising the question whether the very low level of income per head that prevailed in India during the latter half of the nineteenth century had always prevailed in the country, Colin Clark says in his book, *The Conditions of Economic Progress* (Macmillan, London, 1960) as follows :

> "There is good evidence that it did not, but that at an earlier date real income had been a great deal higher. This is not surprising. From the death of Aurangzeb in 1707 to the final establishment of order under British rule in the mid-nineteenth century, India passed through a shocking period of war, anarchy and bloodshed, and a great decline in the level of economic productivity is all too appropriate. Prof. Radhakamal Mukherjee in his *Economic History of India*, boldly asserts that real wages are now less than half of what they were at the beginning of the seventeenth century.
>
> "Relevant evidence on which to form a judgment of this period was assembled by Brij Narain in his book *Indian Economic Life* (Lahore, 1929). Indian records for this period are extremely scanty ; but after searching Europe, he obtained some interesting records of Dutch and Portuguese navigators of that period, recounting the price they paid for supplies. The prices expressed in their coinage are all re-expressed in terms of the silver rupee, which at that date contained about 2½ times the silver content of the contemporary English shilling.
>
> "His results are most conveniently expressed by measuring the quantities of different commodities obtainable for one rupee,

restating each in terms of the number of O.U.* (exchangeable for the rupee), and then taking the median. In the late sixteenth century, Akbar's period, the median of these data indicates a purchasing power for the rupee of 45 O.U. For the early part of the seventeenth century, Jehangir's period, we have more abundant data, 25 in all. Sub-dividing these, we find that the median purchasing power of the rupee over cereals was 24 O.U., over livestock product 95 O.U. This remarkable relative cheapness, as compared to the present day, of livestock products is in itself evidence of a much more productive and better-fed community ; and these products must have formed a much larger proportion of the diet than they do now. Overall, we give the rupee a purchasing power of 45 O.U."

Brij Narain also gives a table of wages for different types of labour, which we can re-express in present-day rupee by use of the above coefficients. These compare with Atkinson's figures for 1895, probably the lowest point, and the present day. Though a considerable improvement has been shown over the last half century, it appears that real wages are still only between one-third and one-half of what they were under Jehangir, and Professor Mukherjee's claim is fully justified :

TABLE 1

Average Wage per Month in O.U.

Class of Labour	*Akbar's Period*	*Jehangir's Period*	*1895*	*1953*
Slave	34	—	—	—
Unskilled farm labourers	67	87	24	48
Watchmen, urban labourers	101	131	32	55
Carpenters	203	262	57	82
Superior skilled workers	236	284	78	97
Highest placed staff	—	400	—	—

"If we carry the study further back, we get more striking results still. Moreland was of the opinion that real incomes in the sixteenth century were about the same as they had been in the fifth century. But Dr. Prem Nath in his book, *A Study of the Economic Conditions of Ancient India*, gives for the eleventh century the annual wages payable to a number of workers, measured in *Kalams*, each of 3½ maunds of rough rice, or 40 O.U. On this reckoning, the average monthly wage in O.U. was as follows :

* O.U. (Oriental Unit) is defined by Colin Clark as the quantity of goods or services exchangeable directly or indirectly for one rupee in India in 1948-49.

TABLE 2

Average Monthly Wage in O.U.

Class of Workers	*Wages*
Unskilled labourer	130
Barber	170
Carpenter's assistant	250
Skilled workers	330
Jewellers and master carpenters	500
Administrative officials	670

These are substantially higher than the real wages of Jehangir's period. This conclusion is by no means improbable (*vide* pp. 204-207)."

The following two tables taken from Shri Moni Mukherjee's book, *National Income of India : Trends and Structure* (M/s Statistical Publishing Society, 203, Barrackpore Truck Road, Calcutta-35, p. 61), give an idea of the state of India's economy since 1857 till about 7 years after the foreigners left our shores in 1947. It would appear from Table 3 that per capita income of our country at 1948-49 prices (including income from the services or tertiary sector) rose from Rs. 169 in 1860 to Rs. 200 in 1900, and Rs. 261 in 1930. The level of income remained stable for a decade (1925-35). After a short spurt at the end of the thirties, it gradually touched the level of Rs. 254 in 1950.

TABLE 3

Average per capita National Income of India at 1948-49 Prices (or in Terms of the Value of Purchasing Power of the Rupee in 1948-49) for Overlapping Nine-year Periods, 1860-1955

Period	*Centering*	*Per capita Income (in 1948-49 Rupees)*
1857-63	1860 (7 years)	169
1861-69	1865	169
1866-74	1870	172
1871-79	1875	177
1876-84	1880	197
1881-89	1885	216
1886-94	1890	204
1891-99	1895	201
1896-1904	1900	199
1901-09	1905	203
1906-14	1910	220
1911-19	1915	241
1916-24	1920	253
1921-29	1925	261
1926-34	1930	260
1931-39	1935	260
1936-44	1940	265
1941-49	1945	255
1946-54	1950	253
1952-58	1955 (7 years)	275

Table 4 shows the rates of growth of national income, population and per capita income in India, during the period 1860-1962, as also its sub-periods.

TABLE 4

Rates of Growth in Different Sub-Periods

Periods	*No. of Years*	*Annual Geometric Rate of Growth of*		
		National Income at 1948-49 Prices	*Population*	*Per capita Income at 1948-49 Prices*
1	*2*	*3*	*4*	*5*
1860-1900	40	0.90	0.50	0.40
1900-1950	50	1.32	0.84	0.48
1860-1950	90	1.15	0.70	0.45
1865-1885	20	1.76	0.53	1.23
1905-1925	20	1.73	0.44	1.29
1948-1962	14	3.07	1.95	1.12

Two major conclusions, which emerge from the figures above, may be summarised as follows :

(i) The rate of growth of per capita real income over the entire period is low, being less than 0.5 per cent per year. At this rate per capita income would double up in some 140 years. The rate of growth of national income over the whole period was 1.15 per cent per year, while the rate of growth of population was 0.70 per cent per year.

(ii) The rates of growth of per capita income during 1865-1885 (1.23) and 1905-1925 (1.29) were higher than recent rates (1.12) but the rate of growth of national income in recent times is much higher in comparison with the rates prevailing in those periods. This is because both these past periods of high rate of growth were characterised, first, by sustained agricultural expansion and, second, by a low rate of population growth, 0.53 per cent per year during 1865-85 and 0.44 per cent per year during 1905-25, while the rate of growth of population during the 14 years, 1948-62, was as high as 1.95 per cent per year.

Table 5 shows the progress that the country has made during the post-Independence period.

TABLE 5

Economic Progress during the Post-Independence Period

(In Crores of Rupees at 1970-71 Prices)

Year	*Net National Product at Factor Cost*	*Per capita Net National Product*	*Index Number of Net National Product*	*Index Number of per capita Net National Product*
1950-51	16,731	466.0	100.0	100.0
1951-52	17,086	468.1	102.1	100.4
1952-53	17,699	475.8	105.8	102.1
1953-54	18,854	487.5	112.7	106.8
1954-55	19,328	500.7	115.5	107.4
1955-56	19,953	507.7	119.3	108.9
1956-57	21,046	524.8	125.8	112.6
1957-58	20,587	503.3	123.0	108.0
1958-59	22,329	534.2	133.5	114.6
1959-60	22,676	532.3	136.5	114.2
1960-61	24,250	558.8	144.9	119.9
1961-62	25,039	563.9	149.7	121.0
1962-63	25,414	559.8	151.9	120.1
1963-64	26,746	576.4	159.9	123.7
1964-65	28,808	607.8	172.2	130.4
1965-66	27,103	558.8	162.0	119.9
1966-67	27,298	551.5	163.2	118.3
1967-68	29,715	587.3	177.6	126.0
1968-69	30,513	589.1	182.4	126.4
1969-70	32,408	612.6	193.7	131.5
1970-71	34,235	632.8	204.6	135.8
1971-72	34,715	626.6	207.5	134.5
1972-73	34,191	604.1	204.4	129.6
1973-74	35,967	621.2	215.0	133.3
1974-75	36,411	616.1	217.6	132.2
1975-76	40,411	662.4	239.1	142.1
1976-77	40,534	658.0	242.3	141.2
1977-78	43,857	697.2	262.1	149.6
1978-79*	45,637	712.0	272.8	152.8

Annual Growth Rates

First Plan Period	3.6	1.7
Second Plan Period	4.0	2.0
Third Plan Period	2.2	—
Three Annual Plans Period (1966-67 to 1968-69)	4.0	1.8
Fourth Plan Period	3.4	1.1
1974-75	1.2	(—)0.8
1975-76	9.9	7.5
1976-77	1.3	(—)0.7
1977-78	8.2	6.0
1978-79	4.1	2.1

* Quick Estimates.

Source : Economic Survey 1979-80, Table 1.1.

Despite a massive growth of population the increases which have been achieved in rates of capital formation, agricultural production and industrial output since the inception of economic planning are in a sense not inconsiderable. In effect, the net national product at 1970-71 prices has grown at a compound rate of 3.65 per cent per annum during 1950-51 to 1977-79, and net per capita production at a rate of 1.53 per cent. Along with increase in industrial and agricultural production, the growth of chemical and engineering industries has laid a solid foundation of economic self-reliance which is also reflected in the structural changes that have taken place in our foreign trade. The increase in the number of technical and scientific personnel is also noteworthy.

The above gains notwithstanding, we are amongst the very poorest nations on earth : nearly one-half of our people are living below what is called the 'poverty line'. The production of foodgrains in India has more than doubled since the beginning of planning, but, owing to massive increase in population and the fact that the initial base with which we started was very low, the increase in agricultural production that has been achieved, proved inadequate to feed our people. Therefore, food imports continued in an ever-increasing quantity till 1976. Industry has grown fast but festering slums have grown faster. Unemployment and under-employment, both in the rural as well as urban areas, is mounting at a galloping rate and the income-gap between one man and another, the agricultural and the non-agricultural worker, the village and the town goes on widening further and further. This means that economic power is getting concentrated into fewer and fewer hands as time rolls by. While fewer people on the whole die of malaria, typhoid, cholera and small-pox, many more die of starvation and mal-nutrition. Finally, we are the most illiterate people in the world—75% of the people in villages and 45 per cent in the towns in 1970 not knowing how to read and write, though we had attained political freedom more than two decades earlier. At the same time, while the number of people with 'degrees' is increasing, the number of people without jobs is increasing more rapidly.

Although, only three centuries ago, India compared not unfavourably with Europe, it is an extremely poor, if not the poorest, country in the world today. In 1963-64, India occupied the 85th position in regard to per capita income among all the countries (i.e., the developing countries taken together). After about 10 years, according to the World Bank Atlas, 1975, our country, with a per capita GNP of $ 120 at current prices, took the 101st to 104th place in 1973 (Sri Lanka and Pakistan having the same income as India) among the 125 countries which had a population of more than one million each. Three years later, i.e., in 1976, India slided down to the 111th position, whereas Sri Lanka and Pakistan were able to maintain their old positions, 103rd and 104th. In the succeeding year, 1977, with statistics for five countries not being available, India with a per capita GNP $ 160 occupied the 106th position out of 121 countries.

It would appear that 43 countries (out of 55) situated in the

continent of Africa which possessed little or no infra-structure at the time they secured their liberation from European overlordship, mostly after 1947, have also marched ahead of us.

Table 6 shows GNP per capita in the year 1977 and real growth rates during the period, 1970-77 for twenty-five developed and twenty-six developing countries.

TABLE 6

GNP per capita at Market Prices, Amount (1977) and Average Annual Growth Rates (1970-77)

Country	*GNP per capita*	
	Amount 1977 (US $)	*Real Growth Rate (%) 1970-77*
1. Kuwait	12,690	—0.9
Switzerland	11,080	0.1
Sweden	9,340	1.2
Denmark	9,160	2.3
United States	8,750	2.0
6. Germany, Federal Republic of	8,620	2.2
Norway	8,570	3.9
Canada	8,350	3.4
Belgium	8,280	3.5
Netherlands	7,710	2.2
11. France	7,500	3.1
Australia	7,290	1.6
Saudi Arabia	7,230	13.0
Libya	6,520	4.5
Japan	6,510	3.6
16. Austria	6,450	3.8
Finland	6,190	2.8
German, Democratic Republic of	5,070	4.9
United Kingdom	4,540	1.6
New Zealand	4,480	0.9
21. Czechoslovakia	4,240	4.3
Israel	3,760	2.0
Italy	3,530	2.0
USSR	3,330	4.4
25. Poland	3,290	6.3
96. Haite	230	2.1
Madagascar	230	—2.7
Afghanistan	220	2.7
Benin	210	0.5
Tanzania	210	2.1
101. Zaire	210	—1.4
Guinea	200	2.5
Pakistan	200	0.8
Sierra Leone	200	—1.3
Niger	190	—1.8

(Contd.)

(*Table 6 Contd.*)

106.	India	160	1.1
	Rwanda	160	1.3
	Sri Lanka	160	1.3
	Malawi	150	3.1
	Burma	140	1.3
111.	Mozambique	140	—4.3
	Upper Volta	140	1.6
	Barundi	130	0.6
	Ched	130	—1.0
	Mali	120	1.9
116.	Somalia	120	—1.1
	Ethiopia	110	0.2
	Nepal	110	2.4
	Bhutan	90	—0.3
	Lao People's Democratic Republic	90	N.A.
121.	Bangladesh	80	—0.2

Source : 1979 World Bank Atlas.

Notes : 1. No figures at all are available for Iran, Lebanon, Kampuchea (Democratic), Uganda and Vietnam.

2. The per capita incomes of different countries have been compared by converting them into US $ at the official exchange rates. This method is not perfect for the purpose. Foreign exchange rates reflect only the relative prices of goods and services which enter into foreign trade. Whereas goods and services produced and used within a low-income country are cheaper (relative to the same goods and services in the high income countries like the USA) than those that enter into foreign trade. So that conversion of a country's national income into US Dollars by use of the foreign exchange rates understates its true income. Notwithstanding this and other drawbacks, however, this method is the best that can be thought of.

The 178 countries whose population, national income and per capita income statistics for the year 1977 are available, have been divided by the 1979 World Bank Atlas into the following five income groups :

TABLE 7

Income Group	*Number of Countries*	*Population mid-1977*	*GNP 1977 ($'000 millions)*	*Average per capita 1977 US $*
Less then $ 200	21	856	126	150
$ 200 to 499	41	1,413	535	380
$ 500 to 1,999	56	655	708	1,080
$ 2,000 to $ 4,999	31	550	1,864	3,390
$ 5,000 and over	29	572	4,547	7,950

The lowest income group includes the following countries : *Bangladesh, Bhutan, Burma,* Burundi, Cape Varde, Ched, Comros, Ethiopia, Guinea-Bissau, *India,* Lao People's Democratic Republic, Malavi, Maldives, Mali, Mozambique, Nepal, Niger, Rwanda, Somalia, *Sri Lanka,* Upper Volta.

Till recently, people have been under the impression that there were only three worlds in this variedly divided world—the obnoxiously rich First, the middling Second and the miserable Third. But we are now being told that the Third World is, in fact, two worlds in one. Within it is contained a Fourth World, described as the MSA (which is short for Most Seriously Affected). India is unshakeably placed in this Fourth World consisting of countries having an income which worked out at less than $ 10 per capita per month.

As against this, according to a study made by the World Bank in 1979, Britain and Australia give doles to their jobless which average between Rs. 1,160 and Rs. 4,320 per month. The United States gives food coupons to its poor citizens.

Of a total world population of about four billion, 350 million and totally destitutes without a roof over their heads, living on pavements and bridges, scavenging in dustbins and gutters for scraps of food to stay alive. And all these destitutes live in the Indian sub-continent.

A truck-driver in Australia who drives a 22-wheeled 100-tonner can earn as much as 400 Australian dollars (about Rs. 4,400) in a week while his counterpart in India hardly gets Rs. 40 to Rs. 80 per trip.

The wages for white-collar jobs and technical professions in India are not different from what the labourers repairing the road or digging trenches in UK or Australia will get. Skilled professionals like plumbers or builders in the latter countries earn almost as much as journalists or doctors in the former. Thus, what a labourer in a factory in the UK and Australia gets for an hour's work, a labourer in India gets in a week.

The study says that price-wise Indian cities are among the 10 most expensive cities in the world. A 1979 model Ford costs $ 6,000 in Australia (Rs. 60,000) inclusive of all taxes, while a second-hand STC-auctioned car of that model will cost not less than Rs. 1,25,000 in India.

An average Indian white-collar employee earning between Rs. 12,000 and Rs. 20,000 per year, will take his life-time to save enough to buy the tinpot that passes for a car in India, while an Australian can buy it in two years, if not earlier.

Similarly, one can buy a pair of trousers, a shirt or any other dress for between $ 10 (Rs. 100) and $ 60 (Rs. 600) in any city of the United States and Australia. The same garment can be bought for between Rs. 100 and Rs. 150 in India which is 15 days' wage of an unskilled

labourer while an Australian labourer can buy the same garment out of two hours' earnings.

One can get a clean, unadulterated meal for $ 2 in any eating house in the United States and Australia which is an hour's earning of an Australian or American labourer, while an unskilled woman construction labourer will have to work the whole day to buy a meal from an Indian *dhaba*, the report added.

The situation in India further deteriorates as trade deficits increase following a rise in prices of petroleum products.

China had begun a march towards development more or less at the same time as we did. Not only were the problems of poverty, unemployment and a wide gap between the rich and the poor similar, but the physical resources available were also almost similar. Although China possesses less arable land per capita, her usable land resources are greater than India's. While India possesses more iron, China possesses more coal. In truth, India possessed an edge over China : our living standard was somewhat higher. Industrially, we were better off and had, what some political leaders and economic planners regard, the advantage of availability of technical and economic assistance from all sources. China, in the initial stage, had to depend upon only one source, namely, the USSR. Yet, today the Chinese are better fed, better clothed and better housed than Indians (having a per capita income of $ 410 in 1970 as compared with Indian's $ 160) and, although any talk of their having stolen a march over us may be considered unpatriotic in our country, China's less important leaders attract more attention in some of the world capitals than India's top leaders.

What is in store for India's millions in the next decade and by the end of the century ? The World Development Report for 1979 just published by the World Bank says, to no one's surprise, that the prospects are 'particularly bleak' for low-income countries, and the number of people trapped in absolute poverty, now 45 per cent of the total in India, will probably rise even if the proportion falls. This scenario points to the obvious conclusion that "many low-income developing countries, including India, will find it hard to maintain political stability if the underlying economic situation deteriorates because of the falling purchasing power of exports."

India did not do too badly in the 1970-78 period, chiefly because of a sustained improvement in agriculture. Improved returns to the grower by way of higher farm prices, the rapid spread of small-scale irrigation and, above all, good weather contributed to record harvests.

As the 'report' points out, the 1979-80 drought, one of the worst, reduced output by only 8 to 9 per cent, "but the crop was still the third largest ever, some 20 per cent higher than in 1973-74 when there was a comparable drought."

As a result of faster agricultural growth in the 1970's compared with the previous decade, the growth of India's gross domestic product was more than maintained. But the inexorable rise in population reduced the improvement in per capita terms to less than the average for low-income L.D.C's (Less Developed Countries). In other words, India was dropping further behind in the world income league.

Despite the slow-down in industry, India managed to achieve a real growth of 6 per cent in exports in the 1970-78 period compared with 3 per cent in the 1960's. Since the share of primary commodities in the total exports was going down, this obviously meant that exports of manufactured goods were rising even faster. In 1977, the share of manufactured goods in exports was 56 per cent.

This is some consolation. But a comparison of India's progress in manufacturing with developing countries in the same class shows how the opportunity has been missed of making the most of its early start in industry. Value added in manufacturing increased between 1970 and 1976 by 92 per cent in Brazil and 41 per cent in Mexico, both countries of substantial size. The pace was much greater in small, export-oriented economies like that of South Korea, which registered a rise of 274 per cent. Against this, the Indian figure of 26 per cent is rather dismal.

Among the L.D.C's (Less Developed Countries), India ranked fourth by the size of its manufacturing sector in 1970. The position remains unchanged except that Brazil, the largest, was 40 per cent ahead of India then and 114 per cent ahead in 1976. In the last four years, marked by particularly sluggish performance in India, the difference will have become even greater.

CONSUMPTION LEVELS

While the National Income per capita is a useful summary measure of the well-being of a people, the per capita private consumer expenditure is a more direct evidence of such well-being or level of a people's living. The latter figure can be arrived at in two ways. First, by an arithmetical calculation, viz., by adding the value of exports to the net national product ; and then deducting from the total the values of imports, net domestic capital formation and consumption expenditure of the Government. The private consumer expenditure of our country thus arrived at for the year 1960-61, when divided by the population figure, gives us an amount of Rs. 276.3 as the per capita private expenditure per annum (or 75.7 paise per day per person), whereas the per capita national

income for the year 1960-61 stood at Rs. 306.3.

Second, (the figures of private consumer expenditure can be arrived at) by making direct enquiries from a random sample survey, as the NSS does. The figures so arrived at should, in a way, be still nearer to reality. The NSS estimate of per capita private consumer expenditure in 1960-61 came to Rs. 278.8 while, as we have already seen, the one obtained by arithmetical calculation, came to Rs. 276.3. When the two kinds of figures coincide or almost coincide, as they do in this case, then it must be assumed that we have arrived at a fool-proof figure.

According to the NSS estimates, given in Table 8, the per capita private consumer expenditure of the rural population in 1960-61 was Rs. 261.2 while that of the urban population was Rs. 359.2. Thus, the per capita consumer expenditure of the urban population was about 37.7 per cent higher than that of the rural population. This does not, however, mean that the urban population on an average was so much better off than the rural population. In this connection, it must be noted that the prices of some of the consumer goods and services are usually higher in the urban areas than in the rural areas.

TABLE 8

Distribution of Population by per capita Consumer Expenditure in 1960-61

Monthly per capita expenditure class	*Rural*		*Urban*	
	Average annual per capita expenditure	*Per cent of population*	*Average annual per capita expenditure*	*Per cent of population*
Rs.	Rs.		Rs.	
0-8	79.3	6.38	77.6	2.15
8-11	116.6	11.95	118.3	2.49
11-13	147.2	9.88	145.0	7.19
13-15	170.8	9.82	169.7	6.86
15-18	200.0	13.79	201.2	10.71
18-21	237.3	11.44	235.7	11.40
21-24	273.4	9.03	271.7	9.68
24-28	313.0	7.72	315.4	11.03
28-34	375.1	7.66	373.6	9.34
34-43	460.8	5.93	464.0	9.61
43-55	583.3	3.12	592.3	7.04
55 and above	1005.1	3.28	1032.5	9.50
All classes	261.2	100.00	359.2	100.00

It will be seen from the above that in 1960-61, nearly two-thirds of our people, both in the rural (63.26 per cent) and urban (64.51 per cent) areas, were living below the national average. They had respectively only an annual expenditure of less than Rs. 237.3 (66 paise a day) as compared with the national average of Rs. 261.2 (rural) and less than

Rs. 315.4 (88 paise a day) as compared with Rs. 359.2 (urban). Further, that 2.15 per cent of the people in the towns and 6.38 per cent in the villages lived on 22 paise on the average per day. Few political leaders have seen this misery face to face or realised that even a dog could not be maintained on this amount—the amount on which more than 24 millions of our people were living in 1960-61.

According to calculations made by V. M. Dandekar and Nilkantha Rath, in a study entitled *Poverty in India*, prepared under the auspices of the Indian School of Political Economy, Pune, at the instance of the Ford Foundation, from which the above table has been taken, in 1960-61 an annual per capita expenditure of Rs. 170 in rural areas was essential to give a diet adequate, at least, in respect of calories, viz., 2,250* calories per capita per day as estimated by the nutritional experts of the Food and Agriculture Organisation (FAO) of the United Nations. So far as residents of the urban areas were concerned, the nutritional levels within the reach of a rural householder who had an annual expenditure of Rs. 170, could be attained only by those who could afford an annual expenditure of Rs. 271.7.

The Planning Commission accepted Rs. 20 per capita per month or Rs. 240 per capita per annum (at 1960-61 prices) as the minimum desirable consumption standard. Taking into account the difference in the cost of rural and urban living, V. M. Dandekar and Nilkanth Rath suggested Rs. 180 per capita per annum as the minimum for the rural population and Rs. 270 for the urban population both at 1960-61 prices. With these minima, they calculated that, in 1960-61 about 40 per cent of the rural population and about 50 per cent of the urban population lived below the level of minimum desirable consumption.

In concluding an assessment of the decade of the sixties Dandekar and Rath underline the overall deepening of poverty in the following words:

> "During the past decade, the per capita consumer expenditure increased by less than half a per cent per annum. Moreover, the small gains have not been equitably distributed among all sections of the population. The condition of the bottom 20 per cent rural poor has remained more or less stagnant. The condition of the bottom 20 per cent urban poor has definitely deteriorated, and for another 20 per cent of the urban population it has remained more or less stagnant. Thus, while the character of the rural poverty has remained the same as before, the character of urban poverty has deepened further. This is the consequence of the continuous migration of the rural poor into the urban areas in search of

*This figure compares with 2,640-2,650 colories for the United States and 2,840-2,850 for Sweden and Norway. Biological food requirements in India are lower than in the temperate zone, and those in the temperate zone lower than in the cold zone.

a livelihood, their failure to find adequate means to support themselves there, and the resulting growth of roadside and slum life in the cities..."

In a later study, published in the Annual Number of the Political & Economic Weekly for 1973, based on National Sample Survey (NSS) data, Pranab K. Bardhan estimated that, according to the standards of minimum level of living suggested by Dandekar & Rath, the percentage of rural population below the minimum level of living went up significantly from 38 per cent in 1960-61 to 54 per cent in 1968-69 and that of the urban poor from 34 to 46 per cent. In absolute numbers, this means a rise from about 135 million to about 230 million of the rural population living below the minimum level.

Replying to a question on the floor of the Lok Sabha, on August 9, 1972, the then Minister of State for Planning confessed that the number of people living below a basic minimum standard of consumption (that is, on a consumption of less than Rs. 20 at 1960-61 prices or Rs. 45 at 1972-73 prices per month) at the time was just as large as it was two decades ago, and the people living in abject poverty constituted almost half the Indian population. He added that it may take another 30 to 50 years for the poor sections of the people to reach the minimum consumption levels.

On the basis of two equally arbitrary but, in his opinion, quite reliable definitions of a minimum consumption level of living viz. Rs. 240 and Rs. 200, Dr. B. S. Minhas,* lately a member of the Planning Commission, estimated the rural population below the poverty line as given below.

TABLE 9

Percentage and Numbers of People below Minimum Level of Living—Rural India

Year	*Below Rs. 240 per annum at 1960-61 prices*		*Below Rs. 200 per annum at 1960-61 prices*	
	Percentage	*Millions*	*Percentage*	*Millions*
1956-57	65.0	215	52.4	173
1957-58	63.2	212	50.2	169
1960-61	59.4	211	46.0	164
1961-62	56.4	206	43.6	159
1963-64	57.8	221	44.2	169
1964-65	51.6	202	39.3	154
1967-68	50.6	210	37.1	154

* Vide All India Radio Commentary, August 20, 1972 and *Planning and the Poor*, S. Chand and Company (Private) Ltd., 1974, p. 103.

Dr. Minhas drew the following conclusions from his study :

(*i*) Between mid-1950s and 1967-68 the absolute number of people below the poverty line did not undergo any clearly discernible change ; (*ii*) their number seems to fall in good harvest years but shoot up in bad crop years; (*iii*) between mid-1950s and 1967-68, there was a slow but steady decline in the proportion of people below the poverty line. This seems to be the case on either of the two definitions of poverty line.

"In short, after two decades of planned economic development", concluded Dr. Minhas, "approximately two-fifths of the rural people were living in stark poverty."

More than sixty years ago, in 1917, Mahatma Gandhi had gone to the rural parts of Champaran district in the province of Bihar to study the situation created as a result of oppression of the Indian peasantry by the English indigo planters. On his way he observed that many a woman who had come to see him pass by the road which touched or crossed their village, wore dirty clothes. On enquiry he was told that they possessed only the clothes they were wearing, and had none other which could enable them to wash their dirty clothes or even to take a bath. This situation persists till today. The author has seen with his own eyes, not once but a hundred times, in the eastern parts of U.P. and in the State of Bihar, young women and girls putting on only one cloth, viz., the *dhoti* to cover their entire body. Such is the progress that the country has made after more than thirty years of Independence with which many a political leader are completely satisfied. So much so that they would brook no change, not even the talk of a change in the present economic policies of the country which have brought the country to this pass. The main reason perhaps is that they have not seen poverty face to face.

Speaking of the country's poverty, however, our Prime Minister, Shrimati Indira Gandhi, told a *Time* magazine interviewer on December 8, 1972 that "even in the U.S.A., there were pockets of abject poverty". This was an attempt to justify Government of India's failure in this vital regard over a period of 25 years. 'Poverty' is a relative term. The 'poor' in the U.S.A. may be 'rich' according to the standards of India. Writing about 'poverty' in the U.K. in his book, *Party Games* (Hutchinson of London, 1969, p. 144), Christopher Mayhew, M.P., says : "An interesting study of poverty on a Nottingham Council Estate showed that 22 per cent of the families were living in poverty but that 90 per cent of 'poverty' families had television sets and 60 per cent had washing machines." Whereas in India, a recent survey showed that among 73 per cent of the households with an income level of less than Rs. 3,000

per annum, only 15 per cent owned bicycles, 3.5 per cent radios, 2.1 per cent sewing machines and 1.3 per cent electric fans.

With so many benefits and allowances permissible to the unemployed and the disabled in the U.K. and U.S.A., whose national income per capita in 1969 stood at $ 1513 and $ 3814 respectively, there could not possibly be a single person in these countries who was so abjectly poor as to fall short of food, clothing or a house as quite a high percentage of people in India are.

Speaking at a function to present the Hari Om Ashram Trust Award in Service for 1976 in New Delhi, on Nov. 15, 1980, Mrs. Gandhi said : "I spend a lot of time travelling in the country. Particularly in the last three years when I had no official conveyance, I did not see a single case of malnutrition. In fact, children looked to be in better health. Their eyes were brighter and they were better dressed." (vide *Statesman*, New Delhi, dated Nov. 16, 1980)

Now, nothing can possibly beat this observation. Our Prime Minister is not ashamed of telling such a blatant untruth. In the Delhi city itself 26 per cent of the population lives in slums or below the poverty line.

Although in defining the 'poor' the criterion adopted is minimum calorie intake, the poverty line itself (monetary norm) duly takes into account the rest of the consumer expenditure on non-food items like clothing and housing also.

In any classification of incidence of poverty based on calorie requirement, however, it is necessary to allow both for variations of requirements between individuals as well as the variations in the requirements for the same individual from day-to-day if the calculation of poverty line is to be nutritionally meaningful.

In order to take account of these factors, therefore, the Planning Commission has considered age-sex-occupation status of the structure of the Indian population and determined the energy requirements based on the recommendation of the Nurition Expert Group (1968) and arrived at the norms of 2,400 calories per capita per day in rural areas and 2,100 calories per capita per day in urban areas.

All persons belonging to a household are treated either as below the poverty level or above, according as the per capita consumption expenditure in the household is below or above a specified poverty norm. In actual fact this may not be true for all persons within the household who are classified as below/above poverty level.

Notwithstanding its limitations, this was the only feasible method available.

The Planning Commission's latest estimate of the number of people living below the poverty line as of 1977-78 came to 306 million or only slightly less than half of the entire population. It shows that the economic condition of the country has continued to deteriorate during the present decade. The Commission has calculated that the number of these people in rural and urban areas comprised 47.85% and 40.71% of the total population. The estimate is based on the norm of per capita consumption expenditure of Rs. 61.80 and 71.30 (based on the surveys made by the NSSO) for the two groups at 1976-77 prices. The average of the two percentages works out to 46.33 per cent of the total population—a figure which indicated an increase in the number of people below the 'floor' compared to estimates made at the beginning of this decade. In 1967-68, about 40% of the rural sector were included in the extremely poor group. In 10 years more than 50 million people were added to the number of those living in abject poverty, consuming less than 2,400 calories a day in rural areas and 2,100 calories in cities and towns.

Benefits of economic growth did not trickle down as predicted. They were siphoned off somewhere up in the line leaving more people hungry, shelterless, illiterate, diseased and destitute than thirty years ago.

The following table shows the State-wise percentage of the people living below the poverty line in 1972-73 both in the rural and urban areas separately :

TABLE 10

State-wise Percentage of People Living below Poverty Line in Rural and Urban Areas in 1972-73

Sl. No.	*State*	*Rural*	*Urban*
1.	Andhra Pradesh	57.67	43.75
2.	Assam	48.24	33.78
3.	Bihar	55.82	43.45
4.	Gujarat	43.88	34.03
5.	Haryana	21.52	29.94
6.	Himachal Pradesh	*	*
7.	Jammu & Kashmir	36.07	51.63
8.	Karnataka	52.33	45.79
9.	Kerala	57.76	52,69
10.	Madhya Pradesh	61.35	44.83
11.	Maharashtra	53.94	34.32
12.	Manipur	24.73	24.25
13.	Meghalaya	20.64	10.76

(*Contd.*)

(Table 10 Contd.)

14.	Nagaland	N.A.	3.33
15.	Orissa	71.01	43.38
16.	Punjab	21.47	21.84
17.	Rajasthan	47.47	39.26
18.	Tamil Nadu	62.98	52.22
19.	Tripura	42.62	18.70
20.	Uttar Pradesh	52.96	51.59
21.	West Bengal	64.00	35.86
22.	All Union Territories	37.55	26.73
	All India (weighted)	54.09	41.22

*Under scrutiny

Note : At 1977-78 prices, the poverty line worked out at Rs. 65 per capita per month in rural areas and Rs. 75 in urban areas. The corresponding per capita monthly expenditure at 1972-73 prices worked out at Rs. 41 in rural areas and Rs. 47 in urban areas. For estimating the percentage of people below poverty line in each State, the cut-off points in the National Sample Survey data on household consumer expenditure of 27th round (October, 1972 to September, 1973) have been used.

According to replies given by the Planning Minister on the floor of Parliament durirg the budget session of 1981 the number of persons living below the poverty line in 1980 rose to 384 million (including 118 million children below 12 years of age). This number amounted to 55 per cent of the total population of the country which was estimated by the Census Commissioner at 680 million.

MALNUTRITION

"At the moment when India was about to attain her freedom", write Larry Collins and Dominique Lapeirree, "3 million human beings in Calcutta lived in a state of chronic under-nutriment existing on a calorie intake inferior to that given to the inmates of Hitler's death camps."* What Collins wrote for the population of one city of India of pre-independence period holds true even today, 33 years after Independence, for a vast proportion of rural, tribal and urban slum population of our country. There is too little money to provide adequate or balanced diet to the family and therefore a large percentage of our population have to remain satisfied with an insufficient and ill-balanced diet containing preponderance of cereals, sugar and root vegetables.

Food is so scarce (and, therefore, so dear) that according to figures published by the Department of Statistics, Government of India, in March, 1975 nearly two-thirds of the total private consumption expenditures of Indians was devoted to food alone. This pattern of consumption remained more or less static during the decade 1960-61 to 1970-71 for which data are available.

**Freedom at Midnight*, Vikas Publishing House Pvt. Ltd., 1975, p. 232.

A National Survey of food habits conducted by the National Nutrition Monitoring Bureau, and surveys conducted by several other research workers show that an average Indian usually lacks calories, protein, vitamin A, C, riboflavin, minerals and particularly calcium in his daily intake of food. If he gets one component, he does not get another. Forty-two per cent of our pre-school children survive on low calorie diet. The study conducted between 1972 and 1974 covering 5,835 (4,141 rural+1,695 urban) households consisting of 33,261 individuals shows that, in almost all states, only a little more than 50 per cent of the individuals had adequate proteins. It links inadequacy with calorie shortage in all states, excepting in Kerala, Tamil Nadu and Karnataka, where an occasional individual consumed inadequate quantities of protein but had adequate amounts of calories.

The main intake of pulses (*dals* and beans) has been "far below the recommended daily allowance of 70 grams" in all states except in Uttar Pradesh and Madhya Pradesh.

Paradoxically, though this country accounts for as much as a quarter of the world's cattle, it produces only five per cent of the world's milk supply. Even if adults are assumed to require only 10 ounces of milk per day (as against the ideal 20 ounces), the actual availability of milk falls short by more than 50 per cent. Surveys in Madras slums have revealed that destitute families can barely afford Rs. 20 a year for buying milk and milk products. According to official figures, availability of milk (and milk products) in India per capita instead of going up has gone down from 132 grams in 1951 to 110 grams in 1974. These figures are to be viewed against a target of 284 grams (reduced to 210 in 1968) laid down by the Planning Commission.

As Professor Gunnar Myrdal has said, "Indian masses suffer from qualitative nutritional deficiencies that render them defenceless against many health risks, particularly the so-called incipient diseases, and, generally, when alertness and a willingness and an ability to work hard for long stretches of time are needed."

Calorie-protein deficiencies are particularly harmful to small children and to pregnant and nursing women. The lasting damage they do in early life is incalculable. Lack of protein is actually the starting point of senility. The nerve cells and the brain cells are the only cells which do not multiply themselves and senility implies that cells are falling off and dying. For an Indian child amongst the masses, this senility starts even before he is born and goes on into the first years. He does not get enough protein which destroys him. Protein deficiencies decrease the number of brain cells and thwart mental development. The average availability per capita of protein in the country has gone down from 2.15 ounces per day in 1951 to 1.4 ounce in 1974.

Children below five years—the most vulnerable segment from the nutritional standpoint—constitute over 15 per cent of the population in India (as against 8.8 per cent in the U.K. and 10.5 per cent in the U.S.A.).

Surveys carried out by the Indian Council of Medical Research show that the heights and weights of about 90 per cent of pre-school Indian children from poor communities correspond to the lowest and weakest 10 per cent of American children of equivalent ages. Recent National Survey conducted by the consultants in ICDS scheme covering 29,000 pre-school age rural and tribal children revealed that nearly 45 per cent of them were moderately and severely malnourished, with less than 60 per cent of accepted weight for age. Marasmus and Kwashiorkor are most severe forms of calorie-protein malnutrition. ICDS study showed its prevalence rate of about 8 per cent amongst the pre-school age children. Severe malnutrition is associated with high rate of morbidity and mortality amongst these children. Malnutrition reduces the capacity of the children to fight infections. About 10 per cent of our pre-school children are sick all the time in our rural and tribal population.

Lakhs of pregnant women, and children below the age of five, die every year in the country for lack of sufficient nutrition. This is not surprising, for women and children very often get very little food. The little food available is to be given to the man who is working. This is something horrible, but only too true.

The composition of the diet and the nutritional condition of school children and hospital patients indicates widespread deficiencies. The diet is markedly lacking in essential vitamins, viz., A, B complex, C and D, besides calories and protein. The shortage of calcium and phosphorus is also widespread, and in certain areas goitre is endemic owing to the lack of iodine.

The problem of nourishment, thus, is not only a problem of calories, but of a more balanced diet. Heavy reliance on one or two cereals fails to provide the needed balance of protective elements against disease.

Table 11 shows nutritional standards that the people of various countries were able to enjoy roughly at the end of sixties. Among 26 countries, India stood at the bottom.

It is clear that while Indians on the average consume more cereals, availability of sugar, milk, fats and oils per capita is very low as compared with advanced countries, which means that our food lacks greatly in productive nutrients or non-cereal foodstuffs that will not only be rich in protein and vitamins to a substantial degree, but will also provide certain important minerals such as iron, calcium and phosphorus.

It is surprising, indeed, to find that full use has not been made of groundnut flour prepared from groundnut cake after extraction of oil. India produces 55 million tonnes of groundnuts. Similarly, the usefulness of soyabean milk in waging a war against malnutrition is known to us since long, yet little progress has been made in increasing its supply.

Some 7.5 million Indians are blind and malnutrition is the major cause for blindness among children below five, according to a recent survey conducted by the Indian Council of Medical Research. About 4 per cent of pre-school children have sub-normal eye-sight caused by

TABLE 11

Standard of Living : Selected Indicators (Food)

Country	*Year*	*Net Food Supplies per capita*				*Calories per day*	*Protein per day (gms.)*
		Cereals	*Sugar*	*Meat*	*Milk*		
1	*2*	*3*	*4*	*5*	*6*	*7*	*8*
Argentina	1969	259	97	335	338	3,160	105
Australia	1968	256	145	300	640	3,220	106
Austria	1969-70	253	92	211	545	3,230	86
Belgium	1969-70	219	107	213	542	3,230	92
Brazil	1970	272	128	84	195	2,820	67
Canada	1969	183	138	253	662	3,150	97
Chile	1970	321	86	108	231	2,560	66
China	1964-66	387	10	47	9	2,050	57
Denmark	1969-70	189	135	170	720	2,140	89
Egypt	1968-69	565	44	31	135	2,770	80
France	1969-70	219	94	256	630	3,270	103
West Germany	1969-70	189	95	220	567	3,180	83
India	1969-70	384	49	4	116	1,990	49
Israel	1969-70	304	107	155	403	2,990	92
Italy	1969-70	353	74	136	394	3,020	88
Japan	1970	352	73	48	137	2,470	77
Mexico	1964-66	379	109	55	157	2,620	66
Netherlands	1968-69	188	133	159	671	3,030	84
Philippines	1969	362	50	44	54	2,040	53
Sri Lanka	1970	385	62	5	54	2,340	49
Sweden	1970-71	168	114	N.A.	723	2,850	80
Syria	1964-66	456	46	31	152	2,450	69
Turkey	1964-66	474	41	39	219	2,760	78
U.K.	1970-71	200	136	209	592	3,170	87
U.S.A.	1970	176	140	310	689	3,300	99
Yugoslavia	1968	498	66	93	281	3,130	92

Source : India : Pocket Book of Economic Information, 1973 and 1974, p. 256.

Vitamin A deficiency. Answering a series of questions on the subject, the then Health Minister, Dr. Karan Singh, told the Lok Sabha on Feb. 27, 1975 that 14,000 to 15,000 children went blind every year for want of Vitamin A.

According to official sources the number of the blind in the country has now gone up to 9 million of whom 1.8 lakh have lost their sight owing to deficiency of Vitamin 'A' in their food. This was disclosed by Shri Mool Chand Daga, Minister of State for Health, in the Lok Sabha on December 4, 1980.

It is further estimated that 75% of the child population, reckoned at 250 million today, can be classified as 'not healthy' due to major and minor illnesses. Thus these children are poorly fed and have a low chance of living.

For a large proportion of the population hunger is a life-long experience. Chronic hunger induces depression and apathy. In its analysis of the World Food Crisis the Society of German Scientists stated : "The lethargy and shyness for hard work which is sometimes to be observed in the tropics cannot be traced back to the climate or lack of will to work. It is a self-preserving check that is caused by insufficient nutrition. These people are consequently less capable of performing as a work force, are liable to have accidents at work and are threatened by illness. The result for both individuals and the collective societies of the developing countries is a vicious circle of under-nourishment, inadequate work performance and growing poverty."

Needless to add that an improvement in nutritional levels is a primary condition for economic development, for, without it, there can be no improvement in the quality of labour. Thus we find ourselves in a vicious circle : lack of more and better food lowers our physical efficiency which, in turn, limits our productivity of food.

Studies show that the size of the family affects the amount of food available for children. The worst forms of protein-calorie deficiency are found in families with more than four children. The vicious circle of hunger and over-population is apparent : hunger creates higher mortality in children and this means that larger families are needed.

In its leading article dated November 16, 1975 the *Times of India*, New Delhi observed as follows :

> "The sudden or the spectacular event makes the headlines, not the slow and inexorable process. The spectre of malnutrition is a typical case in point. There are as many as 60 million children who are chronically undernourished here. But nobody seems to give a damn about them. There are no crash programmes or other measures for their relief. Indeed, in some ways malnutrition plays greater havoc than drought and famine precisely because it is an unseen enemy. It not only claims the lives of at least one million children each year but stunts the physical and mental growth

of countless more. Besides, health experts have found that there are specific groups which are affected by under-nourishment. Among them are women, who generally eat last, after the rest of the family, and hence eat the least."

Below are given two sickening accounts of misery and poverty from which our people suffer, and which make utter nonsense of the tall claims and professions of our political leadership :

Bangalore, August 7 :

It is 1 P.M.—lunch time for the affluent customers in fashionable restaurants on Brigade Road, South Parade (now called Mahatma Gandhi Road) and St. Mark's Road. It is also eating time for thousands of garbage pickers.

First, dog fights dog for the left-overs dumped into garbage bins. Then, man fights dog in a scramble for what is considered food—cooked and uncooked bones, meat, onion peels, rotten potatoes and vegetables.

Muniyamma, a 36-year old woman, has survived on the garbage food all her life, as had her mother. Now she has taught her 12-year old daughter to do it.

Elsa, another sickly middle-aged woman, also scrounges for garbage every day. She lives on the pavement with her two-year old daughter.

The youth wing of St. Mark's Cathedral Relief Service, called 'Reach-Out', has found that more than 6,700 people live on garbage food in the cantonment area. There must be thousands of others in the other half of this growing city.

Two bins, kept between a prominent restaurant and a popular club, serve many eating houses, a Chinese hotel, and a sweetmeat shop as dumps for a variety of leftovers—vegetarian, non-vegetarian, North Indian or South Indian. Some garbage pickers use wastepaper as fuel to cook meat, fish or vegetables picked from the garbage. (vide The *Times of India*, New Delhi, dated August 8, 1973)

Twenty months later, the *Indian Press* dated April 31, 1975, carried the following report which must have pained every patriotic Indian :

Recycling of waste materials like papers, broken glass, cork and coconut shells and selling of sex are the means of livelihood of thousands of destitute pavement-dwellers of Calcutta.

While 66 per cent of them migrated to the city from different districts of West Bengal because of economic, political and social reasons, 32.2 per cent are from States like Bihar, Uttar Pradesh and Bangladesh according to a survey conducted by the Calcutta Metropolitan Development Authority (CMDA).

About 10,000 pavement-dwellers consisting of 20 per cent of the total were interrogated in the survey.

The survey revealed the shocking and painful ordeal of the adolescents, both boys and girls, who tried to live an honest life but were slowly driven into the clutches of miscreants, pimps and brothel operators, as a result of hunger, dejection and lack of sympathy from authorities.

While an estimated 39.2 per cent of the city destitutes are physically handicapped—lame, blind, deaf or dumb—29.9 per cent suffer from serious chronic diseases like tuberculosis, asthma and cancer. Another eleven per cent are mental cases.

Generally, the destitutes migrate to the city in groups. There are only a few bachelors among them.

While one-fifth of the destitutes live on charities and begging, the others earn their livelihood either by collecting waste materials and casual employment or by selling their sex.

There are innumberable cases happening every year where low purchasing power or low availability of food and lack of adequate raiment and shelter, re-inforced by unemployment, ultimately led to death of innumberable Indians—death by cold, suicide, murder of their own children by parents, etc. etc. which are a shame to any civilized government worth the name.

Studies made by F.A.O. indicate that during the period 1969-74 (the hay-day of green revolution) the number of persons suffering from malnutrition showed a significant increase as given below :

TABLE 12

Incidence of Malnutrition – 1969-74
(No. of Individuals and Percentage of Total Population)

	No. in Thousands		*Percentage*	
	Average 1969-71	*Average 1972-74*	*Average 1969-71*	*Average 1972-74*
India	141214	175162	26	30

Taking the latest case : The *Times of India*, New Delhi, dated 23rd July, 1980 carried the following report :

Suicide by Poverty-hit Family of 4

Jhansi, July 22 (UNI) : Extreme poverty led a family of four members to end their lives.

A. Sahar Ali, with his three daughters aged 4, 6 and 8 years, jumped into a well in Moth Tehsil on Saturday. Their bodies have been taken out of the well.

It is said that Sahar Ali had been unable to feed his daughters.

DISEASE

So far as the health of our people is concerned, it is going down day-by-day. The height of younger generation, the girth of their chest and their weight —all are deteriorating. The army and police recruiting authorities today are not able to find young men as stout and healthy as they used to be in the pre-Independence days. The health of at least 50 per cent of our children born in villages and slums is a distressing sight, mainly because of malnutrition—because their mothers did not get enough protein to eat during the days of their pregnancy and are not able to provide them with nourishing food after they have been born.

It will take a volume by itself to describe the health conditions of our people satisfactorily, but we will content ourselves with giving a summary of a report prepared by Glaxo (India) in collaboration with Central and State authorities of India, which was published in the *Hindustan Times*, New Delhi, dated 10 Nov., 1980 :

> *New Delhi, Nov. 9*—Twenty-seven million Indian villagers suffer from typhoid. There would be 33 million of them in 1990 and 40 million by 2000.
>
> But the number can be cut to 21 million and 19 million, respectively, with improved water supply and sanitation, notwithstanding 15 million annual growth in population, a report of a pharmaceutical company said.
>
> The report, 'Medical Protections (2000 AD)', prepared by Glaxo (India) in collaboration with Central and State authorities and hospitals said that increasing insanitation and absence of clean drinking water are making more people sick.
>
> However, if potable water supply is progressively increased to 75 per cent and sanitation to 50 per cent, the number of typhoid patients in villages will be reduced to 21 million 10 years later and 19 million by end of the century, the report said.
>
> If all children up to three years of age are to be covered against diphtheria, whooping cough and tetanus, they would need 96 million doses of DPT vaccines against 25 million doses currently produced. Demand would increase to 120 million doses two decades later.
>
> Dr. M. Paul Anand, Technical Services Director of Glaxo, told a group of Delhi Journalists in Bombay last week : "Most diseases are water and air borne. We need health measures rather than drugs."
>
> Besides, expenditure on health care compared to other planned expenditure is only one-third of what it was 25 years ago, Dr. Anand said, adding that the major beneficiary had been the urban population.
>
> The report said, seven per cent of the population or 18 million people suffer from heart diseases. They will number 26 million in

1990 and 38 million in 2000. Hypertension patients (10 per cent of population) will increase from 25 million to 38 million and 55 million.

Amoebiasis cases (30 per cent of population) are likely to increase from 210 million to 240 million and 285 million—helimenthiasis (40 per cent of population) from 260 million to 320 million and 340 million, diabetes (2 per cent of population) from 14 million to 19 million and 25 million.

Diarrhoea patients suffering one attack a year total 185 million now. The number will increase to 204 million in 1990 and 242 million in 2000, the report said.

Malaria and tuberculosis are only two among 18 diseases listed in the report whose incidence may fall in the next few years.

2

Role of Agriculture

"From the very beginning it has been my firm conviction that agriculture provides the only unfailing and perennial support to the people of this country."

MAHATMA GANDHI[1]

NEED OF INCREASE IN FOOD PRODUCTION

Living creates wants, which can be satisfied only by the use and consumption of goods, collectively called 'wealth'. By and large, wealth is ultimately derived from land. Raw materials must be produced before they can be processed and distributed, and food which, day by day, is necessary to life, is mostly obtained from land. Exploitation of land, or agriculture in the narrower sense, is thus obviously the primary and basic industry. Manufacture and commerce, however important they may be in the economy of a country, must of necessity occupy a secondary place.

No truer statement of the role that agriculture should enjoy in the economics of a country has been made than by the 'Businessmen's Commission on Agriculture' appointed in 1926 by the National Industrial Conference Board, Inc., and the Chamber of Commerce of the United States of America, to report on the condition of agriculture in the United States and measures for its improvement. While summarizing its conclusions on the question as to how the problem of agriculture has to be approached, the Commission says :

"Agriculture is not merely a way of making money by raising crops ; it is not merely an industry or a business; it is essentially a public function or service performed by private individuals for the care and use of the land in the national interest; and farmers in

1. *Village Swaraj*, p. 92.

the course of their pursuit of a living and a private profit are the custodians of the basis of the national life. Agriculture is, therefore, affected with a clear and unquestionable public interest, and its status is a matter of national concern calling for deliberate and far-sighted national policies, not only to conserve the natural and human resources involved in it, but to provide for national security, promote a well-rounded prosperity and secure social and political stability." (p. 23)

All economic activities which are concerned with creation of wealth or provision of goods and services needed to satisfy human wants, individual or collective, may be classified as Primary, Secondary and Tertiary. Agriculture is commonly grouped with all forms of grazing or animal husbandry, forestry, hunting and fishing, as also sometimes with mining, under the head of primary industries. The group consists of activities which all depend upon the direct and immediate utilization of natural resources. Manufacturing and construction (of buildings, and public works) are grouped together under the head of secondary industries. Tertiary industries (or services) are defined as consisting of all other economic activities, the most prominent of which are commerce and finance, transport and communications, public utilities (electricity, gas and water) as well as public and private services. The actual classification, however, differs with the preferences of the particular economist. For example, some put mining and public utilities under the second head, and building and construction under the third. In that case the three sectors are better called Agriculture, Industry and Services.

Latterly, some economists have divided these activities into four sectors—the primary sector representing agriculture and ancillary activities ; the secondary, manufacturing and mining activities; the tertiary, commerce, finance and ownership of real estate, communications and transport; and the quaternary, the professions, the government services, the domestic services etc. The Government of India has, in its publications, during the last five years or so, begun to divide these activities into five :

1. Agriculture, Forestry and Logging, Fishing, Mining and Quarrying.
2. Manufacturing, Construction, Electricity, Gas and Water-supply.
3. Transport, Communications and Trade.
4. Banking and Insurance, Real Estate and Ownership of Dwellings and Business Services.
5. Public Administration and Defence and Other Services.

The gravest weakness of India since Independence consists in its failure to realise the role or importance of agriculture in the economic

life of our people. This failure has done immense harm to the country. Infatuated with *heavy industry* as it has been, Congress leadership has accorded low priority to agriculture. Whereas in the opinion of all those who have made any study of the problem, eradication of poverty or economic development of the country cannot precede, but will follow, or at best accompany, agricultural prosperity. Agriculture, which includes animal husbandry, fisheries and forests, produces two commodities viz., food for men to eat and raw materials for industries to process.

Food is the first necessity of man, since nobody can live without it. The modern conveniences in the cities, hospitals, roads, education, housing and even clothing can wait, but not food. Next to the people's faith in their Government it is the most important thing for a country—even more important than arrangements for defence of its frontiers. Food shortage is likely to lead to political instability, chaos and uprisings behind the war front, which will demoralise even a most efficient army and make it surrender. Confucius was once asked to enumerate the three things vital to a ruler. The sage replied : "sufficiency of food, sufficiency of military power and sufficiency of popular faith in the ruler". When asked what would he omit if only two were possible, he replied : "Omit military power".

It has been well remarked that, "had the feeding arrangements of Bourbon France given satisfaction, the Bastille would probably never have been stormed". With the population growing by more than 14 million every year and Indian agriculture hardly capable of feeding all the existing population, the real danger of mass starvation is just over time's horizon. In fact, only recently people were dying of starvation over large parts of the country. Mahatma Gandhi once said : "A starving man thinks of satisfying his hunger before anything else. He will sell his liberty and all for the sake of getting a morsel of food. Such is the position of millions of people in India. For them, Liberty, God and all such words are mere letters put together without the slightest meaning".

Whether Communism in India (with a far lower land : man ratio than in the USSR) would be able to solve the food problem earlier than the Democratic system that we have today, will be clear from the confession of failure by the USSR itself. Despite the fact that it possesses a larger land area per capita than the USA, the USSR has, owing to inefficiency of its agricultural system, been a consistent importer of food from the USA since 1963. Despite massive investments during the last two decades, agriculture, because of its ideology of collectivisation, remains the Soviet Union's Achille's heel.

But facts, figures and arguments will not make any appeal to a hungry man : he will not stop to think or argue. He will embrace Communism—in fact, any other 'ism'—which promises 'bread', and will discover his mistake only when it becomes all too late to retrace his steps.

According to the Census Report of 1951, India was normally surplus in foodgrains in or about the 1880s, including both rice and wheat, and the surplus was of the order of 12 lakh tonnes per annum. Figures for subsequent years which are available, and which averaged over five-year period, are given in Table 13.

TABLE 13

Export and Import of Foodgrains by India during 1890-1920

(In lakh tonnes)

Five year period	*Exports*	*Imports*	*Net Exports*
1890-91 to 1894-95	14.5	2.1	12.4
1895-96 to 1899-1900	11.0	4.8	6.2
1900-01 to 1904-05	16.6	6.2	10.4
1905-06 to 1909-10	14.8	9.6	5.2
1915-16 to 1919-20	15.9	11.90	4.0

1915-20 was the last five-year period when undivided India was a net exporter of foodgrains. Thereafter, there was net import during every five-year period as shown in Table 14.

TABLE 14

Export and Import of Foodgrains by India during 1920-1940

(In lakh tonnes)

Five year period	*Imports*	*Exports*	*Net Imports*
1920-21 to 1924-25	11.4	9.8	1.6
1925-26 to 1929-30	15.9	8.3	7.6
1930-31 to 1934-35	18.4	5.7	12 7
1935-36 to 1939-40	20.7	6.9	13.8

The subsequent changes during the World War II and a quinquennium after its cessation may be briefly narrated. During 1940-41 and 1941-42, net imports were cut off, and in fact, India supplied foodgrains to Ceylon and a few other areas ; that is, net exports reappeared for about one year, though the quantity was only 2.9 lakh tonnes.

The Bengal famine occurred during 1943-44 when India received, under international allocations, a net supply of 3.0 lakh tonnes. The next two years were managed with imports of only 7.3 and 9.3 lakh tonnes. The shortage was made good mainly by eating into the carry-over ; the stocks normally carried by farmers, traders and consumers were reduced, thus adding greatly to the difficulties of distribution, and creating the risks of break-down which was the nightmare of 1946.

Thus, it was the Second World War and the Bengal Famine that brought the question of the food resources of India to the forefront. It may, however, be added that the Bengal Famine was not so much due to the actual food deficit resulting from poor crops in Bengal and from the loss of imports from Burma, Siam and Indo-China, as to break-down of transport because of military demands, the inflation of prices because of war time conditions, and the hoarding of grain because of profiteering and insecurity.

Table 15 shows the quantity and value of cereals imported on Government of India's account for a period of five years—1946 to 1950.

TABLE 15

Year	*Quantity in thousand tonnes*	*Value in crores of rupees (C & F)*
1946	2285	76.11
1947	2371	93.99
1948	2887	129.72
1949	3765	144.60
1950	2159	80.60
	13467	525.02

In fact, there has not been a single year since 1946 when we have not imported food. Table 16 shows how, despite 15 years of planning aimed at self-sufficiency in foodgrains (with poor harvest only in two years, 1966 and 1967), largely due to Government's failure to develop irrigation, an import of 190.3 lakh tonnes of cereals worth a huge sum of Rs. 1055 crores (at current value) had to be arranged. In other words, how an under-developed agriculture can stultify industrial development by diverting foreign exchange from industrial raw materials to food imports.

TABLE 16

India's Imports of Foodgrains

(Quantity—Thousand Tonnes
Value—Crores of Rupees)

Year	*Quantity*	*Value (C & F)*	*Value converted at the Unit Price of 1977 : Rs. 1408.00 per tonne*
1	*2*	*3*	*4*
1950	2159	80.60	303.99
1951	4801	216.78	675.98
1952	3926	209.07	552.78
1953	2036	85.95	286.53
1954	843	48.53	118.69
1955	711	33.11	100.11

(Contd.)

(Table 16 Contd.)

1	*2*	*3*	*4*
1956	1443	56.34	203.17
1957	3646	162.39	513.36
1958	3224	120.51	453.94
1959	3868	141.41	544.61
1960	5137	191.84	723.29
1961	3495	129.56	492.10
1962	3640	141.09	512.51
1963	4556	183.60	641.48
1964	6266	266.25	882.25
1965	7462	290.32	1050.65
1966	10358	523.13	1458.41
1967	8672	532.16	1221.02
1968	5694	361.20	801.72
1969	3872	253.01	545.18
1970	3631	207.55	511.24
1971	2054	123.46	289.20
1972	445	24.29	62.66
1973	3614	319.52	508.85
1974	4874	463.04	686.26
1975	7407	1057.90	1042.91
1976	6515	982.24	917.31
1977	555	78.16	78.16
1978	nil	nil	nil
Total	114904	7283.01	16178.3

Source : Bulletin on Food Statistics, 1978—Directorate of Economics and Statistics, Min. of Agriculture and Irrigation.

Note : 1. Col. 2 represents quantity of import in the respective year.

2. Col. 3 represents the value (C & F) of import in the respective year. The sharp rise in the value of imports from 1966 onwards is due to devaluation of the Rupee on 6th June, 1966.

3. Col. 4 represents the value of each year's import converted at the unit price of Rs. 1408 per tonne (C & F) prevailing in 1977.

4. There was no import of cereals in 1978.

It will be seen that with every quinquennium that has passed since 1950 the amount of food imports has consistently risen. Had the huge cost of these imports from 1950 to 1976 which came to Rs. 7283 crores at current prices and Rs. 16178 crores at 1977 prices, gone to the pockets of our own farmers, India would have, as the reader will find in the later pages, taken long strides towards industrialisation, viz., production of non-agricultural goods and services, along with greater employment, during this period, and would not have been almost the poorest country in the world, that it is today.

Concessional imports from the USA, during the period 1956-71, received under the PL-480 Agreement entered into on August 29, 1956, and those received as gifts have been shown separately in Table 17.

TABLE 17

Imports of Foodgrains

Period	*Concessional Imports of Cereals ('000 tonnes)*	
	PL-480	*Other (Mostly Gifts)*
1956 to 1960	12410.4	—
1961 to 1965	21168.5	—
1966 to 1970	23250.6	3857.53
1971	1209.8	475.6
1972	nil	243.3
Total	58039.3	4575.62

Source : B.R. Shenoy : 'India's Food Problem', A.D. Shroff Memorial Lecture, Bombay, 1973, pp. 16-17.

Concessional imports of foodgrains under the PL-480 agreement amounted to 580 lakh tonnes, or 64.7 per cent of total imports made during the period, so that but for the PL-480 programme, India would have faced a long drawn-out famine.

In January 1972, the Government of India stopped all PL-480 and other concessional imports of foodgrains, in terms of a decision taken five years earlier, on 17th January, 1967. Indeed, it fancied that our food position had become strong enough to enable us to stop commercial imports as well. The Government of India, therefore, wrote to the USA that it proposed not to lift the balance of 4.38 lakh tonnes of foodgrains to which we were entitled in terms of the PL-480 agreement of 1st April, 1971 for import of 15.7 lakh tonnes. The reason given was the *Excellent Rabi Crop* prospects.

It soon turned out, however, that the decision to stop concessional imports was premature. It was taken in a fit of over-optimism, based, first, on ignorance of the behaviour of our weather, and, second, on an uncritical assessment of data. For example, the stock of 7.9 million tonnes of foodgrains at the end of 1971 was made up of 6.9 million tonnes of imported wheat and only one million tonnes from internal production. After an unusual succession of favourable weather for a period of five years 1967 to 1971, the harvest in 1971-72 turned out to be a bad one. Production declined by 3.25 million tonnes during the year to 105.17 million tonnes from the peak of 108.42 million tonnes reached in 1970-71. So we had to go in for imports again.

Lastly, nothing could be more shameful than what the following news-item in the 'Times of India', New Delhi dated December 11, 1975 would convey :

"Canada will give 250,000 tonnes of wheat worth Rs. 37.8 crores to India this year as part of its International Food Aid Programme. This good news was conveyed to the Economic Affairs Secretary, Mr. M.G. Kaul, by the Canadian High Commissioner, Mr. John R. Maybee.

India can take the wheat in the form of grain or flour. Canada will make supplies available at ports, and India will make the appropriate shipping arrangements. The entire amount of food aid will be shipped to India in the current financial year.

Canada has almost doubled its wheat aid to India this year. Last year it gifted 138,000 tonnes.

The U.K. has also announced its decision to give 50,000 tonnes of food aid.

Easily the biggest instalment of such assistance is expected to come from the U.S.A., under PL-480. A formal agreement will be signed early in 1976, and the amount of wheat is expected to be 500,000 tonnes or more."

Table 18 portrays the results of our efforts in the direction of food production during the last three decades or so : it presents growth rates of area, and production and yield for major crops for the period 1967-68 to 1978-79, as well as for the earlier period 1952-53 to 1964-65. The two exceptional drought years 1965-66 and 1966-67 have been excluded from the analysis. Productivity (yield) growth rates of foodgrains are higher in the second period for many crops. This is markedly evident in the case of wheat, *ragi* and *jawar*, but it is also evident in a number of other cases. It is owing to this faster growth of productivity that, although the area under cultivation of foodgrain crops grew much more slowly in the second period than in the first, there was no comparable deceleration in production. At the same time, however, it must be admitted that the rate of production of non-foodgrains has come down steeply during the latter period as compared with the earlier, although the rate of productivity is static. As the Indian reader will find to his regret in the latter pages, this performance is very poor, indeed.

Table 19 highlights our achievements in the sphere of food production as converted in the form of statistics of various articles of food that have been available to our people per capita since 1951.

TABLE 18

All-India Compound Rates of Growth of Agricultural Production, Area under Crops and Agricultural Yield during 1952-53 to 1964-65 and 1967-68 to 1978-79

Crop/ Group of Crops	*Production*		*Area*		*Yield*	
	1952-65	*1967-79*	*1952-65*	*1967-79*	*1952-65*	*1967-79*
Rice	3.18	2.64	1.47	0.82	1.68	1.80
Jowar	1.96	2.07	0.40	—1.49	1.56	3.62
Bajra	1.38	0.28	—0.28	—1.26	1.58	1.53
Maize	2.80	—0.04	2.28	0.05	0.51	—0.07
Ragi	2.22	3.98	0.55	1.00	1.66	2.97
Wheat	3.30	6.02	2.31	3.16	0.97	2.76
Barley	—1.62	—1.95	—1.47	—3.36	—0.16	1.39
Cereals	2.74	3.05	0.90	0.41	1.83	2.07
Gram	0.83	0.66	1.15	0.29	—0.31	0.31
Pulses	0.72	0.54	1.35	0.74	—0.62	—0.07
Foodgrains	2.52	2.77	1.07	0.44	1.12	1.84
Groundnut	4.65	1.47	3.78	—0.15	0.84	1.60
Sesamum	—1.24	0.89	—0.24	—0.67	—1.00	1.60
Rapeseed and Mustard	3.28	1.73	2.93	1.07	0.34	0.65
Oilseeds	3.46	1.62	2.80	0.25	0.37	1.26
Cotton	3.32	2.71	1.22	—0.24	2.08	2.95
Jute	4.24	1.51	3.38	0.64	0.83	0.62
Fibres	3.81	2.43	1.56	—0.13	1.85	2.44
Tea	2.20	3.66	0.64	0.57	1.56	3.08
Coffee	7.78	5.29	2.71	4.24	4.94	1.00
Sugarcane	5.91	3.80	4.03	2.96	1.82	0.79
Tobacco	2.96	2.18	1.46	—0.23	1.48	2.43
Non-foodgrains	3.87	2.88	2.31	1.19	1.24	1.25
All crops	2.90	2.81	1.31	0.63	1.21	1.63

Source : 'Economic Survey', 1979-80, Table 2.2.

Note : Growth rates for various groups of crops are based on weights corresponding to the weighing diagram for the triennium ending 1969-70.

TABLE 19

Net Availability of Certain Important Articles of Consumption

Year	Population (millions)	Net production of cereals (million tonnes)	Net imports of cereals (million tonnes)	Per capita net availability					
				Per day (grams)			Per year (kgs.)		
				Cereals	Pulses	Total	Edible oils*	Vanaspati	Sugar (Nov. to Oct.)†
1	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*
1951	363.4	40.10	4.80	334.1	60.8	394.9	2.7	N.A.	3.0
1956	397.3	50.43	1.39	360.5	70.4	430.9	2.5	0.7	5.0
1961	442.2	60.89	3.49	399.7	69.0	468.7	3.2	0.8	4.7
1962	452.2	61.85	3.64	399.0	62.0	461.0	3.2	0.7	5.8
1963	462.0	60.19	4.55	384.0	59.8	443.8	3.1	0.8	5.4
1964	472.1	61.79	6.26	401.0	51.0	452.0	2.7	0.8	4.9
1965	482.5	67.33	7.45	418.6	61.6	480.2	3.6	0.8	5.1
1966	493.2	54.60	10.34	360.0	48.2	408.2	2.7	0.8	5.7
1967	504.2	57.65	8.66	361.7	39.7	401.4	2.7	0.7	5.1
1968	515.4	72.58	5.69	404.1	56.0	460.1	3.4	0.8	4.3
1969	527.0	73.14	3.85	397.9	47.3	445.2	2.6	0.9	5.0
1970	538.9	76.83	3.58	403.1	51.9	455.0	3.0	0.9	6.1
Annual average over 1961-70				392.9	54.6	447.5	3.02	0.80	5.21

(*Contd.*)

(*Table 19 Contd.*)

1	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*
1971	551.2	84.53	2.03	417.5	51.3	468.8	3.5	1.0	7.3
1972	563.5	82.31	(—)0.49	419.5	47.0	466.5	3.0	1.1	6.7
1973	575.9	76.23	3.59	381.2	41.2	422.4	2.4	1.0	6.1
1974	588.3	82.82	4.83	410.1	40.7	450.8	3.4	0.8	6.1
1975	600.8	78.59	7.39	366.7	39.9	406.6	3.3	0.6	5.9
1976	613.3	94.50	6.44	402.5	50.8	452.8	3.5	0.8	6.2
1977	625.8	87.33	0.41	391.2	43.5	434.7	3.2	0.9	6.2
1978	638.4	100.13	(—)1.00	426.6	44.3	470.9	3.8	0.9	7.3
1979 (P)	651.0	104.30	(—)0.9	433.7	44.8	478.5	4.0	1.0	9.8
Annual average over 1971-79				405.44	44.78	450.22	3.34	0.90	6.84
Annual average over 1961-79				398.85	49.97	448.82	3.17	0.85	6.00

(P) indicates Provisional.

* includes groundnut oil, rapeseed and mustard oil, coconut oil, sesame oil, nigeresee oil, sunflower oil, soyabean oil and safflower oil but excludes oil used for manufacture of *Vanaspati*.

† relates to actual releases for domestic consumption.

Source : 'Economic Survey', Govt. of India, 1979-80, Table Nos. 1.11 and 1.13 (except for figures relating to 1951, which have been taken from 'Economic Survey', 1974-75).

Note : 1. Production figures relate to agricultural year, July-June; for example, 1961 figures relate to the production of July 1960-June 1961.

2. Net production has been taken as 87.5 per cent of the gross production, 12.5 per cent being provided for feed and seed requirements or wastage.

That India has suffered from food shortages over a long period is now beyond dispute. But how do we technically define 'food shortage' or estimate its extent ? Most obviously, shortage is the amount of food commodities by which the average rations of an Indian fall short of the standard laid down by the Food and Agriculture Organisation of the United Nations. According to FAO and our Planning Commission, 2250-2400 calories are the minimum amount that are required to maintain an individual in normal health under the climatic conditions of our country.

But as the calorie and nutritional contents of the various cereals and other food articles differ, the shifting preference of consumers for the various commodities renders it difficult to determine the nutritional needs of an individual (and, therefore, of the entire nation) in terms of various cereals or commodities severally or in combinations thereof. There is, however, a way out. Navy and army rations can, with justication, be taken as the measure of a well-balanced and nutritious diet. Also, inasmuch as it is the Government's responsibility to keep its prisoners in reasonably good health, jail rations, though based on a penal dietary code, are also relevant in this connection. It will be found that *even after taking massive imports of food into account*, the food that has been available to our people during the last several decades, falls short both of the army and navy as also jail rations (see Table 20)

TABLE 20

Existing Scale of Rations for Army and Navy

(per man per diet in grammes)

Sl. No.	*Name of item*	*Army*	*Navy*	*Remarks*
1.	Atta	600	600	
	or			
	Rice + *Atta*	400 + 200		
2.	*Besan*	15		
3.	Pulses	90	90	
4.	Edible oil (hydrogenated)	70	80	
5.	Sugar	90	70	
6.	Milk fresh/standard/blended	230 Ml	190	
7.	Meat fresh dressed (with bone)	100	180	
8.	Vegetables fresh	180	160	
9.	Potatoes fresh	110	110	
10.	Fruit fresh, citrus or	50	50	
	non-citrus	100	100	
11.	Onion fresh	60	60	
12.	Tea	8	8	
13.	Salt evaporated	20	20	
14.	Condiment powder	16	16	

Note : The scales of rations to troops/sailors in Peace Areas is subject to 5% cut in respect of units with a strength of more than 200 and 2.5% in respect of those with a strength of 200 and less.

So far as the various classes of prisoners in the country are concerned, the average per capita per day quantity of their rations works out as under :

	Cereals	*Pulses*	*Edible Oils*	*Sugar*
	gm.	gm.	gm.	gm.
'A' & 'B' Class prisoners	520	112	50	51
'C' Class prisoners :				
(a) labouring	619	115	28	18
(b) Non-labouring	520	112	26	16

There are different scales of diet for the sick, juveniles, pregnant and nursing women etc. In addition to the average quantity of rations indicated above, prisoners get vegetables, milk or tea/coffee etc.

Table 21 shows at one glance the figures of the army, navy and jail rations as also the availability of food articles per capita for our people as a whole, averaged over a period of nine agricultural years, 1971 to 1979 which is the best period of our country's agricultural performance. In order to compare the figures of national availability of food with those of the army, navy and jail rations, the figures of rations for the military personnel and the prisoners given in the preceding two tables, have been depreciated in Table 21 by 20 per cent on the assumption that 80 adults consume as much as 100 persons of all ages.

TABLE 21

Availability of Food Articles in India to the People in General, Army and Navy Personnel, and the Prisoners per capita

	Per capita net availability					
	Per day (grams)			*per Year (kilograms)*		
	Cereals	*Pulses*	*Total*	*Edible Oils**	*Vanaspati*	*Sugar (Nov. to Oct.)†*
National per capita availability (annual average : 1971-79)	405.44	44.78	450.22	3.34	0.90	6.84
Army rations	492.0	72.0	564.0	20.16	—	25.9
Navy rations	480.0	72.0	552.0	23.04	—	20.0
Jail rations						
i. Class A & B	416.0	89.6	505.6	18.25	—	18.62
ii. Class C						
(a) Labouring	495.2	92.0	587.2	10.22	—	6.57
(b) Non-labouring	416.0	89.6	505.6	9.49	—	5.24

* 'Edible oil' for defence personnel includes *Vanaspati*.

† 'Sugar' for C class prisoners includes *Gur*.

The low availability of pulses at the national level is alarming when it is realised that, for the Indian masses, most of whom are vegetarians, it is pulses which are the principal source of protein.

It is true that foodgrain production in the country has increased more than 2½ times since planning began in 1951, but it should not be forgotten that our population, too, has, in the meantime, almost doubled, and the availability of foodgrains today per capita remains practically what it was in 1951—well below the requirements of a standard diet. Nor should the painful fact be blurred over that out of the total availability of cereals during the period 1970-79, viz., 1033 million tonnes, 242.25 million tonnes, or 23.5 per cent, consisted of imported foodgrains. 4.9 lakh tonnes of cereals that we exported in 1971-72 was, in a way, a form of aid to Bangladesh (not that our production was surplus to our needs) and 19.5 lakh tonnes that we sent out of the country during the two years, 1977-79, constituted a repayment of debt of wheat which we owed to the USSR.

Further, as a reference to Table 21 would show, the non-cereal part of our people's diet today is far less than the amount required or what is available to the army and navy personnel or even the prisoners. Further, what is alarming is the fact that the availability of pulses (vide Table 19 on Pages 39-40) and milk, ghee or butter per capita is declining almost right since the attainment of Independence. Still further, comparison with the situation as it obtained on the departure of the British has little or no meaning when it is realised that, even at the low levels of consumption that obtained at the time, India had become a net importer of food since the twenties. During a quarter of a century prior to 1947, foodgrain production virtually stagnated with an insignificant (0.11) per cent per year growth rate, while population grew at a rate of 1.5 per cent per year. The result was that the national deficit went on increasing as time passed.

Today (1980), more than 14.0 million mouths are being added every year to the existing population. This number is equal to the total population of Australia and would require more than 2.5 million tonnes cereals per annum @ 480 grams per person per day. Thus, as Table 18 would show, our growth in food production since 1967 till 1979 has only just kept pace with the growth in population. We cannot, therefore, afford to be complacent or indifferent towards the need for continually increasing our food production. Otherwise, the food deficit of the country will soon reach a figure beyond its importing capacity. Whether it will long remain within the exporting capacity of any single country, is a different matter.

The euphoria that is recently developing in the country about our having not only attained self-sufficiency in the matter of food production but even the capacity to export food, is as misplaced as it was in 1971. As in 1971, the stock of 19 million tonnes of foodgrains that the Janata Government of India inherited from its predecessor in March 1977, was all made up of foreign wheat which was imported in the three calendar

years 1974, 1975 and 1976 at a huge cost of Rs. 2646.48 crores. Also, the political leadership of the country must remember that more than 50 per cent of its population today is not able to purchase food to the required degree because of want of adequate purchasing power. Further, that out of every five-year period on the average, the crops are good only for two years : the remaining three years produce ordinary or bad crops. So, we are not yet out of the woods.

It must also not be forgotten that nothing mocks our values and our dreams more than our people's desperate struggle for existence, and that nothing is more poignant than the look of despair in the eyes of a starving child. Nothing could, therefore, be a more patriotic objective for our political leaders than that, within a decade from now, no child will go to bed hungry, that no family will fear for its next day's bread, and that in future the capacities of not a single Indian will be stunted by malnutrition.

Low agricultural production has led to food shortages, malnutrition (already dealt with in Chapter I) and consequent heavy imports (creating balance of payments difficulties). As the reader will gradually find the unsatisfactory performance of the agricultural sector is largely responsible for the harsh fact that since 1964, from the point of view of per capita national income, India had slided down by 26 positions to 11th in 1976 out of a total comity of 125 nations with a population of more than one million each.

Before proceeding further, however, we may examine the possibility of obtaining, or continuing to obtain, food from outside, indefinitely. Food will be obtainable from outside either if an outside source or sources of food are under our political control, so that the economies of food production and supply are irrelevant ; or if, along with raw materials, particular skills are available within the country, so that it is more economical to import food in exchange for manufactured goods than in exchange for raw materials. "Since the beginning of the history of civilization", says the eminent historian, Arnold J. Toynbee, "statesmanship has been trying to find ways and means of conveying food of surplus food-producing areas to areas with no food margin or with a food deficit. The ways and means have to be physical in the first place : the surplus food has to be transported. In the second place, they have to be economic or political or both. The surplus food has to be either bought or commandeered if it is to reach the mouths that need it. To buy requires economic purchasing power ; to commandeer requires political and military power."

There are no outside sources of food, however, which may be under our political control and from which food may be commandeered. Nor are there any vacant or near-vacant fertile lands, left to colonise or exploit

even if we would and could. World conditions are fast changing ; in fact, they have already changed. We cannot, therefore, import food endlessly from abroad as did ancient Rome and Greece or modern Britain and Europe in their hey-day of imperialism.

Remains the other course of exporting our industrial goods, and, on the strength of purchasing power so acquired, importing steadily increasing quantities of food. There are three snags, however, in this course. First, as time passes, countries from which we purchase our food today, with increase in their own population, and likely erosion of their soil, or owing to political reasons, may not be able, or may not like, to sell it to us any longer or may attach impossible conditions thereto. Or, like the USA, they may have no use for industrial goods which India may be able to sell or offer in return. Second, free trade or competition is no longer in vogue anywhere today. Almost all countries are resistant to manufactured goods from outside so far as they can help it and, if they find it necessary, will erect tariff barriers. Third, any product sold by as large and populous a country as India in the world market in sufficient quantity to help her economy measurably, will represent a substantial portion of the world trade in that commodity. It will, therefore, affect seriously the other major countries exporting the same or similar products, and they may be expected to protect themselves by various measures, including possible price reductions. The price of food required by India will, therefore, go up and that of its manufactured products will go down so that increasing quantities of industrial products will have to be sold by us in order to procure the same amount of food. Our economic growth will become dependent upon the rate at which exports can be expanded, but it will not be possible to continually expand exports as food prices will have risen *relatively to all others*. A rise in food prices will lead to a rise in industrial costs and also impede release of workers from agricultural sector for absorption in industries. "It is inconceivable", said Shri C. Rajagopalachari, "that we can, by any process of modernisation, convert India into an industrial country, depending for food on imports from abroad, to be paid for by exports of steel, textiles or sugar or even tea."

Today North America is the biggest granary of the world from which like many other nations we have been importing foodgrains for the last four decades or so. But "with almost exhausted reserves, growing demand and the dependence of the whole world on the one granary of North America", as Jonathan Power and Anne-Marie Holenstein point out in their recent book, *World of Hunger* (Temple-Smith, London, 1976, p. 31), "it needs a drop in production of only a few per cent to create a very dangerous situation. From these facts one can draw the conclusion that, just as the world financial system can no longer count on the dollar as its base, North American agriculture is no longer a guarantee for the security of world nutrition.

"This degree of dependence is frightening, not only because it

concerns the security of many millions of people, but above all because of its implications for power politics. The United States with its large proportion of the world's grain supply has the power to decide the fate of hungry masses in the world. A CIA report argues that this 'could give the United States a measure of power it had never had before—possibly an economic and political dominance greater than that of the immediate-most World Ward II years'. In political terms the same policy can be undertaken with grain which the oil-exporting Arab states practised during the Yom Kippur war with oil. The Secretary of State, Henry Kissinger, and the Secretary for Agriculture, Earl Butz, have not tried to hide the fact that the United States is ready to play off the 'food weapon' against the 'oil weapon'. Her proportion of the world grain market is bigger than the Arabs' share of the energy market."

There are other reasons also for not relying on imported food, e.g., dictates of self-respect, possibility of exporting countries lording it over us, impossibility for any country or groups of countries to supply food to such a large country as India for ever, their inability to send food to us in times of war, and abandonment on our part of the dream of ever being a rich or strong nation etc.

To conclude : all efforts have to be made to increase our own food production so that we are not dependent on the climate and political discretion of the United States, or, for that matter, any other country.

(B) PRODUCTION OF RAW MATERIALS

Besides food, man has other wants or needs to satisfy, e.g., shoes and clothing, house or housing materials, maintenance of health or medical care, education or means of enlightenment, means of communication and transport, as also other aids or equipments which a civilised life may demand, e.g., a watch.

Now, none or hardly any of these means of satisfaction of human wants are available in Nature in the form in which they can be used or consumed by man. Excepting a few food-items like fruits, milk, water and, in some cases, root vegetables and even foodgrains, these means have to be processed or manufactured out of materials that are obtainable directly from land or agricultural crops, forests or animals and even from mines (which are sometimes grouped with agriculture under the head 'primary sector').

Raw materials obtainable from agricultural crops are essential for some industries, like textiles, oil-pressing, rice-milling, flour, jute, sugar, *vanaspati*, tobacco manufacture, etc. Similarly, forestry and animal husbandry make available various kinds of materials like timber, gum, resin, skin and hides, bones etc. which form the base of innumberable industries. And mines produce iron, copper, magnesuim, bauxite and other

metals as also coal and stones which are all essential for the development of capital goods industry in the country.

Thus, in addition to providing food for the entire population, it is mostly agriculture that has to provide continuous and increasing production of raw materials for feeding the wheels of consumer industries.

Consumer industries play a prominent role in the economy of any country, particularly in a dense agrarian economy as ours. Such industries are unable to operate at all or effectively if their necessary material inputs cannot be obtained or if they can be obtained only on ever-worsening terms. Imports of raw materials from outside will lead to still higher prices of finished products—prices which place them beyond the reach of our people at large. Nor will they be able to compete in foreign markets, which will lead to shrinkage in the volume of exports, with the result that even the existing industries in the country will close down, the misery of the people will increase and the balance of payments will worsen.

When agricultural productivity within a country does not increase faster than demand, or (food and) raw materials are not easily and cheaply available from outside, as in due course of time they will not be, the prices of raw materials will rise relative to all others, and industries will not only cease to develop, but will decline. Workers will be thrown out of work and retrogression will set in. More and more men will take to agriculture because, as the reader will find later under given conditions, more men on a given area produce a greater total of (food and) raw materials.

So, the production of raw materials has to be increased. But most of the land as also most of our workers have to be devoted today to production of food crops for bare sustenance. Thus, only a small proportion of land is left for crops that provide raw materials for industries or to export crops for an investment surplus.

The percentage of net cultivated area in the country devoted to non-food crops in the period 1911-16, stood at 17.0, in the period 1948-53, at 19.1 and in 1965-70, at 20.56. However, in the years 1975-76 and 1976-77 the non-food crops accounted only for 19.4% of the total area sown. So that attainment of political independence in 1947 has made little or no difference to the proportion. Nor have any significant steps been taken to improve the quality and quantity of the non-food crops from the existing, limited surface, with the result that even raw materials obtainable from agriculture have had to be imported. To take the example of cotton alone which forms the raw material for clothing—the most essential necessity of man next to food. Till 1971-72 the country was, far and away, the top buyer of long-staple cotton in the world market : even affluent nations like Japan and the U.S., respectively, purchased only a quarter as much as we did. What is worse, almost 90 per cent of the long-staple cotton that India bought from Egypt or Sudan was used for the production of superfine *sarees*, mulls, voils, cambrick, *dhoties* and

poplins for the home market, and not even 10 per cent of it was converted into surperior or blended fabrics for export. There could not be a more obvious case of mismanagement of national resources.

In the years 1950-51, 1960-61, 1965-66 and 1970-71 the value of imported raw cotton came to Rs. 100.1, Rs. 128.8, Rs. 72.8 and Rs. 98.8 crores respectively. During the Third Plan period India imported 3.5 million bales of cotton and 1.5 million bales of jute. Since 1970-71, however, imports of high quality Egyptian and Sudanese cotton have progressively declined—thanks to steadily rising output of superior variety of cotton in the country recently. Only, as recently as on January 31, 1975, however, India entered into an agreement with Pakistan to import 200,000 bales of raw cotton worth Rs. 25 crores in the ensuing year. And owing to a poor cotton crop during the season September 1975-August 1976, India contracted to purchase foreign cotton worth Rs. 140 crores by September 1976.

It may not be known to many a reader that while the acreage of land under cotton in India is by far the highest of any country in the world, its yield is the lowest. Table 22 relating only to a few countries will confirm this statement.

TABLE 22

Average Annual Acreage and Production of Cotton for the three years 1974-77—Selected Countries

Country	*Acreage (000's of acres)*	*Production (lbs. per acre)*
United States	10,759	453
Brazil	5,166	209
U.S.S.R.	7,209	794
China	12,033	441
Pakistan	4,734	242
Sudan	1,088	317
Egypt	1,399	639
India	18,060	142
World Average	77,843	362

The World Bank Mission, which visited India some six years ago in order to examine the state of the textile industry, pointed out that the country could raise its output of cotton fibre from around one million tonnes to 1.5 million tonnes by the end of the Fifth Plan through a phased programme of shifting from low-yielding Asian to high-yielding American cotton and from short to medium and long staple varieties, and by raising the average yield throughout the country from the present one-fifth of the American level to around three-fifths. This will not only save the foreign exchange that will otherwise have to be spent on the import of

around 140,000 tonnes of foreign cotton by 1978-79, but also yield a surplus of around 300,000 tonnes of cotton fibre for export.

(C) PURCHASING POWER OF THE MASSES

While nobody can live without food, the standard of living of an individual or a people will rise only when non-agricultural goods and services for satisfaction of human wants are available to him or to the country in an ample measure. And means and equipment for production of these goods and services will come into existence only when there is a demand from the people for these goods and services. But it is only when there is purchasing power in the pockets of the agricultural workers who constitute the mass of the people in India (and other less developed countries), that a demand for industrial or non-agricultural goods and services will arise. This purchasing power will be derived from increase in agricultural production. The greater the production which is surplus to the needs of the producers and therefore available for sale, the greater will the purchasing power be available to the seller or producer and, consequently, the greater will be the demand for production of non-agricultural goods and services. Inasmuch as, and to the extent, therefore, a developing agriculture will bring income and, thus, furnish purchasing power to the farmers, will it convert them into a ready market for industrial growth. Where the purchasing power of the population cannot be increased, that is, whether surpluses of food production above the farmers' consumption are not available, there cannot be any industrial goods and social services. Even if we are able to transplant all the factories of the USA on to the soil of India, it will make no difference to our economic conditions in case the level of our agricultural production and, therefore, our purchasing power, remains what it is today. For, without an internal market of our own (which, in our present conditions, is proportionate to the surpluses generated by agriculture) these factories will grind down to a halt in no time.

The following table shows the average percentage rates of utilisation of installed capacity in the organised industrial sector during the period 1961-71 :

TABLE 23

Sl. No.	*Industry*	*Periods*		
		1961-65	*1966-68*	*1969-71*
1.	Consumer Goods	46.3	48.6	53.0
2.	Intermediate Goods	64.3	60.9	61.2
3.	Capital Goods	57.6	42.3	42.8
4.	All Industries	53.6	52.1	54.5

Source : 'Economic & Political Weekly', Bombay, Dec. 7, 1974, p. 2027.

While there may be other contributory causes—for example, labour unrest, foreign exchange bottlenecks, the maze of controls, licensing quotas, tariffs, indirect taxes, fiscal disincentives, penalties, etc.—the main factors responsible for under-utilisation of industrial capacity in non-availability of raw materials and low demand for finished products, in other words, low purchasing power of the masses. And these two factors are, in their turn, largely traceable to low agricultural production.

Inasmuch as those directly engaged in working, the soil constitutes an overwhelming proportion of our working population, most of the food that is produced today has to be kept back for personal consumption and only a small proportion reaches the market. It means that, barring a small percentage who are able to produce food surplus to their needs, our vast peasantry, which is living not much above the subsistence level, has little or no purchasing power at its disposal.

If, therefore, India has to survive, the farmers must produce not only for themselves but for the market because it is the marketable supply of foodstuffs, by and large, which provides the purchasing power to the masses and is, thus, a measure of the effective demand for the products of the non-agricultural sectors. It means that the production or availability of industrial goods and social services (and, therefore, the growth of the demand for labour outside agriculture) is limited by the proportion of food production which goes to the market as against food consumed by the food producers themselves.

So, the inevitable condition for the development of non-agricultural resources consists in the availability of surpluses of food production above the farmers' consumption. Where the surpluses do exist, the villages tend to become cities. Where food surpluses are not present, or are not easily available, villages must remain villages, and the cities must remain few. "Wherever the fertility of the soil, or the state of agricultural arts has produced a surplus of food and raw materials beyond the needs of the producers", says Roland R. Renne, "towns and cities have developed."[2] A comparison of the two States of Punjab and Bihar in India will confirm this conclusion : there are more towns or cities in Punjab which produce food surplus to the needs of the farmers, than in Bihar which has little or no food surplus. The same is true of western and eastern U.P.

People moving to the non-agricultural jobs, whether the town or the village itself, must have food. When there is scarcity of food, the Law of Diminishing Returns, as the reader will see later, will compel them to remain on land. With little or no food available in the market, nobody will take the risk of giving up agriculture for the sake of taking to manufacturing or services.

Thus, a dense agrarian economy finds itself in a vicious circle.

2. *Land Economics*, Harper & Harper, 1947, p. 57.

Density of population on land can be decreased (and the standard of living raised) only if a good proportion of the people take to manufacturing. But they cannot take to manufacturing because of the fact of this very density. Those who do so, will be able to get food supplies with difficulty and there will be few purchasers of the products they manufacture. This Gordian knot has to be cut if India is to be saved in the economic sense, and it can be cut only if determined attempts at increasing agricultural production per acre are made. There is simply no other way.

Even the future of cottage industries or handicrafts depends upon the rate at which the income of the farmers in the rural areas is raised. A farmer cannot buy a pair of shoes unless he has first sold away some of his produce in the market : shoes do not grow in the fields.

What is true of industries, is true of services also, especially those engaged in providing education, medical aid, power and public transport. Increase in the farmers' purchasing power leads directly to an immediate and proportionate demand for, and strong response in rural areas to, the provision of schools, hospitals, railways, motor services for the carriage both of goods and passengers, etc. With increase in exchange of agricultural for non-agricultural goods (and one service for another) commerce also begins to flourish.

Ashok Thaper wrote in an article published in the 'Times of India', dated May 22, 1972 :

> "When farmers earn more, then they also spend more. In the process they create new markets and new opportunities for hundreds of blacksmiths, carpenters, masons, weavers, potters, leather workers, utensil-makers, *dhobis*, tailors, cotton-ginners, oil-pressers, dyers, transporters, petty caterers and countless others. In Ludhiana, a population of 1.2 million is now enjoying an economic boom as a result of the prosperity achieved by just 45,000 farmers.
>
> Elsewhere, in Nalgonda, in the command area of the Nagarjunasagar dam, the increase in farm production in recent years is only a third of the levels achieved in Ludhiana. But even there its impact on the non-farm population has been dramatic. In a typical 'wet' village like Nadamannoor in the Miryalguda taluka, for instance, the number of households has shot up from 178 in 1967 to over 280 in 1971. Most of the new arrivals have come from nearby dry villages and many of them are earning twice as much as they did previously."

So that industrialists, transport workers, educationists, traders or businessmen, doctors, engineers and others of their kind automatically spring into existence once agricultural productivity goes up and there is a demand for their goods and services. On the contrary, if our farmers are unable to produce agricultural surplus to feed the factories and the

non-agricultural workers, even the existing market will shrink or disappear altogether.

Agriculture provides purchasing power not only to those directly engaged in it, but to others also who have gone to industries and services depending for existence or maintenance on agriculture. For example, in the USA, although the workers engaged in agriculture in 1950 constituted only 11.6 per cent of the total strength and the percentage came down to 4.2 in 1967, agriculture was instrumental in providing purchasing power to about 50 per cent of the population. Looked at in this manner, the figure of 3.0 per cent in Table 28, showing the contribution made by agriculture to the net domestic product in the USA, did not convey a correct idea of the role of agriculture. Says Louis Bromfield :

> "In general, both the citizens of the United States and of the world think of the United States as a nation whose power and wealth is almost wholly based upon industry. This is logical in view of the fact that the United States produces more of many industrial commodities than the rest of the world put together. It is largely unknown or unrecognised that the total investment in agriculture in terms of land, building, live-stock, machinery, etc. in the United States is larger than the total investment in industry. It is also unrecognised that agriculture provides in one way or another the wages, salaries, and, consequently, the purchasing power for industrial commodities of around fifty per cent of our population. This includes by far the greater part of the small towns and villages whose economy is almost entirely based upon agricultural purchasing power, and many larger cities, such as Omaha, Kansas City, Minniapolis, Des Morris, Memphis and others whose insurance companies, real estate valuers and general markets are largely based upon live-stock and agriculture. There is the whole of the vast meat and food-processing industries, the huge agricultural machinery industry and large segments of the automobile, steel, rubber industries and other industries which are dependent for prosperity and employment upon agricultural purchasing power."[3]

Thus, it is agriculture which has been the greatest performer in the growth rate of the advanced countries. Besides producing food for non-agricultural workers and raw materials for consumer industries, it has created demands for a great many new industries which, in turn, have provided high and well-paid employment.

3. *Vide* an article entitled 'Agriculture in the United States' by Louis Bromfield, Writer, Farmer, Economist, in *Profile of America*, edited by Emily Davie, New York, 1954, pp. 179-80.

(D) RELEASE OF WORKERS FROM AGRICULTURE

A developing agriculture will not only furnish purhasing power to the masses with which to buy the manufactured goods and the services, it will also release workers from agriculture for transference to industrial and tertiary employments. And without such release and transference there can be no economic development of the country or eradication of its poverty. The reason is simply stated thus : most of the products that the primary sector or agriculture makes available, have to be processed by those engaged in the secondary sector with the aid of services provided by the tertiary sector, before they can be used for satisfaction of human needs.

Let us take the example of cloth : there might be any amount of cotton and wool available in a country, but, if there are no artisans or craftsmen, machine-minders, traders and transporters, the country will have to go without clothing of its own manufacture. Similarly, about a watch which is regarded as an essential article, at least, in a civilised society. Supposing a country has iron and other materials required for its manufacture in an abundant measure, but does not have workers equipped with necessary skill and training to convert these materials into a watch, its people will go without one and, therefore, remain poorer to that extent.

It follows, first, that the larger the number of persons engaged in the primary or agricultural sector, the poorer the country, or the lower the standard of living of its population. And, second that the larger the number of persons in a country engaged in the secondary and tertiary sectors of the economy, that is, in the processing of the primary or agricultural products, production of non-agricultural goods and provision of services like education, public health, medical care, power etc., which are required to meet the varied wants of a civilised life, the wealthier the country, or the higher the standard of living of its population.

It is a matter of common sense and daily observation that labour engaged in an industry or a sector of the economy becomes superfluous and tends to move away to other industries or occupations when output per worker engaged in it increases more rapidly than in others, or so greatly that the supply tends to exceed the demand. At the line or point where production exceeds demand, labour shifts may begin in consequence of the impact of accelerating production of the commodities concerned on prices, profits and wages. Resources will move into other trades and industries, to expand production in these other directions.

So that, despite the relative inferiority of agricultural incomes, workers engaged in agriculture today will abandon it only when they have been rendered superfluous, that is, when agricultural production per acre has gone up so greatly that their shift to non-agricultural

occupations makes no difference to total production, that is, food is available to them easily or cheaply in their new surroundings also.

On the contrary, when there is scarcity of food, the Law of Diminishing Returns will not allow the farmers to leave the land or to be released therefrom. According to this law, under given conditions, more men working a given land area result in more total product, and fewer men result in less product per acre and less total product. The truth of this law is well illustrated by the following table :

TABLE 24

Illustration of the Law of Diminishing Returns

No. of men working the land	*Acres of land worked by the total No. of men*	*Total production of the hundred acres in equivalents of bushels of grain*	*Production in bushels of grain attributable to the man in the series who is now considered for the first time*	*Average production per man in bushels*	*Average production per acre in bushels*
1	100	200	200	200.00	2.00
2	100	500	300	250.00	5.00
3	100	900	400	300.00	9.00
4	100	1250	350	312.50	12.50
5	100	1540	290	308.00	15.40
6	100	1780	240	296.67	17.80
7	100	1980	200	282.85	19.80
8	100	2150	170	268.75	21.50
9	100	2300	150	255.55	23.00
10	100	2440	140	244.00	24.40
11	100	2575	135	234.09	25.75
12	100	2705	130	225.42	27.05
13	100	2830	125	217.69	28.30
14	100	2950	120	210.71	29.50
15	100	3067	117	204.47	30.67
16	100	3181	114	198.81	31.81
17	100	3292	111	193.65	32.92
18	100	3400	108	188.88	34.00

Source : Dr. Elmer Pendell : *Population on the Loose*, New York, 1951, p. 37.

Dr. Pendell comments :

"The table shows that, with 18 men working the 100 acres, though they produce relatively little per man, there is relatively high average productivity per acre and a high total production. If 9 of the 18 men are taken off from the 100 acres, the average productivity of the 9 that are left is higher. But the average production per acre and, therefore, the total production are now only about 68 per cent of what they were with 18 men working those 100 acres.

When we reduce the number of men per unit of land, we find that, though the *per capita* productivity of the remaining farmers increases, the total production decreases, that is *per capita* production or availability of food averaged over the total population is reduced, obviously because those who left the villages and moved to the towns for factory jobs would still be a part of the total population and be in need of food. So, if the 68 per cent is an ample supply for all the 18, then, since the men in towns will make useful goods, the diversification of occupations to include manufacturing would be advantageous, provided the factory product could all be sold year after year. But if that 68 per cent of former total production were not enough to go around among both the factory workers and peasants still on the land, then the change would mean still greater poverty, that is, a still lower food consumption."

India's huge population relative to land resources, i.e., our low land-man ratio is, thus, a deterrent to industrialisation or diversification of employments. Because more men under given conditions will produce a greater amount of food from the same area than fewer men, and men must have food above all, they will continue to stick to land rather than move to factories. People leave agriculture and take to manufacturing when food is not only available, but is cheaper than manufactured goods, that is, when for the same amount of skill and energy expended, there is greater return in manufacturing than in agriculture. So, *in a crowded land*, like India, the scantiness of food which results diminishing returns in agriculture, tends to prevent manufacturing. Withdrawal of labour from agriculture (beyond a certain point) will accentuate food shortage, resulting in still higher food-prices. *In a new area, on the other hand*, with a high land-man ratio and, therefore, with abundance of food supplies it is the other way round : diminishing returns in agriculture stimulate manufacturing—because of diminishing incentives for agricultural production owing to this cheapness.

If, therefore, India has to develop economically (which depends upon the number of workers engaged in non-agricultural occupations), lack of land will have to be made good by investment of more and more capital and by continuous improvement of agricultural techniques. *The 'given' conditions under which agriculture operates today, will have to be so changed that production per acre increases, and goes on increasing to the optimum extent possible, but with fewer and still fewer men on the soil.* It is the people no longer needed to work on the land that will provide the labour force for an expanding manufacturing industry, for the services and for the rapidly growing information and knowledge employments.

A continuous rise of productivity in agriculture without which (surpluses of food and raw materials cannot be available and, therefore) labour from agriculture cannot be diverted, thus, emerges as a basic condition of progress in the whole economy.

A continuous rise in agricultural productivity will lead to a continuous shift of owners of under-sized and uneconomic holdings to industry (or other non-agricultural occupations) with the side effect that such holdings will cease to multiply and gradually disappear. It must be remembered that according to the All-India Agricultural Census, 1970-71, 50.6 per cent of the farmers owned a land-holding of less than one hectare each. It is in their own interest that these and other farmers whose land-holdings are uneconomic take to cottage or small-scale industry as a subsidiary or principal occupation. In such cases there will be an increase in the area of land-holdings of the remaining farmers which will increase their incomes, or, in other words, their purchasing power. This increase in purchasing power will lead to increase in demand for non-agricultural goods and services which, in turn, will require more workers. These workers, again, will be coming from agriculture which, in its turn, will increase the area of land-holdings of the remaining farmers. And so on and on.

Food being man's first necessity, its production has, since the dawn of civilisation, been his first or main concern and occupation and, despite development of other necessities and interests, food production or agriculture has till a century ago continued to claim more workers than any other occupation or than should be necessary. This inference is brought out by the next two tables which show that since 1870 in developed countries, a large-scale transfer of population has taken place, away from the primary industries (or agriculture) to the secondary and tertiary industries. Further, that a high average level of real income per head is associated with this transfer of population. The conclusion is inescapable, therefore, that labour in agricultural pursuits has hitherto been comparatively less productive than labour in non-agricultural pursuits. As time goes, and the share of the labour force engaged in the primary or agricultural sector declines relatively to the other two sectors, not only does the total output of the country, but, as both the tables would show, the real income or output per head also rises despite population growth.

To state the above conclusion in other words : in the more developed countries, the share of agriculture in the labour force is low, and those of the non-agricultural sectors are high, whereas the opposite is true of the less developed countries.

The tables further show that while the decline in the percentage of agricultural workers is continuous, the numbers engaged in the secondary sector also, which were initially higher, as time passes, gradually begin to decline relatively to the numbers engaged in the tertiary sector. This is because, although the relative demand for agricultural products falls

TABLE 25

Percentage Changes in Production of Agricultural Workers, Population, National Output and Output per Head during the Period, 1870-1965

Country	*Proportion of the working population engaged in agriculture (excluding women in agriculture) about 1870 and in 1965*		*Per cent changes in total and agricultural employment during 1953-65*			*1913=100*			
	About 1870	*1965*	*Total*	*Agriculture*		*1870*	*1938*	*1953*	*1965*
1	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*
Australia					Population	33.5	143.2	183.0	235.8
					Total Output	23.2	140.7	224.3	377.8
					Output per head	69.3	98.3	122.6	160.2
Belgium	25 (1880)	4.5	8.1	—37.4	Population	66.5	109.2	114.5	123.6
					Total Output	31.8	122.0	159.1	249.7
					Output per head	47.8	111.7	139.0	202.0
Canada	50a(1870)	9.0	30.6	—28.2	Population	47.2	144.3	186.1	245.0
					Total Output	20.1	143.7	336.6	546.6
					Output per head	42.6	199.6	180.9	233.1

(Contd.)

(Table 25 Contd.)

1	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*
Denmark	54 (1870)	12.7	14.8	—27.8	Population	63.3	125.9	145.7	158.8
					Total Output	25.8	160.7	223.5	370.2
					Output per head	40.8	127.6	153.4	233.1
France	43 (1866)	12.7	4.5	—34.6	Population	92.7	100.6	102.2	117.3
					Total Output	51.1	124.0	167.7	301.7
					Output per head	55.1	123.3	164.1	257.2
Germany	36 (1882)	5.6b	19.7	—34.7	Population	61.0	113.4	140.3	162.4
					Total Output	30.4	149.9	205.2	422.4
					Output per head	49.8	132.2	146.3	260.1
Italy	51 (1871)	19.0	12.5	—29.2	Population	75.4	118.6	131.2	142.2
					Total Output	54.8	153.8	197.5	367.0
					Output per head	72.7	129.7	150.5	258.1
Japan	76 (1872)	14.0	20.6	—27.4	Population	71.3D	139.3	168.9	190.2
					Total Output	40.8D	267.6	259.7	761.7
					Output per head	57.2D	192.1	153.8	400.5
Netherlands	29 (1899)	8.5	14.4	—17.9	Population	58.4	141.3	170.9	200.3
					Total Output	45.0	170.3	247.7	443.7
					Output per head	77.1	120.5	144.9	221.5
Norway	49 (1875)	14.3	4.9	—25.4	Population	70.9	120.0	137.5	152.2
					Total Output	40.9aa	202.8	295.4	481.4
					Output per head	56.4bb	169.0	214.8	316.3
Sweden	56 (1870)	9.1			Population	74.1	112.0	127.5	137.6
					Total Output	28.5	154.6	238.5	398.4
					Output per head	38.5	138.0	187.1	289.5

Switzerland	33 (1880)	10.3c			Population	68.5	108.5	126.2	153.8
					Total Output	E	162.6	240.3	419.2
					Output per head	n.a.	149.9	190.4	272.6
UK	19 (1871)	3.0	9.2	—24.9	Population	58.5	111.2	119.1	127.8
					Total Output	43.5	132.5	168.8	244.7
					Output per head	63.5	119.2	141.7	191.5
USA	51 (1870)	4.8	12.3	—39.3	Population	41.0	133.7	164.1	199.4
					Total Output	16.9	163.3	345.0	511.6
					Output per head	40.6bb	122.1	210.2	256.6
USSR	77a(1897)	17.2	29.7	—2.8	Population	52.4	122.5	123.0	149.8
					Total Output	34.9	197.8	325.2	660.1
					Output per head	66.6	161.5	264.4	440.7

a=includes women; b=Federal Republic and West Berlin ; c=1960; D=1879 ; aa=1871 ; E=earlier figure available is for 1890 (58.0 of 1913) ; bb=adjusted from 1871.

Source : Angus Maddison : *The Economic Growth in Japan and the USSR*, George Allen & Unwin, London, 1969, p. xxiv.

Note : In this table, as also in all the tables that follow, women workers in agriculture (including related activities such as forestry and fishing) which is synonymous with the primary sector, have been excluded because of the varying statistical treatment in the census returns of the women members of the farm families in the various countries and, therefore, of the difficulty caused in analysis and comparison of the figures.

According to Adams & Adams : *Men versus Systems*, The Free Press, New York, 1971, appendix, Table I, the rural population of the USSR in 1965 consisted of 106,900,000 persons which came to 45 per cent of the total population. Out of these 90,000,000 (38 per cent) were dependent upon agriculture.

TABLE 26

Variations in Percentage Distribution of Working Population of Selected Countries and per capita Income

Sl. No.	*Country*	*Year*	*Percentage distribution of working population*			*Income per head of population*	
			Primary	*Secondary*	*Tertiary*	*Years*	*Dollars*
1	*2*	*3*	*4*	*5*	*6*	*7*	*8*
1.	United States	1870	50.8	25.1	24.3	1869-78	232
		1880	50.5	25.0	24.3	1874-83	292
		1890	43.1	28.3	28.4	1884-93	355
		1900	38.0	30.6	31.3	1894-1903	411
		1910	32.0	32.1	35.9	1904-13	508
		1920	27.6	34.7	37.7	1920	565
		1930	22.6	31.8	45.4	1930	648
		1940	18.3	33.1	48.6	1940	789
		1950	11.6	37.4	50.8	1950	1064
		1960	6.1	36.9	57.0	1960	2277
		1965	5.1	34.8	60.1	1965	2921
		1967	4.2	35.1	60.7	1967	3310
						1973	5554
2.	Australia	1871	43.9	26.5	29.6		
		1881	38.6	29.8	31.6		
		1891	26.5	36.3	37.2	1891	405
		1901	25.4	34.3	40.3	1901-03	355
		1911	24.8	34.3	41.2	1913-14	414
		1921	23.0	34.4	42.6	1921-22	350
		1933	24.7	28.3	47.0	1933-34	441
		1939	20.5	34.4	45.1	1938-39	524
		1947	16.8	37.6	45.4	1947-48	664
		1954	12.7	41.0	46.3	1952-53	675
		1961	10.2	40.5	49.3		
		1966	8.1	40.7	51.2	1966	1747
						1971	3426
3.	Great Britain (Ireland excluded throughout)	1871	15.0	49.8	35.5	1871	330
		1881	12.3	50.3	37.4	1881	362
		1891	10.4	49.4	40.2	1891	453
		1901	8.7	46.8	43.5	1901	490
		1911	7.8	46.7	45.5	1911	519
		1921	6.7	50.1	47.4	1931	521
		1951	4.5	49.7	46.1	1951	597
		1966	2.7	47.1	50.2	1966	1544
						1971	2503
4.	Belgium	1880	24.5	38.7	36.8		
		1890	18.2	40.5	39.6		
						1895	219
		1900	16.7	43.9	39.4		
		1910	17.6	50.1	32.3	1913	314
		1920	16.0	49.5	34.5	1920	176
		1930	13.6	49.1	37.3	1930	324
		1947	10.9	51.1	38.0	1947	481

(*Contd.*)

(*Table 26 Contd.*)

1	2	3	4	5	6	7	8
		1961	6.3	47.7	46.0		
		1964	4.7	46.2	49.1		
		1967	4.3	44.9	50.8		
						1967	1593
						1971	3346
5.	Canada	1901	43.6	27.8	28.9	1900	408
		1911	40.0	26.6	33.4	1910	552
		1931	32.6	28.2	39.2	1931	432
		1941	29.2	31.8	39.0	1941	678
		1951	18.7	36.0	45.1	1951	834
		1961	11.3	34.5	54.2		
		1966	7.6	34.2	58.2	1966	1990
		1968	8.2	32.5	59.3	1968	2247
						1973	4151
6.	Newzealand	1881	31.9	37.9	30.2		
		1886	32.1	37.5	30.4		
		1891	30.1	35.6	34.3		
		1896	30.5	35.1	34.4		
		1901	29.6	33.1	37.3	1901	334
		1911	27.2	31.3	41.5		
		1921	27.3	27.1	45.6	1925-26	590
		1936	25.2	28.6	45.0	1936-47	745
		1945	20.1	32.2	47.7	1945-46	739
		1956	15.3	36.4	48.3		
		1961	13.5	37.2	49.3		
		1966	11.9	38.6	49.5	1966	1750
						1973	3711
7.	France	1866	43.0	38.0	19.0	1870	143
		1901	33.1	42.0	24.9	1900	231
		1911	30.1	39.2	30.8	1913	266
		1921	28.5	36.6	34.9	1921	348
		1926	26.7	39.4	33.8	1926	391
		1931	24.5	41.0	34.5	1931	363
		1936	24.7	36.1	39.2	1936	361
		1946	25.6	36.4	39.8	1947	442
		1951	20.2	41.4	38.4	1951	505
		1954	19.8	40.0	40.2	1954	812
		1962	14.4	40.8	44.8	1971	3403
8.	Netherlands	1899	28.5	35.9	35.6	1900	329
		1909	24.7	37.1	37.5	1909	372
		1920	21.1	39.6	39.3	1920	366
		1930	18.0	40.6	41.4	1930	439
		1947	16.8	37.4	44.8	1947	434
		1960	9.9	42.8	47.3		
9.	Germany (F.R.)	1882	35.5	37.4	18.4	1883	206
		1907	23.8	50.6	18.3	1907	298
		1925	17.8	48.9	33.3	1925	274
		1933	16.9	47.4	35.7	1933	295

(*Contd.*)

(*Table 26 Contd.*)

1	2	3	4	5	6	7	8
		1950	11.8	49.0	39.1	1950	360
		1961	6.5	52.6	40.9		
		1965	5.4	51.6	43.0	1965	1463
		1967	4.9	50.8	44.3	1967	1519
						1973	5040
10.	Denmark	1901	42.4	27.6	30.0	1903	481
		1911	37.3	27.6	35.1	1911	428
		1921	31.7	28.8	39.5	1921	493
		1930	30.6	30.1	39.3	1930	535
		1940	23,6	32.5	28.0	1940	545
		1952	19.0	38.4	42.5	1951	618
		1960	16.4	37.8	45.8	1960	1049
						1973	5004
11.	Norway	1875	48.8	24.1	27.1		
		1890	45.2	26.7	28.1	1891	145
		1900	37.1	31.6	31.4		
		1910	37.5	29.5	33.0	1913	229
		1920	34.1	31.4	34.5	1920	380
		1930	34.0	28.1	37.8	1930	463
		1960	18.8	37.0	44.2	1960	964
						1973	4115
12.	Japan	1872	76.4	7.5	15.9		
		1887	67.0	13.3	18.9		
		1912	48.0	24.3	27.0	1913	146
		1920	41.3	28.5	30.2	1920	97
		1930	36.2	27.0	36.7	1930	189
		1940	28.6	34.8	36.6	1940	249
		1950	32.6	34.6	21.8	1950	194
		1955	25.8	29.6	44.6	1952	220
		1960	18.9	35.8	45.3	1960	343
		1965	13.7	37.7	48.6	1965	721
						1973	3292
13.	Italy	1871	51.0	32.3	4.3		
		1881	45.8	36.2	4.6		
		1901	48.9	29.9	8.2	1901	132
		1911	45.4	32.0	15.0	1911	154
		1921	46.5	29.0	16.3	1921	146
		1931	41.7	32.6	16.5	1931	160
		1936	40.3	32.5	27.2	1936	168
		1951	34.9	40.2	25.2	1951	250
		1961	23.2	40.0	32.8		
		1965	18.9	44.5	36.6	1965	920
		1967	17.7	44.2	38.1	1967	1075
						1973	2298
14.	Switzerland	1880	32.7	44.8	19.8	1890	230
		1900	27.0	47.5	21.0	1899	245
		1910	22.4	48.6	23.6	1913	293
		1920	21.7	46.8	25.3	1924	346
		1930	19.2	46.2	34.6	1930	431

(*Contd.*)

(Table 26 Contd.)

1	2	3	4	5	6	7	8
		1941	19.9	44.9	35.2	1941	414
		1950	15.4	47.7	36.9	1950	638
		1960	10.4	51.0	38.6		
						1970	2963
15.	Sweden	1900	42.8	23.8	33.5	1900	200
		1910	40.8	30.4	28.8	1910	252
		1920	34.9	35.0	30.1	1920	285
		1930	30.5	35.3	34.2	1930	358
		1940	27.1	37.1	35.7	1938-39	446
		1950	19.3	41.7	39.0	1950	625
		1960	12.8	45.8	41.4	1960	
		1965	9.4	44.4	46.2	1965	
						1973	5596
16.	U.S.S.R.	1926	81.0	5.6	13.4	1928	168
		1939	57.8	17.2	25.0	1938	207
						1973	2030A

Source : For figures upto 1952, Chapters II and III of *The Conditions of Economic Progress* (1957 edition) by Colin Clark, and after 1952 ILO Year Books of Labour Statistics, 1961, 1966 and 1968 and U.N. Statistical Year Books, 1962 and 1974. Figure of GNP at A has been taken from World Bank Atlas, 1975.

Note 1. Per capita income upto 1952 has been given in terms of an I.U. (International Unit) which equals the quantity of goods exchangeable in the USA for one dollar over the average of the decade, 1925-34. After 1952, it has been given in the current value of the dollar.

2. 'Mining' is included in the 'secondary' sector (that is, along with constructive, manufacture, electricity and gas) except in the case of Australia for 1871 and 1881 where it is included in the primary sector.

3. The 'secondary' sector for Italy since 1951 includes Transport and Communications also.

4. The higher figure of employment in the primary sector for Japan in 1950 as compared with 1940 is not an aberration, but a measure of the injury which the Japanese economy suffered during the Second World War, but now more than repaired.

all the time, the relative demand for manufactured goods first rises, and then falls in favour of services directly leading to larger and larger employment in the latter. Along with the shift of workers from agriculture to the secondary and the tertiary sectors, and then from the secondary to the tertiary sector, there is a gradual rise in per capita and, therefore, national incomes also.

The above table shows that the US had the highest income, viz., 3310 dollars in 1967. According to the World Bank Atlas, 1979, however, the US is no longer the world's richest *industrialised* nation on a per capita basis. Switzerland ($ 11080), Sweden ($ 9340) and Denmark ($ 9180) had moved ahead, relegating the US ($ 8750) to the fifth place in 1977.

There are some other countries, however, not mentioned in the tables, where the proportion of workers engaged in manufacturing industries and services is low, yet, their per capita incomes are relatively high. This is due to their fortunate natural resources—endowment (such as oil or mineral deposits). Through production and export of primary commodities, they have exploited the strong advantage which they enjoy in international trade as a means of raising their national income per capita. In recent history, the clearest examples are the petroleum-exporting countries like Kuwait ($ 12690), Saudi Arabia ($ 7230) and Libya ($ 6520).

It does not follow, however, that Kuwait, Saudi Arabia and Libya can be classed as developed countries. The definition of a developed country is based on the attainments of the economic and social systems, not on the extent or amount of natural resources. Per capita product is certainly the main criterion but, according to Simon Kuznets, it should be a product high enough to indicate a relatively successful attempt to exploit the economic potential of modern material and social technology.

It may not be out of place to mention here that excepting Japan, the presently developed 15 to 18 countries are all in Europe or are European off-shoots overseas.

While the above three tables show the percentage distribution of the working force of developed countries in the primary and other sectors of the economy, the following one shows a percentage distribution of the national income or gross domestic product in the three sectors :

TABLE 27

Percentage Distribution of Gross Domestic Product of Selected Countries and per capita Income

Sl. No.	*Countries*	*Years*	*Gross domestic product at factor cost*	*Percentage distribution of gross domestic product*			*Share of primary sector in gross domestic product = Col. 4 × Col. 5 / 100*	*Per capita income in US dollars*
				Primary	*Secondary*	*Tertiary*		
1	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*
1.	USA (100 Million Dollars)	1952	349.4	6	39	54		1,851
		1954	368.5	5	39	55		1,842
		1958	452.9	5	37	59		2,115
		1960	509.0	4	37	58		2,277
		1963	596.3	4	37	59		2,562
		1965	692.1	3	38	59		2,921
		1966	758.6	3	38	59		3,175
		1967	803.3	3	36	60		3,310
		1968	876.0	3	37	61		3,578
2.	Australia (Million Australian Dollars)	1958	11137.0	14	41	44		1,126
		1960	13062.0	13	42	45		1,245
		1963	16162.0	14	41	45		1,472
		1965	18538.0	10	43	47		1,622
		1966	20384.0	11	41	47		1,747
		1967	21612.0	9	42	49		1,807
3.	United Kingdom (Million Pounds)	1952	13757.0	6	45	49		703
		1954	15678.0	5	58	48		788
		1958	20115.0	4	47	47		1,013
		1960	22563.0	4	48	49		1,097
		1963	26826.0	4	46	51		1,303
		1965	30895.0	3	48	52		1,478
		1966	32590.0	3	47	51		1,544
		1967	34386.0	3	46	51		1,586
		1968	36267.0	3	47	52		1,451
4.	Belgium (1000 Million Francs)	1954	391.7	8	42	52		818
		1958	466.4	7	40	52		936
		1960	506.9	7	41	53		1,023
		1963	615.2	7	41	51		1,191
		1965	749.9	6	42	53		1,431
		1966	799.9	5	42	54		1,513
		1967	848.1	5	41	54		1,593
		1968	985.3	5	42	55		1,696
5.	Canada (Million Canadian Dollars)	1952	21344.0	13	40	47		1,323
		1954	22213.0	9	41	50		1,283
		1958	29354.0	7	41	52		1,503
		1960	32336.0	7	39	54		1,534

(*Contd.*)

(*Table 27 Contd.*)

1	2	3	4	5	6	7	8	9
		1963	38697.0	7	38	54		1,602
		1965	45793.0	6	40	54		1,830
		1966	50741.0	7	39	54		1,990
		1967	54166.0	6	38	56		2,085
6.	France	1952	144.8	13	48	41		738
	(1000 Million	1954	160.1	12	46	43		812
	Francs)	1958	244.7	10	48	43		1,013
		1960	301.4	9	48	45		1,013
		1963	411.4	8	47	46		1,322
		1965	489.0	7	49	47		1,528
		1966	531.0	7	49	47		1,642
		1967	571.4	4	48	48		1,752
		1968	624.3	7	48	49		1,927
7.	Netherlands	1958		11	41	48		695
	(Million NZ	1960		11	43	47		
	Dollars)	1963		9	42	50		996
		1965		8	42	49		1,280
		1966		7	42	50		1,366
		1967		7	42	51		1,481
		1968		7	42	51		1,604
8.	Germany (West)	1952	136.5	10	51	40		508
	(1000 Million	1954	158.2	9	52	39		580
	D Mork)	1958	231.2	7	52	41		829
		1960	296.6	6	53	40		1,035
		1963	378.0	5	53	42		1,254
		1965	453.8	4	53	43		1,463
		1966	481.6	4	51	45		1,528
		1967	486.0	4	50	46		1,519
		1968	530.7	4	51	45		1,682
9.	Denmark	1952	24985.0	21	35	43		690
	(Million Kroner)	1954	27618.0	19	37	45		751
		1958	33981.0	16	37	47		888
		1960	48523.0	14	39	47		1,049
		1963	53476.0	12	39	49		1,335
		1965	68291.0	11	40	49		1,683
		1966	75003.0	10	40	50		1,814
		1967	82604.0	9	40	51		1,955
		1968	89844.0	9	39	51		1,960
10.	Norway	1952	18714.0	15	37	48		684
	(Million Kroner)	1954	20598.0	14	39	46		736
		1958	26039.0	12	37	51		871
		1960	29402.0	11	38	51		964
		1963	37364.0	8	38	54		1,205
		1965	45665.0	9	38	54		1,453
		1966	49508.0	8	39	53		1,559
		1967	54404.0	7	38	54		1,697
		1968	58518.0	7	37	56		1,808

(*Contd.*)

(Table 27 Contd.)

1	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*
11.	Japan	1952	4966.6	23	31	46		161
	(1000 Million Yen)	1954	6534.1	22	30	47		188
		1958	9558.2	18	33	50		290
		1960	12832.6	15	36	48		343
		1963	19966.9	12	37	51		576
		1965	25528.3	11	36	53		721
		1966	29279.9	11	36	53		820
		1967	33611.6	11	37	52		959
		1968	40966.9	10	39	51		1,122
12.	Italy	1952	10413.0	22	36	43		286
	(1000 Million Lire)	1954	12118.0	21	36	43		332
		1958	16781.0	18	36	45		478
		1960	19286.0	15	38	47		509
		1963	27679.0	14	39	48		763
		1965	32593.0	13	38	49		920
		1966	35333.0	13	38	50		992
		1967	38540.0	13	38	49		1,075
		1968	41437.0	11	39	50		1,149
13.	Austria	1952	72.4	16	51	33		389
	(1000 Million	1954	82.6	17	50	33		402
	Shillings)	1958	120.2	14	50	36		588
		1960	140.9	12	53	35		681
		1963	176.9	10	51	39		831
		1965	208.9	9	52	38		967
		1966	225.2	9	53	39		1,041
		1967	240.7	9	50	41		1,104
14.	Israel (Million	1952	926.0	10	30	52		756
	Israel Pounds)	1954	1472.0	12	32	55		461
		1958	2859.0	13	32	54		610
		1960	3652.0	11	32	54		915
		1963	6118.0	11	35	55		836
		1965	8570.0	8	34	59		1,101
		1966	9415.0	8	32	62		1,168
		1967	9730.0	9	29	63		1,158
		1968	11398.0	8	33	60		1,147

Source : For column 8, U.N. Statistical Year Book, 1969 ;
For the rest, Year Book of National Accounts Statistics 1969, Volume II, *International Table 3* : Industrial origin of Gross Domestic Product at Factor Cost.

Note : The composition of Primary, Secondary and Tertiary is indicated below :

A—Primary : Agriculture.
B—Secondary : (a) All industrial activity, (b) Construction.
C—Tertiary : (a) Transport and communication
(b) Wholesale and retail trade
(c) Others.
D—Japan : Electricity gas, water and sanitary services are included in Tertiary.
E—Germany (West) includes the Sarr and West Berlin.

It will be seen that as a gradual shift of agricultural workers to non-agricultural occupations has led to an increase in per capita incomes (and, therefore, of the national income) despite a growing population, so has it led to a gradual decline in the share of agriculture and a corresponding gradual increase in the share of non-agricultural sectors, in the national product.

It will, futher, be seen that the relative contribution of agriculture to the national product has gone on declining notwithstanding the fact that *agricultural production has simultaneously gone on increasing in absolute terms.*

The years for which the figures in the immediately preceding two tables have been shown, do not generally coincide. Except for Canada, Denmark, the Netherlands and Sweden (figures for which were only available with effect from the beginning of the present century), the figures in the first table (excluding the USSR) date from seventies of the last century, whereas almost all the figures in the second table begin with 1952. Yet, the conclusions are not affected. For, all the years subsequent to 1952 in the first table show the same trend as the years prior to 1952, and the years subsequent to 1952, though not exactly the same as given in the second table, relate to the same period to which the latter table refers, viz., approximately 1952-1967.

On the strength of all that has been said, and of the statistics given above, the irresistible conclusion is reached that in all the countries which are prosperous or economically advanced today, there has been, over a considerable time past, an increasing shift of workers from agricultural to non-agricultural employments. So that the percentage of agricultural workers has gradually declined and continues to decline.

Further, that as the percentage of agricultural workers gradually declines and, therefore, the percentage of those engaged in industrial and service sectors rises, so, despite its increasing productivity, the proportionate contribution of agriculture to the national welfare steadily declines and the economy prospers, that is, the national income as also the income per capita or the standard of living rises (despite population growth).

Though not at all necessary, still we are giving below a table showing the latest statistics just for the reader's information. Excepting for Germany (F.R.), where the population of agriculture workers has gone up, it confirms the conclusion arrived at in the two preceding paragraphs.

TABLE 28

Gross Domestic Product and Employment by Kind of Economic Activity (% Distribution)

Sl. No.	Country	Year	Agriculture		Secondary		Tertiary		Per capita income in U.S. dollars for 1978
			Employment	G.D.P.	Employment	G.D.P.	Employment	G.D.P.	
1.	Australia	1976	6.7	5	28.8	32	53.4	51	7467
2.	Austria	1978	10.8	5	41.0	42	47.8	45	6739
3.	Belgium	1978	2.9	2	33.3	37	56.3	56	9025
4.	Canada	1978	5.5	4	26.5	31	60.5	54	7572
5.	Denmark	1973	8.3	6	30.5	30	51.1	51	9869
6.	Finland	1976	15.0	9	35.7	36	48.8	47	6090
7.	France	1977	8.6	5	35.2	37	50.9	49	7918
8.	Germany (F.R.)	1978	6.2	3	45.0	49	49.5	48	9278
9.	Hungary	1978	21.6	15	42.8	59	17.5	15	—
10.	Israel	1978	5.9	6	30.8	35	60.3	59	3332
11.	Italy	1977	14.2	8	35.1	43	43.5	47	4118
12.	Japan	1978	11.4	5	34.2	40	52.0	53	7153
13.	Netherlands	1976	0.7	5	20.7	36	59.9	51	8509
14.	Newzealand	1977	10.1	10	34.5	31	52.7	58	5346
15.	Norway	1978	8.5	5	31.5	36	58.4	54	7949
16.	Sweden	1978	6.0	4	32.4	36	59.4	51	9274
17.	U.K.	1978	2.5	2	37.4	36	53.4	49	4955
18.	U.S.A.	1978	3.6	3	30.5	34	62.9	61	8612
19.	U.S.S.R.	1978	—	17	—	62	—	20	—

Source : 'Year Book of National Accounts Statistics', 1979, Vol. I & II, published by United Nations, and ILO Year Book 1979, Geneva.

Note : 1. Total may not be 100 for G.D.P., because import duties in many cases are not included in the reported industrial group.

2. The figures for employment may not end up to 100 because the data pertaining to 'activities not adequately described' and 'persons seeking work for the first time' etc. have not been included.

3. 'Secondary' includes 'Mining and Quarrying', 'Manufacturing' plus 'Electricity, Gas and Water'.

4. 'Tertiary' includes Wholesale and Retail Trade, Transport and Communication and others.

(E) EXPORT OF AGRICULTURAL PRODUCE

Besides producing foodstuffs for consumption of our people and raw materials for feeding our consumer industries, a developing agriculture can produce commodities in quantities that are not only surplus to the needs of the producers but also to those of the entire nation, which can be exported. These exports will provide the country with foreign exchange with which we can finance imports of capital goods for industrial development—capital goods which under any kind of economy, even an economy of the Gandhian conception, a country will necessarily have to have. In fact, agricultural exports have, as a matter of history, generally preceded or accompanied the economic development of many a country in the world. Expanded yield of primary industries created from natural resources has served to finance the import capital equipment during their take-off periods—grain in the USA, the USSR and Canada, timber and pulp in Sweden, dairy products in Denmark and silk in Japan.

Taiwan is poorer than India so far as mineral resources are concerned. Yet it has recently made significant economic advance. It has paid single-minded attention to agricultural development with the result that it is now earning considerable foreign exchange from the export of agricultural products—funds which are now being used to build up the nation's industries. Taiwan has had so much success with this policy that in the past few years it has no longer required developmental aid from the United States.

In India, on the other hand, the value of exports of agricultural commodities (including products of fisheries, forestry and animal husbandry) which worked out at 95.4 per cent of the total exports in 1950-51, has gone on declining with the passing of time—from a figure of 92 per cent in 1955-56 to 82.4 in 1960-61, 82.4 in 1965-66, 65.3 in 1973-74, 50.0 in 1977-78 and 48.0 in 1978-79.

Whereas national interest clearly demands that India shifts its emphasis from industry towards agricultural production so that it would not only be self-sufficient in foodgrains but would also be in a position to earn foreign exchange by establishing itself as a leading exporter of foodgrains.

According to the National Commission on Agriculture the domestic demand for foodgrains in 2000 A.D. will be 205 or 225 million tonnes depending on whether our consumption level is 'Low' or 'High'.

If we are able to produce according to Dr. Shah's Projection III (see chapter 18) and consume foodgrains at the 'higher' level there will still be a surplus of nearly 135 million tonnes, which, if sold in the international market, would fetch us foreign exchange worth at least Rs. 16,000 crores annually.

We should not, therefore, waste our energies on producing imitative

designs and industrial goods to export which we have to shell out every year more than Rs. 300 crores by way of subsidy besides begging at the doors of the industrialised nations to lower their tariffs.

A comprehensive review of the world food situation by the Food and Agriculture Organization is contained in FAO's latest publication entitled, 'The State of Food and Agriculture, 1979'. In the foreword the Director-General of FAO, Dr. Edouard Saouma, reviews the seventies and specifically mentioned 'disappointments' in the U.N. Development decade.

In food and agriculture, the rate of growth of production in the developing world has averaged about 3% a year in the 1970s—a quarter less than the target rate of 4% set for the decade. While a score of developing countries have been able to accelerate their rate of growth to 4% or more, the increase in food production has failed to keep pace with the growth of population in more than half of the developing countries, particularly the poorer ones. The under-nourished in the developing market economies are at least 420 million and continue to increase in number...the increase in food and agricultural production in 1979 was not only marginal but also the smallest since 1972. World cereal production in 1979 fell by about 4% below what was achieved in 1978.

Meanwhile, the incidence of emergencies has been increasing fast. As of mid-February 1980, abnormal food shortages were reported for 26 developing countries, twice as many as at the same time last year, the report says.

Referring to the 4% target for the decade, the report says that while only 20 countries have achieved above-average increase of 4% a year or more, in more than half of the developing countries production increase failed to match population growth. The low rate of production was particularly noticeable in Africa and in the most seriously affected and the least developed countries.

The World Food Council has recently forecast that there is going to be a food shortage all over the world. Also, according to the projection in a study which has been quoted in the latest report on the regional development strategy for 1980s prepared by the Economic and Social Commission for Asia and the Pacific, the cereal deficit for ten developing countries, viz., India, Indonesia, Malayasia, Pakistan, Bangladesh, Burma, Philippines, Republic of Korea, Sri Lanka and Thailand is expected to be around 20.7 million tonnes even if the agricultural growth rate remains at the 'high' level of 3 per cent to 5 per cent per annum.

The opportunity must, therefore, be seized right now to build up a potential for food production and exports. This may look rather unorthodox to those brought up on traditional views of increasing industrial production, capturing foreign markets with non-traditional goods, making agriculture merely subserve industry with higher value added. But realities should compel us to take a totally different view.

3

Static Economic Conditions of India

On turning to India—the object of our concern as also our fond hopes—we find a trend very different from that of other countries. A look at Table 29 shows that despite an impressive development of the large-scale manufacturing and infrastructure sectors, the share of agriculture in the work force has not diminished at all. It was 72 per cent in 1911, 72.0 per cent in 1931, 72.8 per cent in 1951 and 72.0 per cent in 1971. In almost all countries economic development is associated with a significant decrease in this share. According to the Planning Commission, even during the decade 1965-75 the share declined in thirteen Asian countries (including Pakistan and Bangladesh). In India, however, a fairly rapid growth of investment in the non-agricultural sectors during the last twentyfive years of planned development has not made any noticeable impact on the distribution of the work force. For six decades the share of mining and manufacturing in the work force has stuck around 9 to 10 per cent and that of the tertiary sectors around 17 to 19 per cent. The inference is clear : employment growth in these sectors has been insufficient to absorb an increasing proportion of the labour force.

Table 30 shows the detailed break-up of occupational distribution of India's working force according to the Census Reports of 1961 and 1971.

The 27th Round data of the National Sample Survey given in Table 31 shows a somewhat different distribution of the working population in 1972-73. The survey is based on the reported activity of each worker during the survey week while the Census-based distribution is based on the reported main activity over a year. Thus, a worker classified as engaged in agriculture in the Census may well be placed in some other sector in the weekly status distribution. It will be observed that the proportion of workers engaged in agriculture turns out to be less (69 per cent) in the weekly status distribution than in the Census distribution (72 per cent). Whereas the share of mining and manufacturing is the same in both the distributions, that of other sectors is 21 per cent in the weekly status distribution and 18.1 per cent in the Census distribution. It thus appears

TABLE 29

Distribution of the Employed Population, 1911-1971

Census Year	Agriculture		Mining & Manufacturing		Others		Total	
	Number (Millions)	Percentage	Number (Millions)	Percentage	Number (Millions)	Percentage	Number (Millions)	Percentage
1911	88.20	72.3	11.96	9.8	21.84	17.9	122.00	100
1921	87.22	73.1	10.80	9.0	21.48	17.9	120.00	100
1931	89.23	72.0	10.79	8.7	23.93	19.3	124.00	100
1941	89.34	74.0	11.13	9.2	20.33	16.8	121.00	100
1951	101.92	72.8	13.02	9.3	25.06	17.9	140.00	100
1961	119.1	71.94	16.6	10.3	29.8	17.76	165.50	100
1971	129.9	72.01	17.8	9.90	32.7	18.09	180.40	100

Source : For 1911 to 1951 'Census of India', 1961, Monograph No. 4, p. 25.
For 1961 and 1971 adjusted data of the two Censuses, 1961 and 1971, a resurvey conducted by the Registrar General on economic questions of both the Censuses on a sample basis around the period December, 1971 to July, 1972 with a view to preparing comparable estimates of workers. The need for a resurvey arose because of the differences in the identification criteria of workers and non-workers between the two Censuses.

TABLE 30
Distribution of Workers by Industries, 1961 and 1971

Industry	March 1, 1961			April 1, 1971		
	No. of workers (in thousands)		Percentage	No. of workers (in thousands)		Percentage
1. Agriculture	118286	119098	71.45 71.96	129161	129890	71.61 72.01
(i) Cultivators	84601			78177		
(ii) Agricultural labourers	27918			47489		
(iii) Other agricultural and allied activities	5767			3495		
2. Forestry and Logging	268		0.51	143		0.40
3. Fishing	544			586		
4. Mining and Quarrying	849		0.51	923		0.51
5. Manufacturing	15775	18463		16907	19889	
(i) Registered	3667			5045		
(ii) Unregistered	12108			11862		
6. Construction	2439		11.15	2447		11.02
7. Electricity, Gas and Water Supply	249			535		
8. Transport, Storage and Communications	2917		1.76	4401		2.44
(i) Railways	974			1167		
(ii) Transport by other means	1643			2737		
(iii) Storage	27			41		
(iv) Communications	273			456		
9. Trade, Hotels and Restaurants	7750	24211	4.68 14.62	9028	25270	5.00 14.02
10. Banking and Insurance	257		0.15	561		0.31
11. Real Estate and business services	138		0.08	307		0.17
12. Public Administration and Defence	3288		2.00	5023		2.79
13. Other Services	12778		7.70	10351		5.74
Total :	165538		100.00	180373		100.00

Source : National Accounts Statistics, 1970-71 to 1975-76 (Jan. 78), p. 126.

TABLE 31

Industrial Distribution of the Employed Population on the Basis of Weekly Status, 1973

No.	*Industry Division*	*Employed population (millions)*	*Percentage*
1.	Agriculture and Allied Activities	152.30	69.4
2.	Mining and Quarrying	1.02	0.5
3.	Manufacturing	20.52	9.3
4.	Electricity, Gas and Water	0.57	0.3
5.	Construction	7.84	3.6
6.	Trade and Commerce	11.98	5.5
7.	Transport, Storage and Communication	4.18	1.9
8.	Services :		
	(a) Financial, Insurance and Business	1.14	0.5
	(b) Community, Social and Repair	17.25	7.9
9.	Activities not adequately defined or not recorded	2.70	1.2
	All Divisions :	219.50	100.0

Estimates are based on the 27th Round (1972-73) data of National Sample Survey. The figure for electricity, gas and water is the estimated recorded employment, as the NSS figure was lower. The figure for mining and quarrying has been scaled down to accord with other sources of information, viz., Census and recorded employment. The number in 'activities not adequately defined or not recorded' has been consequently adjusted to keep the total employed population unchanged.

that many a worker in agriculture temporarily shifts to miscellaneous tertiary activities in different parts of the year.

According to the distinguished economist, Colin Clark, the percentage distribution of labour force among the three major sectors would stand as follows :

TABLE 32

Year	*Agriculture*	*Industry*	*Share in total force (%)* *Service*
1881	50.7	36.3	12.7
1901	70.4	13.9 (11.5)	15.7
1911	73.6	12.6 (9.9)	13.8
1921	74.5	11.8 (9.6)	13.6
1931	74.1	11.9 (8.3)	14.0
1951	69.1	13.6 (10.4)	17.3

Source : Colin Clark : *The Distribution of Labour between Industries, Conditions of Economic Progress*, Macmillan and Co. Ltd., London, 1960, Chapter 9, pp. 510-520.
ILO : Year Book of Labour Statistics 1977, Geneva, pp. 90. 157.

Note : The above figures relate to male workers only. 'Industry' includes mining, construction, manufacturing, electricity, gas, water and transport & communications. The figures in brackets include mining, manufacturing, electricity, gas and water alone.

According to this table the percentage of workers engaged in agriculture shot up from 50.7 per cent in 1881 to 70.4 per cent in 1901, that is, by 19.7 per cent. And that of industry went down from 36.3 per cent to 13.9 per cent during the same period, viz., by 22.4 per cent. Although Colin Clark concedes that the data on which he relied, are 'very' obscure, he gives two plausible explanations in support of his statistics :

> "Railway building was started rather late in India, and, in 1881, a good deal of the country was still dependent on primitive methods of transport and communication. Transport costs were so high that most districts had of necessity to be economically self-contained, which required the employment of large numbers of handicraftsmen of different kinds. As modern means of transport and communication spread through the country, they effected a drastic economic change, greatly turning the terms of trade in favour of agriculture. Very large numbers of handicraftsmen were displaced by cheap manufactured goods, at first from abroad, but to an increasing degree manufactured in the large coastal industrial cities ; while cheap transport opened up lucrative export markets to the agriculturists, whose numbers were further increased by the large-scale irrigation works commenced in the 1880s. (India at that time,—not, of course, now—had a large net export of farm products)."

There can be no doubt that railway tranport as also mechanical road transport in the modern world brings about the greatest relative reduction in the costs of transport, especially of heavy and bulky goods. Its effects upon agriculture are even more immediate than upon industry : it becomes feasible to transport away from the producing areas even comparatively low-valued crops. From the proceeds of these sales, the Indian cultivator was able to buy numberous cheap manufactured goods, and dispense with the high-priced products produced by the village weavers and other craftsmen, who were thus forced to seek urban employment, or remain persistently under-employed.

Colin Clark's arguments about the cheapness of the railway transport as compared with the indigenous system of bullock-carts, and the cheapness of goods produced by mechanised industries as compared with goods produced by handicrafts, are unassailable, indeed. But his opinion that half the people of India were engaged in domestic industry and other non-agricultural occupations in 1880 is not borne out by facts. As a matter of historical record India had been reduced virtually to the status of an agricultural country much earlier.

The East India Company, a trading concern of Great Britain, had acquired a political foothold in Bengal in 1757. By fraud and corruption of its functionaries and lack of patriotism on the part of our countrymen the Company became the over-lord of India by 1857 when its political authority was taken over directly by the British Government. The commercial policy of this Company towards India in the eighteenth and the earlier years of the nineteenth century was the same which Great Britain had then pursued towards Ireland and towards her Colonies. Endeavours were made to repress Indian manufactures and to extend British manufactures. The import of Indian goods to Europe was repressed by prohibitive duties ; the export of British goods to India was encouraged by almost nominal duties. The production of raw material in India for British industries, and the consumption of British manufactures in India were the two-fold objectives of the commercial policy of England. This policy was pursued with unwavering resolution and with fatal success; orders were sent out to force Indian artisans to work in the East India Company's factories; Company's functionaries engaged in commerce were legally vested with extensive powers over villages and communities of Indian weavers ; prohibitive tariffs excluded Indian silk and cotton goods from England ; English goods were admitted into India free of duty or on payment of a nominal duty.

Asked by the Committee of the House of Commons in 1813 if Hindu women were not slaves to their husbands, Sir Thomas Munro who had served the East India Company in this country for a period of 27 years, 1780-1807, replied : "They have as much influence in their families as, I imagine, the women have in this country (England)". And asked if the civilisation of the Hindus could not be improved by the establishment of an open trade, he gave that memorable answer which

has often been quoted and will bear repetition : "I do not understand what is meant by the civilisation of the Hindus : in the higher branches of science, in the knowledge of the theory and practice of good government, and in education which, by banishing prejudice and superstition, opens the mind to receive instruction of every kind from every quarter, they are much inferior to Europeans. But if a good system of agriculture, unrivalled manufacturing skill, a capacity to produce whatever can contribute to convenience or luxury ; schools established in every village for teaching reading, writing and arithmetic ; the general practice of hospitality and charity amongst each other ; and, above all, a treatment of the female sex full of confidence, respect, and delicacy, are among the signs which denote a civilised people, then the Hindus are not inferior to the nations of Europe ; and if civilisation is to become an article of trade between the two countries, I am convinced that this country (England) will gain by the import cargo."[1]

Writing five years after the date of the Parliamentary Inquiry of 1832, Montgomery Martin described and condemned the commercial policy of the time in the severest terms :

> "Since this official report (Dr. Buchanan's 'Economic Inquiries in Northern India') was made to Government, have any effective steps been taken in England or in India to benefit the sufferers by our capacity and selfishness ? None ! On the contrary, we have done everything possible to impoverish still further the miserable beings subject to the cruel selfishness of English commerce. The pages before the reader prove the number of people in the surveyed districts dependent for their chief support on their skill in weaving cotton etc. Under the pretence of Free Trade, England has compelled the Hindus to receive the products of the steam-looms of Lanchashire, Yorkshire, Glasgow, etc., at mere nominal duties while the hand-wrought manufactures of Bengal and Bihar, beautiful in fabric and durable in wear, have had heavy, almost prohibitive, duties imposed on their importation to England."[2]

The British manufacturer, in the words of the historian, H.H. Wilson, "employed the arm of political injustice to keep down and ultimately strangle a competitor with whom he could not have contended on equal terms" ; millions of Indian artisans lost their earnings ; the population of India lost one great source of their wealth—a source second only to agriculture.

As Romesh Dutt, C.I.E., had pointed out in the Preface to his monumental work, *The Economic History of India* (Victorian Age),

1. *The Economic History of India* (1767-1837) by Romesh Dutt, Volume I, First Indian Edition, April, 1960, pp. 185-86.
2. *Eastern India*, by Montgomery Martin (London, 1838), Vol. III, Introduction,

pp. vii-viii : "*When Queen Victoria ascended the throne in 1837, the evil had been done.* But nevertheless there was no relaxation in the policy pursued before. Indian silk handkerchiefs still had a sale in Europe, and a high duty on manufactured Indian silk was maintained. Parliament inquired how cotton could be grown in India for British looms, not how Indian looms could be improved and Select Committees failed to find out how Indian manufactures could be revived. *Long before 1858, when the East India Company's rule ended, India had ceased to be a great manufacturing country. Agriculture had virtually become the one remaining source of the nation's subsistence.*"

If official proof of the state of India's economy in 1880 was still needed, it is provided by the following observation made in its report by the First Famine Commission (1880) which was appointed by the British Government after large parts of the country had been devastated by famine in the preceding years :

> "At the root of much of the poverty of the people of India, and of the risks to which they are exposed in seasons of scarcity, lies the unfortunate circumstances that agriculture forms almost the sole occupation of the mass of the population, and no remedy for present evils can be complete which does not include the introduction of diversity of occupations through which the surplus population may be drawn from agricultural pursuits and led to find the means of subsistence in manufactures or some such employment."[3]

This conclusion is confirmed by another authority, a Nobel-prize winner, Simon Kuznets, who held that the proportion of workers engaged in agriculture in India, as the following table shows, had already reached a figure of 74.4 per cent in 1881.

TABLE 33

Long Term Changes in Shares of Major Sectors in Labour Force

Year	*Share in total labour force* (%)		
	Agriculture	*Industry*	*Services*
1881	74.4	13.8	11.8
1901	72.9	13.6	13.5
1951	72.7	12.2	15.1

Source : Simon Kuznets : *The Economic Growth of Nations*, Harvard University, 1971, Table 38, pp. 250-53.

Note : 'Agriculture' predominantly includes agriculture along with forestry, fisheries and hunting. Industry includes mining, manufacturing, electric power, gas, water and construction. 'Service' sector includes transport, storage and communications, as also trade, banking, insurance, income from real estate and public and private services of various kinds.

3. *The Economic History of India* (1757-1837) by Romesh Dutt, Vol. I, First Indian Edition, 1960, Second Reprint April 1970, p. 199.

The reader has seen in the previous pages that in the developed countries the general decline in the share of agricultural sector in the national product was accompanied by an equally general long-term rise in per capita product. But in India, although per capita product failed to rise significantly, the share of the agricultural sector in national product declined quite markedly. K.M. Mukherji[4] has summarised the results of his study over a long period as follows :

TABLE 34

Period	*National income per capita (1948-49 rupees)*	*Percentage share of agricultural sector in national income*
1900-04	222	81.2
1925-29	273	63.5
1950-52	272	48.7

It will be seen from Table 34 that while the share of the agricultural sector in the national income had declined by 40% from 1900-04 to 1952-54 the per capita income in contrast to developed countries showed a rise of 22% only. Further that, as we have already seen in Table 30, the share of the primary or agricultural sector in labour force, instead of going down, stands where it did at the beginning of the century. This combination of the constant share of the agricultural sector in labour force and its declining share in total product implies that product per agricultural worker was actually falling. A startling conclusion, indeed, but one which is difficult to challenge. *As the reader will see in a later chapter, this situation has, however, in a sense, now somewhat improved.* The per capita national income derived from agriculture obtaining at the beginning of the fifties, instead of declining, has tarried round about the same figure during the last three decades. *It is a different matter though that the per capita national income derived from industry during the period of 28 years, 1950-78, has more than doubled.*

Table 35 shows that, compared with the primary and secondary sectors combined (with transport, communication and trade counted as part of tertiary sector) there is a rapid increase in the percentage share of the tertiary sector in the net national product since 1950-51. As a corollary the ratio of non-material product or the value of services rendered by the tertiary sector during a period of 28 years, 1950-78, compared to the value of the total material product or wealth produced by the primary and the secondary sectors combined, has steadily risen since 1950-51.

4. *Levels of Economic Activity and Public Expenditure in India*, Asia Publishing House, Bombay, 1965.

TABLE 35

Year	*Percentage share of material product in net national product*	*Percentage share of non-material product in net national product*	*Ratio of Col (3) to Col (2)*
1	*2*	*3*	*4*
1950-51	73.4	26.6	0.36
1960-61	71.3	28.7	0.40
1970-71	70.4	29.6	0,42
1973-74	68.6	31.4	0.46
1974-75	67.5	32,5	0.48
1975-76	68.1	31.9	0.48
1977-78	67.5	32.0	0.48
1978-79	66.9	33.1	0.50

Unlike other countries, however, this rising ratio of the share of the tertiary sector is not a sign of economic progress. Decline in the shares of the primary and secondary sectors in the net national product as compared with that of the service sector reflects a rise in the living standards of a country only when the basic consumption needs of the entire population were already being met, but not in an extremely poor country like India in which nearly half the people do not have enough to eat. Here, a percentage rise in the share of the service sector merely shows that the financial resources have been shifted from productive to unproductive channels at a rate not justified by the overall growth rate of the economy. In fact, the reason for gradual rise in the share of labour force in the tertiary sector in our country lies in the use of the service sector by the Government as a refuge for the inadequately employed labour force.

While the rate of growth of material wealth in the primary and secondary sectors combined, during the period 1960-75, came to 2.6 per cent only, during almost the same period (1961-76), the bureaucracy as a whole, that is taking all the employees of the Central and State Governments, Quasi-Government* establishments and Local Bodies together, grew at the rate of 6 per cent. It is this contrast between the rate of expansion of the bureaucracy and the rate of growth of the material wealth of the country which has created an imbalance between commodity production and services, and constitutes one of the main reasons for a rise in prices.

* The Quasi-Government establishments comprise organisations that are wholly or substantially owned or controlled by the Government (whether incorporated or not), such as Life Insurance Corporation of India, State Bank of India, Reserve Bank of India, Nationalised Banks, Hindustan Steel Ltd., Port Trusts, Indian Airlines, Air India, etc., etc.

"In a developed economy", point out Jonathan Power and Anna-Marie Holstein, "an expanding tertiary sector is a sign of progress—services are the harvest of economic achievement. Quite the reverse in Latin America, Asia and Africa—services are parasites drawing odd coins from the casual passage of wealthier pockets. Shoe-shine boys, sellers of ticky tacky, messages, cigarette vendors, tourist touts, porters eke out a living, contributing only marginally to economic development. The proportion of the non-agricultural labour force engaged in services in Latin American countries is between 60 to 70 per cent, in Europe it is between 40 and 50 per cent. And in 1910 at a time when Europe had a general level of income equivalent to Latin America in 1960, the tertiary sector employed only 22-23 per cent of the active population."[5]

So that Karl Marx was in the right when he said that capitalism had a tendency to 'reduce as much as possible the number of those working for a wage in the production sphere and increase the number of workers in purely service industries (*vide* F. Mehring : Karl Marx, p. 350).

In the light of this discussion, it would seem, therefore, that the practice in communist countries of excluding the services or tertiary sector as a source of income, is, perhaps, a better method of assessing the real state of a nation's economy than the one that India has adopted from the Western countries

5. *World of Hunger*, Temple Smith, London, 1978, p. 74.

4

Agriculture vis-a-vis Industry

Economic stagnation inherited from the last days of the Moghul rule continued throughout the British era, and, by the time the foreigner was driven out in 1947, the economy had reached a stage where a considerable proportion of India's inhabitants went about hungry in the physical sense and many more lived below the poverty line. Not only that : whatever little agricultural surplus there was, was being skimmed off by the foreigner, the landlord and the money-lender instead of being chanelled into industrial growth. The priorities for planning in India on the advent of Independence, therefore, should have been clear and evident to any tyro saddled with responsibility in public life or administration of the country. Agricultural development was entitled to priority No. 1, but fascinated as he was by Soviet achievements, if not the Communist ideology, Pt. Jawaharlal Nehru gave preference to heavy industry over agriculture. That is why, again, when his thoughts turned to agriculture, he advocated large-scale co-operative farms operated by large machinery, and state trading in foodgrains.

Pt. Nehru went on a visit to China at the end of October, 1954. Within 4 days of his return home, he made his first statement on 'socialism' after 7 long years of silence. Without even as much as consulting the Cabinet, the Planning Commission or even the Working Committee of his own party organisation, he delivered himself before the third meeting of the National Development Council on November 9, 1954 as follows :

> "I think we should be clear about the picture we are aiming at. The picture I have in mind is definitely and absolutely a socialistic pattern of society. I am not using the word in a dogmatic sense at all, but in the sense of meaning largely that the means of production should be socially owned and controlled for the benefit of society as a whole."[1]

1. Third Meeting of the National Development Council, Planning Commission, New Delhi, 1955, p. 4

In the following December, with the large Congress majority to support him in Parliament, Nehru had no difficulty in making the two Houses of Parliament adopt the 'Socialistic Pattern of Society' as the goal of Indian democracy. Soon, at the annual session of the Congress Party at Avadi (January, 1955), he made it accept that "Planning should take place with a view to the establishment of a socialistic pattern of society"—although Nehru himself, through all his years of office, was never willing or able to indicate the precise path or paths along which he would lead the country to the objective which he had set before it.

In a speech made before the National Development Council in January, 1956 which was called to finalise the Second Five-year Plan, Pt. Nehru said :

> "If you want India to industrialise and to go ahead, as we must, as is essential, then you must industrialise and not putter about with old little factories producing hair oil and the like—it is totally immaterial what the things are, whether they are small or big consumer articles. You must go to the *root and the base* and build up the structure of industrial growth. *Therefore it is the heavy industry that counts : nothing else counts, excepting as a balancing factor, which is, of course, important.* We want planning for heavy-machine-making industries; we want industries that will make heavy machines and we should set about them as rapidly as possible because it takes time."

This meant that henceforward heavy industry alone was to occupy the entire mental horizon of the Government of India. As a result, the proportion of investment made on agriculture in the First Plan (1951-56) was slashed in the Second Plan (1956-61) by more than half, and that of industrial investment during the same period raised by about five times. Thus, the inauguration of the Second Plan in 1956 heralded a new era in which the creation of a capital-goods or producer-goods industry rather than the development of a prosperous agriculture (along with consumer-goods industries) as the base of our economy, became the aim of India's planning. In this policy shift Pt. Nehru was guided by a fellow-traveller, Prof. P.C. Mahalanobis, who was appointed Statistical Adviser to the Planning Commission. Aided by three planning experts deputed by Moscow, it was he who framed the Industrial Policy Resolution incorporated in the Second Plan. The Third Plan (1961-66) was, in a way, a replica of the Second Plan. The only change made in the former was to increase agricultural investment by a bare 3.0 per cent.

TECHNIQUES OF PLANNING

In a lecture delivered under the auspices of the Forum of Free Enterprise in Bombay on 6th June, 1978, Professor C.N. Vakil, a doyen of Indian economists, said :

"The technique of planning in our country was based on the Plan Frame suggested by Prof. P.C. Mahalanobis in 1956. He had taken the help of Russian Technicians who had worked in the Indian Statistical Institute, of which he was the Director. The concept of Economic Planning was first evolved in Russia after the Revolution, when the Communists came to power. They were anxious for defence as they were surrounded by enemies, and security was their first priority. They evolved a plan, which was based on rapid development of heavy industries essentially helpful for defence. The welfare of the people was not thought of. In fact, because of the totalitarian regime that they had established, they could force people to work for their Plan on minimum wages. The rising of the standard of life of the people came into the picture much later, when they felt that they had approached a Super-Power Status.

"Imbued with this philosophy and technique, the Russian experts suggested something similar for India. This has come to be known as the Heavy Industries Model for Planning. In this model, the main emphasis would be on the development of large heavy industries like steel; other aspects of development would have a subordinate place. The glamour of such a scheme caught the imagination of the then Prime Minister Pandit Nehru, who blessed the scheme. Prof. Mahalanobis had established personal relations with Pandit Nehru, who was impressed by his persuasive talks supported by foreign experts.

"In the Panel of Economists, which was convened to discuss the Plan Frame, two papers were submitted by me along with Dr. P.R. Brahmanand, in which, it was pointed out that in an agricultural country like ours, subject to the vagaries of the monsoon and with increasing population, the emphasis in planning should be on the production of wage-goods i.e. food and other essential articles, without which progress would not be possible."

Almost simultaneously with the inauguration of the Second Plan (April, 1956), Jawaharlal Nehru entered into the PL-480 Agreement[2] with the USA (August 29, 1956) for regular purchase of American wheat at comparatively low prices. Under this agreement the Indian Government was sometimes able to buy USA wheat at less than Rs. 50

2. The US Agricultural Trade Development and Assistance Act, 1954, being the 480th Public Law enacted by the 83rd Congress, is commonly referred to as PL-480. Its principal objectives are three-fold : First, to siphon away abroad, through sales, gift, or barter, the "available" surplus US stocks of agricultural commodities; second, "to use the abundant agricultural productivity of the United States to combat hunger and malnutrition and to encourage economic development in the developing countries"; and, third, "to promote in other ways the foreign policy of the United States".

per quintal and sell it within India at a good profit. During the period 1967-73, the landed price of imported wheat ranged from Rs. 52 to 54 per quintal. Instead of developing our own agriculture and, through it, developing the non-agricultural sectors—the path which was chosen by all democratic countries and is dictated by our political and economic circumstances—Pt. Nehru fell for the communist doctrine on the strength of foreign loans and borrowed food. Between establishment of heavy industry in the public sector, on the one hand, and development of agriculture and labour-intensive consumer industries, on the other, he chose the former course. The strategy, he adopted, was to divert all the financial resources—a Leap Forward exercise in a way—in an effort to speed up industrialisation of the country and meanwhile to keep the food prices down by cheap imported wheat.

Pt. Nehru's anxiety to build up an industrial base and achieve economic self-sufficiency made him accept without much examination a model of development which was calculated to defeat the social objectives he had in view. The roots of today's difficulties are to be found in that wrong choice.

A country which is suffering from chronic food-shortage, had a fast-growing population, is deficient in capital resources, and is wedded to achieving minimum welfare of the people, needs a model of industrialisation quite different from that which served the western nations quite well, or from that adopted by Soviet Russia whose principal aim, in the early years after the Revolution, was to extract a rising agricultural surplus for feeding a growing industrial proletariat. Though the first three five-year plans led to a steady growth in GNP, they neglected the production of food and other basic necessities of the people and produced a highly inequitable economic structure.

Jonathan Power and Anna Holstein point out the following dangers of industrialisation by developing countries, in their book, *World of Hunger* (p. 89) :

> "All the evidence suggests that the escape route from poverty that leads through the city and the industrial sector is fraught with many more difficulties than was thought likely when newly independent countries started on this path a decade or two ago. It is deeply ironic that both the major schools of economic thought—capitalist and socialist—preached similar false solutions. Many socialists argued that real independence was impossible without a strong industrial base and the West often argued that a developing industrial sector was the most effective way of attracting outside capital.
>
> "The Third World countries are now landed with the results of this mistaken advice—chronic food shortages, a demoralised countryside, a fast expanding urban slum population and growing inequality of incomes."

In preferring industry to agriculture Pt. Nehru, in a way, put the cart before the horse. In Europe, the Industrial Revolution was preceded by an agrarian revolution. In England, for example, changes in the agricultural system were made early in the fourteenth century, and during the following decades the English farmers gradually introduced innovations which brought great wealth to the country. England was prosperous long before the Industrial Revolution. It was also better educated than India at a comparable period. Thus the Industrial Revolution could proceed from a firm base of relative prosperity and a relatively educated farming population. Much of the capital that financed early industry came from the rich farmers, which flowed back as profits to the countryside. Similarly, the USA grew to be the greatest power of the world economically through first developing its main industry, namely, agriculture, cattle wealth and allied trades. It built its manufacturing industries, both light and heavy, on a strong agricultural foundation. Economics being the heart of politics, the USA, simultaneously, grew to be a political super-power.

Until World War II, the burgeoning USA still needed to import more food products than it exported, but starting in the mid-1940s, American agriculture was revolutionised by better technology, better seeds, and better use of chemical fertilisers and pesticides. Farms grew larger and the number of people working on them dwindled to less than 5% of today's population, compared with 23% in 1940.

Though most American farm products are still consumed at home, ever increasing quantities are sold overseas. U.S. food exports grew at a steady pace in the 1950s and 1960s, then quintupled in the 1970s ($6 billion to $32 billion in 1979), thus holding down the deficit caused by $70 billion in oil imports. The U.S. now exports more wheat, corn and other coarse grains (barley, oats, sorghum) than all the rest of the world combined. About one-fourth of America's 413 million acres of crop land are planted for export, and foreign demand is expected to keep on growing in the foreseeable future.

The heavy industry programme on which Nehru had set his heart, was almost certain to be economically wasteful. "For instance", said P.T. Bauer Smuts, Reader in Commonwealth Studies, Cambridge University, "it ignored the highly relevant consideration of the actual or prospective demand for the products of the capital-intensive capacity. It is the agricultural sector and the consumer goods industries which must ultimately provide the domestic market for the prodacts of heavy industry. In India, major branches of the consumer goods industries have for years been working far below capacity, notably because of the failure of the productivity of agriculture to rise significantly and the resulting inability to provide a growing market for industry—exports may eventually supply a market for part of the output, but this is unlikely to be a major factor. Much of the capacity is capital-intensive and/or in activities which require advanced techniqnes and skills so that

it is improbable that India will enjoy international competitive advantages in these activities. Moreover, other possible markets are in countries likely to be as autarkic as India."[3]

Ultimately, however, circumstances forced Pt. Jawaharlal Nehru to reconsider his views about the respective places of agriculture and industry in our economy, but only after great damage had been done. At the end of 1963, by which time cereals alone worth some 2600 crores of rupees had been imported since he took over in September, 1946, foreign debt had piled up and prices had greatly increased, he declared that "agriculture was more important than industry". This will be clear from the following extracts of his inaugural speech delivered at the meeting of the National Development Council, New Delhi, on November 8, 1963 :

> "Agriculture is more important than anything else, not excluding big plants, because agricultural production sets the tone to all economic progress. It is agriculture that gives you the wherewithal for progress. If we fail in agriculture, then we fail in industry also. I am laying stress on this because, in spite of the emphasis on this, it appears to me that agriculture is often considered a routine job, not deserving to be taken charge of by the brightest of the Ministers.
>
> "Agriculture is more important than industry for the simple reason that industry depends on agriculture. Industry which is, no doubt, very important, will not progress unless agriculture is sound, and stable and progressive."

It would appear, in going back on his view regarding the importance of heavy industry in economic planning and in emphasising that of agriculture, Pt. Jawaharlal Nehru was obviously influenced by what the Soviet and Chinese leaders had said and done in 1961 and 1962. For, he added :

> "You will see how highly developed countries, even like the Soviet Union, are suffering from bad harvests and it has to import large quantities of foodgrains. China has been in a bad way agriculturally in the last three years. It is a little better now than it was a year or two ago, but still it is pretty bad and everywhere this realisation is dawning on people that agriculture is the key and the base of all progress."

3. 'Problems, Paradoxes, Prospects of Indian Planning', published in the Supplement to the *Capital*, Calcutta, dated December 17, 1959.

It is a pity, indeed, that such a great leader of the country as Nehru had no policy of his own, suited to our particular conditions, but always looked to outside sources for inspiration.

The 'Pioneer' of Lucknow, dated January 24, 1961, had carried the following report under the date-line of Moscow, dated January 23 :

> "In his speech at the recent Party Central Committee meeting here, Mr. Nikita Khrushchev declared that the rate of progress of such industries as steel would be curbed to make more resources available for agriculture.
>
> *What was the use of a lot of steel, if the rapidly growing army of consumers got only a little bread and butter, he asked the meeting.*
>
> He underlined the supreme political significance of agriculture by threatening to sack the inefficient, and expel from the party and try those who try to cook their books."

The communist leaders of China, however, who also had, owing to ideological considerations, during the 1950's, sought to ignore the hard social and economic facts of their country and given the first place to heavy industry, went farther than Mr. Khrushchev who had stopped at an exhortation. They reversed their priorities altogether when experience told them that they did not work, and that Mao-Tse-tung's 'Great Leap Forward', a calamitious attempt at rapid industrialisation, had thrown the country a decade back and close to starvation. In its 3-week secret session ended April 16, 1962, the National People's Congress endorsed a programme, point 10 whereof was intended "to improve planning and ensure an all-round balance between the three branches of the national economy in the order of agriculture, light industry and heavy industry". The economic policy was henceforward to be based on the principle of "taking agriculture as the foundation and industry as the leading factor". The implication was that industry had to primarily serve the interests of agricultural development.

Three bad harvests (of 1959, 1960 and 1961) forced China's leadership into major policy changes. Incentives to peasants were restored by a change in the accounting unit from the remote 5,000 family communes to the 30 family production teams, where reward could be more closely linked to work; by a major improvement in the terms of trade for agriculture—both through higher purchase and procurement prices and a reduction in the prices of inputs—and by the restoration of private plots.

All this amounted to a major shift in emphasis away from industry and in favour of agriculture. Chairman Mao, in a talk in June, 1964 on the Third Five Year Plan, revealed in his characteristic way the significance of this policy shift thus :

"In the past the method of planning was essentialy learned from the Soviet Union and comparatively easy to do. First, you determine how much steel is needed, then on this basis estimate how much coal electricity, transport, working force and so on is needed; and then based on these assumption estimates, the expected increase in urban population and livelihood benefits. This is the method of using the calculator. Once the output of steel is reduced, all other items are correspondingly reduced. This kind of method is impractical and unworkable. *This type of calculation cannot take into account what the Lord in heaven will do to the Plan. In the last few years we have been groping our way and found some other method. Our policy is to take agriculture as the foundation and industry as the leading factor. Pursuant to this policy, when we map out a plan, we first see what quantity of foodgrains can be produced, then estimate how much fertilisers, pesticides, machinery, iron and steel and so on are needed.* How do we plan for an annual harvest ? It will be determined by the assumption that in five years there will be one year of good harvest, two years of ordinary harvest and two years of poor harvest. This is more practical and dependable."

Mao-Tse-tung had, in fact, as an individual, reached the above conclusion several years earlier, viz. in 1958 when he said :

"Agriculture must be the first priority of our economy... First comes agriculture; next come the industries based ona griculture; next come light industries; last, except for defence purposes, comes heavy industrialisation."

This is exactly what Mahatma Gandhi had pleaded for in India, decades and decades earlier. Ten years of practice by China of the new policy of treating agriculture as the 'foundation' of the economy have testified to its success. Within agriculture, foodgrains have been given the highest priority. Today, with greater emphasis on agriculture, the Chinese are better fed and better clothed.

China's communist leadership took only three bad harvests to make a drastic change in policy—change from steel to agriculture; in India even one hundred bad harvests will not do. The explanation lies in the fact that whereas Mao-Tse-tung had risen from the rural masses, our ruling family or families rose from the urban elite with silver spoons in their mouths. They did not know that agriculture is a biological process governed by unforeseeable and largely uncontrollable forces of Nature, and what a bad harvest means to the poor man and to the nation as a whole.

Writing in the 'Atlantic Monthly' on his return from China, Wassily Leontief, Nobel Laureate for Economics, had interesting comments to make :

> "The contrast with the sea of misery and utter destitution enveloping the small islands of conspicuous prosperity and opulence in the rest of the so-called under-developed world, is so striking, that it is almost unbelievable. The prevailing agricultural technology is traditional, not to say medieval. But what is truly startling, is the total absence of hungry and sickly men, women, and children in rags—a sight so familiar to visitors in any under-developed area in Asia, Africa, or Latin America...In China, agriculture comes first, light industry second and heavy industry last. In other words, to maintain and to increase the level of consumption are considered to be more important than larger investments in building up industry and productive facilities so as to secure higher standards of living for remote future generations."[4]

As desired by Nehru, India does need industrialisation or development of non-agricultural resources in order that the living standard of the people may be raised. It is, however, in the heavy industry—first strategy he adopted, in trying to ape the USSR, that lay his mistake which has created more than one problem for the country.

Large plants or projects do not make much difference, or such difference to the prosperity of the bulk of the people as is sometimes supposed. Industrialisation in the modern sense of mills and factories began in India in the middle of the nineteenth century, yet the contribution of the organised industrial sector to the total product of the India Union in 1948-49 stood only at 6.3 per cent. After thirteen years of disproportionately heavy investment on organised industry since April, 1956, the figure could be raised by March, 1969 to 7.5 per cent only. During the period 1960-73, the organised sector annually contributed only 10.7 per cent to the national income (registered manufacturing establishments 9.6+mining, 1.1).

It is not without reason that Mahatma Gandhi had said : "An increase in the number of mills and cities will certainly not contribute to the prosperity of India". And the reason is not far to seek : the number of workers employed in large plants and projects is rather small in view of our huge population, and the returns per unit of capital investment low—indeed, the lowest of all other types of economic enterprises. Not only that; if these plants and projects are set up to manufacture goods or provide services which were already being done on small and cottage scale, they will be merely adding to unemployment without making an improvement in the physical productivity of the country. In actual fact, as the reader will see later, the modern factory,

4. Cited in the 'Economic Times', London, August 25, 1974.

has served to de-industrialise our economy and drive millions of workers out of employment.

Fluctuations in national income as a whole very largely turn on corresponding contribution of agriculture. This will be clear from Table 36 which shows the percentage growth in net domestic product from agriculture and in the net national product or income (both national and per capita) at constant prices. There have been periods of sharp increase as well as sudden decline in national income. These fluctuations are mainly due to changes in the output from agriculture.

The agricultural sector registered an increase of 9.3, 16.2, 12.9 and 11.6 per cent respectively in the years 1964-65, 1967-68, 1975-76 and 1977-78 at the national level and this was reflected as an increase of 7.7, 8.9, 9.9 and 8.2 per cent respectively in the national income for these years.

One is inevitably led to the conclusion that, in the conditions of our country, *there can be no general rise in the living standard of our people without improvement in the output of agriculture, even if there was a rapid rise in the output of other sectors.*

Conversely, a sharp decline in agricultural production of 14.9 and 6.7 per cent in the years 1965-66 and 1972-73 resulted in a fall of 5.4 per cent in the net domestic product in 1965-66 and 1.5 per cent in 1972-73 over the previous year. All the other sectors registered some increase during these years, but their cumulative effect was still inadequate to offset fully the effect of the large decline in the agricultural sector.

What is still more relevant, is the fact that whenever there was the slightest fall in agricultural production it was correspondingly reflected in a fall in per capita income of the entire people.

In this connection, the reader must know that in communist countries there are only two components of the national product, viz., income from the primary sector and income from the secondary sector. The income from the tertiary (or service) sector, which, in 1960-73 formed 33 per cent of India's net product, is not counted as a source of income in the communist countries. Calculated in this way, India's income from agriculture or the primary sector (minus mining) amounted to two-thirds of the national income.

Differences in economic levels in the various States also are largely attributable to differences in their agricultural productivity. A study paper of the Planning Commission at the end of the fifties had admitted that "States which have fared well in agricultural production have generally achieved a larger measure of advance in other directions as well". It is a matter of common knowledge that Bihar, which possesses the largest number of heavy industries next to West Bengal, is the poorest State in the country, whereas Punjab and Haryana which have few heavy industries, if at all, but whose agricultural productivity is highest in the country, enjoyed the highest per capita levels of income. Between 1960-61 and 1968-69, compared with the all-India average of Rs. 306 in 1960-61,

TABLE 36

Net Domestic Product from Agriculture and National Income (Aggregate and per capita) : 1960-61 to 1978-79

Period/Year	*NDP from Agriculture at factor cost (at 1970-71 prices)*		*Net National Product at factor cost (=National Income) (at 1970-71 prices)*			
			Aggregate		*Per capita*	
	Rs. crores	*%age change over the previous year*	*Rs. crores*	*%age change over the previous year*	*Rs.*	*%age change over the previous year*
1	*2*	*3*	*4*	*5*	*6*	*7*
1960-61	13,143		24,250		558.8	
Third Plan						
1961-62	13,234	0.7	25,039	3.3	563.9	0.9
1962-63	12,875	(—)2.7	25,414	1.5	559.8	(—)0.7
1963-64	13,204	2.6	26,746	5.2	576.4	3.0
1964-65	14,429	9.3	28,808	7.7	607.8	5.4
1965-66	12,279	(—)14.9	27,103	(—)5.9	558.8	(—)8.1
Annual Plans						
1966-67	1,2084	(—)1.6	27,298	0.7	551.5	(—)1.3
1967-68	14,043	16.2	29,715	8.9	587.3	6.5
1968-69	14,121	0.6	30,513	2.7	589.1	0.3

(*Contd.*)

(*Table 36 Contd.*)

1	*2*	*3*	*4*	*3*	*6*	*7*
Fourth Plan						
1969-70	15,034	6.5	32,408	6.2	612.6	4.0
1970-71	16,354	8.8	34,235	5.6	632.8	3.3
1971-72	16,209	(—)0.9	34,715	1.4	626.6	(—)1.0
1972-73	15,118	(—)6.7	34,191	(—)1.5	604.1	(—)3.6
1973-74	16,298	7.8	35,967	5.2	621.2	2.8
1974-75	15,917	(—)2.3	36,411	1.2	616.1	(—)0.8
1975-76	17,969	12.9	40,011	9.9	662.4	7.5
1976-77*	16,902	(—)5.9	40,534	1.3	658.0	(—)0.7
1977-78*	18,867	11.6	43,857	8.2	697.2	6.0
1978-79@	19,167	1.6	45,637	4.1	712.0	2.1

* Provisional

@ Quick estimates

Source : 1. National Accounts Statistics 1970-71—1976-77 (January 1979).

2. National Accounts Statistics 1970-71—1977-78 (February 1980).

3. Press Note on Estimates of National Product, Saving and Capital Formation 1978-79 (Feb. 1980).

the per capita income at current prices increased from Rs. 211 to Rs. 402 in Bihar and from Rs. 374 to Rs. 881 in Punjab.

In partial confirmation of what has been said above, a statement is given below showing the per capita income as also the State-wise break-up of investment in, and employment directly provided by the Public Sector Enterprises as on 31-3-1979.

TABLE 37

Statement showing per capita income and percentage share in the country's population of various States as also the State-wise break-up of investment in, and employment generated by, public sector enterprises as on 31-3-1979

S.No.	States	Public Sector Enterprises		Per capita income‡ at current prices	
		Investment* Gross Block (in crores)	No. of employees† (in lakhs)	1973-76 (average)	1977-78
1.	Andhra Pradesh	513.89	0.67	928	999
2.	Assam	382.68	0.24	N.A.	932
3.	Bihar	2877.02	4.25	645	735
4.	Gujarat	762.24	0.40	1134	N.A.
5.	Haryana	213.90	0.10	1399	1600
6.	Karnataka	529.82	1.01	1045	1129
7.	Kerala	382.74	0.24	948	987
8.	Madhya Pradesh	1846.13	2.26	776	904
9.	Maharashtra	976.56	1.66	1349	1628
10.	Orissa	710.28	0.60	793	857
11.	Punjab	344.52	0.16	1586	1962
12.	Rajasthan	291.97	0.28	853	948
13.	Tamil Nadu	615.78	0.63	942	1036
14.	Uttar Pradesh	658.12	0.72	715	916
15.	West Bengal	1082.88	3.46	1033	1268

* The figures exclude investment by National Textile Corporation and its subsidiaries, Insurance Companies and companies under section 25.

† The figures do not include data pertaining to the employees in the National Textile Corporation and its subidiaries which had on their rolls about two lakh employees during 1977-78. The expenditure incurred on salaries, wages and other benefits including bonus paid to employees during 1977-78 amounted to Rs. 1,645.51 crores which works out to Rs. 10,046 per employee on an average.

‡ Owing to the difference in methodology and source material used, the figures for different States are not strictly comparable.

Similarly, differences in the economic levels obtaining in the various districts of a State can be traced to differences in their agricultural productivity. In a brochure titled 'Inter-district Incomes and Economic Profiles of Uttar Pradesh', 1974, an eminent economist, late Dr. Baljit Singh of Lucknow University, came to the same conclusion :

"In general, with a few exceptions of districts that have special characteristices particularly Dehradun and Lucknow, the higher value of NDP is associated with a higher value from cultivation and animal husbandry...

"*It appears that the development of large-scale industries in Kanpur and Lucknow has not succeeded in raising the aggregate NDP of these districts, whereas the development of agriculture in the district of Meerut has pushed ahead a large-scale manufacturing industry.* An obvious conclusion is that in the early stages of development it is agriculture that plays the leading role rather than large-scale manufacturing."

The importance of increased agricultural production would make an indelible impression on our minds if we remember that the three steel plants at Durgapur, Bhilai and Rourkela (which were expected to produce 3 million tonnes of steel ingots yearly, but are producing hardly one million and a quarter, and) of which the Union Government is so proud, had cost us Rs. 1125 crores, while during the period 1951 to 1976, we imported foodgrains worth Rs. 7,200 crores at current prices and cotton worth nearly Rs. 2,000 crores. Also, it is to be remembered that the imported foodgrains have usually to be paid for in external currencies. Had we grown our own food and cotton we could have put up, keeping the increase in prices of imported food in view, at least a dozen steel plants of equivalent size, in addition, for nothing.

True, industrialisation is needed if we want the living standard of our people to be raised, but industrialisation will be achieved and, consequently, the living standard will be raised to the extent workers can be diverted from agricultural to non-agricultural occupations, and this diversion, in its turn, will take place only to the extent agricultural production goes up and becomes surplus to the needs of the producers. Thus, increased agricultural production is seen, rather proved, to be the primary cause of a country's prosperity. Not only that : the industrialisation to which it will directly lead will also provide new employment to our workers. But as will appear in a later chapter, any hope entertained by India's political leadership that heavy industry will be able to reduce, or at least substantially reduce, *existing* unemployment and underemployment as also absorb a *growing* labour force in the present or even in the immediate future, must be considered as fantastic. It is only an alternative strategy of industrialisation based on the Gandhian approach, as propounded in later pages that will solve our problems of unemployment and income disparities. Even then, agriculture will continue, for decades to come, to provide the largest source of income for our people.

Hence agriculture, at least immediately, is more important than industry—more important than giant steel or other heavy industries. It is entitled to Priority No. 1 without the least question or equivocation. Not that anybody is opposed to industrialisation or to production of steel

which is essential to industrialisation, but because man does not live by industrial goods. Therefore, only a grudging concession to the role of agriculture that our economic planners and political leaders usually make, will not do.

It may be conceded that the planners' emphasis on industry is not due only to the fact that industrialists are more powerful, articulate and accessible than farmers, but that land and its problems are far more difficult to manage than the industrial sector; it is easy enough to erect any number of steel plants or other big plants with foreign assistance, but to grow two blades of corn where only one grew before, is a difficult proposition. Also, output is more easily measured and relevant inputs more easily specified, in industry than in agriculture. Further, industry yields more spectacular results whereas agriculture is humdrum, more exacting and associated in the minds of our intellectuals with backwardness and poverty. "Let us face it", said one Western scholar in Hong Kong to Richard Smith of the 'Newsweek', New York, in May 1976, "spending $ 50 million on fertilizer is nowhere near as dramatic as spending the same amount on a factory that belches smoke for every one to see."

But there is no escape from agriculture. In so far as the standard of living is judged by the use of commodities other than food, factory production would appear to make, or, in fact, does make, for a higher standard. Since, however, men must have food above everything else, human energy in our densely-populated country must concentrate on that one objective, FOOD, that is, the land must be worked intensively—must be worked far down the scale of diminishing returns—in order to provide enough food. At least, till we are out of the woods, factory production or industrialisation will receive our attention only to the limited extent that it can provide materials needed for the development of agricultural productivity and equipment needed for the defence of our frontiers.

Says Dr. Elmer Pendell :

> "There seems to be a widespread illusion about the depth and stability of industrial prosperity. The industrial revolution has been a cause of confusion in many minds concerning the relation of men to earth. The reason is that while there has been surplus food anywhere, it could be drawn to the areas where the industrial revolution was most advanced. The people with extra food were glad to sell their surplus in order to get the purchasing power to buy the products of the machine. Actually the people working with the machines have often, if not usually, been better off than those who produced the food. But that advantage could apply only when food was in surplus. When food is scarce, those who produce it have the advantage. In the years of scarcity that lie

ahead, the people who have come to depend on other's lands for food have painted themselves into a corner. Assembly lines, power shovels, fast autos and airlines—these are toys and trinkets; a man must eat."*

Conditions under which agriculture operates in India today, therefore, have to be changed, and changed radically. If we could not do so, and there is scarcity of food, inasmuch as food is the first necessity of man—more vital than anything that may possibly be made available by industries or services and, further, inasmuch as under given conditions more men produce more (food) from the same area than fewer men—workers occupied in industries and services today will move back to land or agriculture. Non-agricultural occupations will, then, not only cease to multiply or prosper but there will be retrogression, that is, the standard of living which is already so low, will go down still further, and ultimately famine will stalk the land with giant strides.

Nor can economic viability, whether internal or external, possibly be achieved at the cost of agriculture. With this viability is linked up not only domestic political stability but also our international political stature. As time passes, food is likely to play an increasingly important role in international politics. There is a distinct possibility of American food being used as a political weapon. So, in a way, to repeat : production of our own food is not only an unavoidable 'Must', but entitled to 'Priority No. 1'.

It would be wrong, however, to conclude from what has been said in the immediately preceding pages, that efforts simultaneously for industrialisation in India should be discontinued. Agriculture and industry are to a large part complementary to each other : it is more a question of emphasis and priorities.

Industrialists, as also some of the political leaders, often ridicule the suggestion that emphasis should be placed on agricultural production, and industry relegated to a secondary role. For, it is asked, how could agricultural production increase without a corresponding rise in industrial output ? To irrigate the land, for example, we require reservoirs, canals, and tube-wells which in turn require cement, steel and power. The industrialists, therefore, in fact almost the entire intelligentsia of the country, would give first priority to, or place more emphasis on, industry. It was a fallacy to hope, they argue, that production on the farms could grow without providing the wherewithal which industry alone could create.

* *Population on the Loose*, New York, 1951, p. 34.

It is this attitude which is at the root of India's economic ruin. While not agreeing with them in regard to the priorities, one may not quarrel with the supporters of the present economic policy that industrialisation will help raise productivity in agriculture by supplying consumer goods (e.g. clothes, shoes, and books) to act as inducements for agricultural workers as also capital goods (e.g. working capital like fertilisers and fixed capital like iron tools and diesel pumps) to act as inducements for land, in a way. Also, a growing industry (and along with it, as a necessary concomitant, a growing commerce, transport, and other services) will provide agriculture with an expanded market due to the increased demand of the urban population and processing and manufacturing industries for agricultural products, without which expansion in agricultural production will not proceed beyond the point where it is able to satisfy the farmers' immediate needs. This increased demand for farm products from the industrial centres will increase the per capita income of the farmers.

On the other hand, however, it is an advancing agriculture alone which can supply food for industrial and other non-agricultural workers to eat, raw materials for industries to process, foreign exchange to purchase capital goods from abroad, an internal market for the products of industry, and workers to run the industries, transport, commerce etc.

There can be no doubt that it is the shortfall in agricultural production that has till now been the greatest constraint on further industrialisation or development of non-agricultural resources. Along with deficit financing, led to a sharp increase in prices and shrinkage of the internal market, it has fomented unrest in the cities, provoked a series of strikes among both white-collar employees and manual workers, weakened labour discipline, and vitiated the climate for investment. Thus, development of industry and agriculture each is to a varying extent, both a cause and an effect of the other. Just as agriculture develops and farmers thrive when industry prospers, so will industry develop and non-agriculturists thrive when agriculture develops.

All this, however, does not mean that industry is as important as agriculture. It is agriculture which plays the primary role—the role of a precursor. While man can do without industrial goods, he cannot do without food. Similarly, while agriculture can, in the ultimate analysis, do without a heavy or capital goods industry, industry cannot do without agriculture at all. Wells, reservoirs, and canals can be built, and had been built by our ancestors and by the British, so also could cloth, shoes, and books be manufactured without the aid of cement, steel and power on any worthwhile scale. Otherwise also, only a small proportion of these commodities is used in agriculture as compared with industry. So far as fertilisers are concerned, organic fertilisers are any day better than inorganic ones—if only they could be collected and composted as the Chinese have been doing for the last forty centuries.