

Our Economic Condition

Data compiled by

THE ECONOMICS RESEARCH COMMITTEE

Edited by

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Preface.

The statistical data analysed in this brochure was collected by the members of the Economics Research Committee to make an unbiased study of the present economic situation in the country. To have an adequate understanding of the complex problems, with which we are faced today, and to set forth a strictly scientific view unbiased in any way by the apparently distorted elements in the situation, a historical approach of the subject was but necessary. At the present momentous time in the history of the country, the scientists have a special responsibility to seek and unfold the truth, and the members of the Committee feel that the present study is an effort in that spirit. It is an attempt to present to the intelligent man the economic realism in a clear perspective, so that he may arrive at his own conclusions, and thus be able to take right decisions concerning his individual, communal or collective future actions and policies. The members are well aware of the limitations of an empirical approach, particularly in this country where published statistics are defective in more ways than one, and where the all-India figures after 1937 (due to separation of Burma) are not strictly comparable with the previous figures. The figures, however, contain and measure truth in a way, in which unaided letters can never do.

The members of the Committee were assembling for discussions of the various problems from day to day and the editor was charged with the duty of expressing the views and conclusions arrived at those sittings and append the same in the form of brief chapters to the statistical data collected for the monograph. It was suggested at one stage that chart and diagrams might serve the same purpose in a better way but the proposal was given up on account of certain technical and financial difficulties. I have tried to interpret the statistical data in simple language without being biased or prejudiced in any way, and to present nothing but the strictly scientific view, so that the reader may be able to take an independent judgment, just as he would have done by looking at those proposed lines and curves. Obviously, the views expressed herein, do not commit any other member of the Committee but myself, except those of Professor K.L. Garg for the last chapter, as the same has been written by him.

Incidentally, the booklet covers a major portion of Indian Economics and as such may prove exceedingly useful for the

students of degree and post-graduate classes. Its primary object is, however, to enlighten the intelligent man about our economic condition today, so that he may make his full contribution to the economic development of the country.

I wish to express my indebtedness and deep gratitude to all my collaborators for the pains that they have taken to unearth the truth, and in particular to Principal Ram Karan Singh who has been the motor force in the present work. My thanks are also due to my wife, who has gone through the early stages of the manuscript and the proofs, besides helping me constantly in sifting the dry statistical data, a really unwholesome work for the fair sex. I also acknowledge my indebtedness to the printers and the publishers for the promptitude that they have shown in their work, particularly in these extra-ordinary times.

MUSSOORIE.
20th May 1944.

BALJIT SINGH,
Editor.

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CHAPTER I.

The Mineral Resources.

THIS review is based on the data recently collected by a Committee of the Mining, Geological and Metallurgical Institute of India. The relevant data classified at the end of the present chapter points unmistakably to our limitations and though it shall be wrong to assume that the country is very poor in minerals; it is certain that the separation of Burma has left us poorer. Nonetheless, one cannot possibly strike a note of optimism after looking at the long list of 24 items which are practically off the list of the country's minerals. These include among others— asbestos, China clays, copper, iodine, lead, pigments, silver, sulphur, tin and zinc and even nickel and mercury. Obviously, these limit our industrial expansion in many a direction though it is absurd to assume that it is highly unlikely that India will ever become an industrial power, and consequently an industrial nation such as the U.S.A. or Great Britain. We have faith in the future of our industries not only because the local supplies of some of these deficit minerals can to some extent be augmented by increased production *e.g.* in the case of copper, fluorite, lead, sulphur and zinc; but more so, because we hold certain important minerals such as manganese and mica, which can procure us easily the needed supplies through international agreements. The clause of the Atlantic Charter, which guarantees on equal terms the ready availability of the raw materials of the world to all countries, is therefore, of special significance to us for our economic prosperity. Moreover, we have failed so far to utilize substitutes, which may be locally available, or develop alternative sources through scientific research. A good example of the latter case is that of gypsum for the production of sulphur. Likewise, we may substitute aluminium in the place of copper. Finally, in no case in pre-war times the importers had ever felt any difficulty in getting such quantities of these minerals in which the country is deficient as we required. The post-war period we assume is not going to be worse for us, at least in this respect. So long as, therefore, we can lay our hands on the supplies of the minerals of the world we should import them freely and treat them within the country to supply the finished commodity and thus retain the manufacturer's profits. The Burma ores, for example, may well be treated within this country as Burma is very deficient in coal and thus we may get in addition to lead and silver, zinc, copper, nickel and sulphur. It may, however, still be desirable to tap and augment certain local supplies in case of essential minerals such as copper and sulphur through protection or subsidies. Scientific investigation and research has yet to play its rôle in the development of the mineral resources of the country.

Against this common deficiency of non-ferrous ores with the exception of bauxite and magnesite, is the long list of minerals in

which either the country has an exportable surplus or is self-sufficient. It is these, which make the country minerally wealthy and promise a great industrial future. These include nearly all the minerals which may be required to maintain and develop to a very high standard the basic and the key industries in the country. The minerals in which our wealth is enormous and which we export at present include iron, kyanite, magnesite, manganese, mica, talc, etc. But even here there is a leakage in our national dividend because we send abroad the ore without treating it locally and secondly because certain industries, which can prosper well on these minerals have not yet been developed in the country. To take a few examples, mica is one of the most vital minerals for the world's industry and the country is its chief supplier, but the country has failed to reap any advantage as methods of mining have remained crude with stealing as a constant feature. In the absence of any co-operation between producers or regulation of marketing it has been shipped abroad as splittings at incredibly low prices. Vast sums can be added to the national income by improved mining technique and regulation of trade as well as by converting splittings into mica and manufacturing condenser plates within the country. Again, the entire output of ilmenite is sent abroad and it provides the world's main supply for the manufacture of titanium white. There is every reason why this should be done in India and the manufacture of ferro-titanium and titanium dioxide be taken in the country. Manganese is another case in point. Being the world's chief exporter of the ore it is not converted into ferro-manganese before export. What a loss! Manganese chemical industry is yet undeveloped. The entire output of monazite is exported without being converted into thorium and cerium. Similar is the case with kyanite and the story of magnesite is not much different, which could very well have been reserved for refractory purposes or for the production of magnesium metal. Chromite, though its exports from the country are too small for the world's industry, can be reserved with advantage for the country's industry or utilized for the manufacture of chromium chemicals. In brief, with regard to these and other minerals falling in this category we require a strict vigilance over exports and see that our reserves are not being dissipated or exported without being treated within the country as far as possible. We usually receive our imports of mineral materials after treatment. There is no reason why the country should not do the same.

Regarding iron ore, the Coal Mining Committee 1937 has given the following estimates of our reserves:—

- (i) 60 per cent iron content 3,341 million tons.
- (ii) 45.6 per cent iron content 3,000 million tons.
- (iii) Less than 45.67 per cent iron content 1,500 million tons.

This is however now admitted generally as an under-estimate. But taking it as correct we find that of the world's iron content reserve of some 10,684 million tons India possesses some 3,384 million tons in the first two grades only. We may still have great reserves when some of the industrial countries of to-day have turned bankrupt. But our iron and steel industry is still in infancy as compared to either our own resources or its development abroad. Imports worth more than Rs. 8 crores per annum of iron and steel were still the order of the day in addition to imports of machinery and mill-work valued at Rs. 14 crores. We, are however, obsessed yet more by another factor, *viz.*, the possibility of the exhaustion of the metallurgical coals of the country, say, a generation or so hence. New smelting methods replacing the present blast furnace have to be our sheet anchor. The country calls forth for research and more vigorous research.

Finally, there are the numerous and varied minerals in which the country is more or less self-sufficing. These include barium, bauxite, dolomite, feldspars, gypsum, limestone, nitrates, phosphates, salt and tungsten besides others. Hereto, in many cases instead of developing fully the domestic industries and deriving the maximum advantage that might have been possible by their utilization we have lagged behind or have even exported the raw material. The industries that thus await vast development are alumina and aluminium, beryllium-copper, magnesium, glass and ceramic, sulphur and sulphuric acid from gypsum, cement, calcium carbide, nitrogen fixation, caustic soda, sodium salts, chlorine, potash, chloride, bromine and even iodine and barium chemicals etc. What is required is a bold plan, installation of modern plants, supply of cheap power and transport, regulation of imports and exports and a Government with a foresight. Granted these, the minerals of the country promise a great future.

TABLE
Minerals with an

Minerals.	Reserves.	Distribution.	Peace-time production.
1. Chromite	Numerous but small	Baluchistan, Bihar, Mysore, Keonjhar.	44,149 tons
2. Iron Ore	Vast. 4,000 mill tons of over 60% Fe. at surface in Singhbhum and Eastern States	Singhbhum, Mysore, Eastern States, and C. P.	2,743,675 tons of ore 1,539,889 tons pig-iron 693,064 tons steel.
3. Kyanite, Sillimanite.	World's largest	Lapsa Buru and elsewhere	28,385 tons
4. Magnesite	Excellent	Madras, Mysore, Idar, Dungarpur.	25,611 tons
5. Manganese....	10 to 20 mil. tons above 48%	C. P. and elsewhere widely scattered.	992,795 tons
6. Mica	Thousands of veins	Bihar, Madras and Rajputana	123,169 cwts.
7. Monazite	Limited	Travancore	5,221 tons.
8. Talc	Excellent	Rajputana, Madras, C. P., U. P., Bihar, Central India etc.	20,000 tons

I(a).

Exportable Surplus.

Peace-time consumption.	Peace-time exports.	Cost of production.	Potentialities.
19,697 tons	18,214 tons	Rs. 40 per ton.	Manufacture of chromium chemicals.
....	525,529 tons ore 66,151 tons pig-iron	Rs. 55 per ton pig-iron	World's best but smelting limited by coal.
Nil.	Entire production.	Rs. 20.	To calcine the raw-material to develop the mineral industry.
19,229 tons	6,382 tons	Rs. 6 per ton	Production of light magnesia and magnesium metal.
62,524 tons	518,342 tons	Rs. 50 to Rs. 250 per ton for chemical ore.	Conversion to Ferromanganese before export— Development of Manganese chemical industry and dry batteries.
1,000 cwts.	175,109 cwts.	As. 6 per lb. to Rs. 65 per lb.	Require modern equipment and vigilance, conversion into mica-nite before export, ground mica?
Nil.	5,221 tons	Rs. 45 per lb.	Extraction of thoria and cerium.
Quite	Growing	Rs. 2 per ton. Rs. 30-Rs. 200 for powder.	Future manufacture of high tension electric insulator and dielectrics. Expansion of cosmetics, polishers, slabs etc.

TABLE

Mineral.	Reserves.	Distribution.	Peace-time production.
9. Titanium	Limited	Travancore....	225,592 tons
10. Zircon	Good	do.	1,450 tons

I(a)—(Contd.)

Peace-time consumption.	Peace-time exports.	Cost of production.	Potentialities.
Nil.	Entire	Rs. 6 per ton	Manufacture of titanium white before export, of ferro titanium, and titanium dioxide condensers.
Nil.	Entire		Future manufacture of Zirconia crucibles.

TABLE
Minerals more or

Mineral.	Reserve.	Distribution.	Peace-time production.
1. Antimony	Small	Chitral and Lahaul	?
2. Arsenic	„	Chitral and Kumaun	?
3. Barium	Considerable	Madras, U. P. Alwar & Bihar	8,075 tons
4. Bauxite	250 million tons	Bihar, Western Ghats and C. P.	14,768 tons....
5. Beryl	Not large	Rajputana and scattered.	17.4 tons
6. Clays (others)	Abundant ....	....	Hundreds of thousand tons
„ bentonite	Large	Jodhpur, Rajmahal Hills, Kashmir and Punjab	33 tons
„ Fuller's earth	Extensive	Sind, Rajputana, Jubbulpore and Mysore	11,884 tons....
7. Cobalt	Little	Katni and Nepal	?
8. Columbite-tantalite	Small	?	?
9. Diatomaecous earth	None ....	....	....
10. Dolomite	Large	Bihar and Eastern States	?

I(b).

less self-sufficing.

Peace-time consumption.	Surplus.	Cost of production.	Potentialities.
?	?	Prohibitive	
?	?	"	
8,450 tons	-375 tons	Rs. 30-50 per ton for lump basite	Good possibilities of expansion and manufacture of barium chemicals.
Nil.	Nil.	Rs. 3 per ton	Great possibilities of the manufacture of alumina and aluminium.
?	Nil.	Rs. 100 per ton	Manufacture of Beryllium-Copper.
....	....	Rs. 4-8 per ton	Abundant for stone ware, tiles and ceramic articles.
33 tons	Nil.	Rs. 20 per ton	
11,884 tons	Nil.	Rs. 1-8 to Rs. 10	
?	?	?	Not worked so far.
?	?	?	Insufficient to warrant treatment.
....	
?	?	?	Flux and magnesium in future.

TABLE

Mineral.	Reserves.	Distribution.	Peace-time production.
11. Feldspars	Large	Rajputana, Mysore and Bihar	691 tons
12. Glass sandstones	Not abundant	?	?
13. Graphite	Low grade, small and scattered	Eastern Ghats. Batul Travancore, Kolar, Ajmer-Merwara	458 tons
14. Gypsum	Extensive	Punjab Salt Range Rajputana Sind etc. sea water	69,823 tons....
15. Limestone	Enormous	Widely scattered throughout	3,049,365 tons
16. Lithium	Not worked....	Bastar State ....	....
17. Nitrates	Decreasing	Surface soils of Northern India	10,000 tons....
18. Phosphates....	2,00,000 tons	Singhbhum and Trichinopoly	119 tons
19. Salt	Great	Rock salt in Punjab, lake and sub-soil brines and sea water.	1,539,663 tons
20. Strontium	One million tons	Trichinopoly and Salt Range	?

1(b)—(Contd.)

Peace-time consumption.	Surplus.	Cost of production.	Potentialities.
691 tons	Nil.	Rs. 7 per ton	Development of glass and ceramic industries.
?	?	do.	Glass industry may expand particularly sheet glass.
All	?	?	
All	Nil.	Rs. 2-4 average	Possibilities of sulphur and sulphuric acid, output likely to increase.
All	Nil.	Re. 1-6 per ton	Further expansion of cement industry and manufacture of calcium carbide.
....	
Little	Major part exported	?	Manufacture of nitrates by fixation of atmospheric nitrogen urgently required.
13,000 tons	-12,281 tons	?	Possibilities of being self-sufficient.
1,871,618 tons	-331,955 tons	Rs. 5 per ton	Imports not justified. Manufacture of Caustic soda, sodium salts, chlorine, extraction of potash, Magnesium chloride, bromine and iodine in future.
?	?	?	Worked in Trichinopoly.

TABLE

Mineral.	Reserves.	Distribution.	Peace-time production.
21. Tungsten	Small deposits of wolfram	Degna in Jodhpur.	10 tons
22. Vanadium	2 or 3 million tons	Singhbhum and parts of Mayurbhunj	Not worked....

I(b)—(Concl'd.)

Peace-time consumption.	Surplus.	Cost of production.	Potentialities.
?	Nearly all	Rs. 700 per ton	Can be sufficient for tungsten steels and tungsten carbide.
....	....	....	Treatment under investigation.

TABLE
Minerals which must

Minerals.	Reserves.	Distribution.	Peace-time production.
1. Asbestos	Small and Minor	Madras, Mysore and Seraikela	1,774 cwt.
2. Bismuth	None ....	....	....
3. Borates	None ....	....	....
4. Bromine	None ....	....	....
5. Cadmium	None ....	....	....
6. China clays....	Not known, small and scattered	Singhbhum and Keonjhar	15,000 to 24,000 tons
7. Copper	Not estimated but insufficient	Singhbhum, Assam, Bengal, C.P., C.I., Almora, Jammu, Sikkim and Rajputana	6,000 tons of refined copper
8. Fluorite	Low Grade....	Khairgarh and Nandgaon states	?
9. Gold	Small	Kolar and some small elsewhere	321,137 ounces
10. Iodine	Not produced	....	....
11. Lead	Small	Zawar in Mewar and Jaipur	Nil.
12. Mercury	No workable deposits	....	....

I(c).

be imported.

Peace-time consumption.	Deficiency or Imports.	Cost of Production.	Remarks.
70,000 to 80,000 cwts.	71,524 cwts.	?	Production is likely to be absorbed in the manufacture of asbestos cement.
?	?	?
26,414 cwts.	26,414 cwts.	....	....
?	?	?
?	?	?
30,000 to 50,000 tons	15,000 to 30,000 tons	....	Scope for improvement in methods of refining.
25,000 to 30,000 tons	10,000 tons	Rs. 550 per ton	Scope for development under protection or subsidy.
?	?	?	Imports for steel smelting. Flotation may provide better grade.
?	?	?	Local production unlikely to increase.
....	....	....	Possibilities under investigation.
7,529 tons	7,529 tons	....	Zawar and Jaipur deposits may repay development.
....

TABLE

Minerals.	Reserves.	Distribution.	Peace-time production.
13. Mineral Pigments	Not Known	....	5,000 to 10,000 tons
14. Molybdenite	No Deposits	....	....
15. Nickle	No workable deposits	Singhbhum ....	....
16. Platinum metals	No Deposits	....	....
17. Potash	Little or none	....	....
18. Radium	None ....	....	....
19. Selenium	None ....	....	....
20. Silver	Meagre	Kolar	22,295 ozs.
21. Sulphur	Little	Baluchistan, Pyrite in Bihar and Simla Hills.	Nil.
22. Tellurium	None ....	....	....
23. Tin	No workable deposits	....	....
24. Zinc	Probable	Zawar	Nil.

I(c)——(Concl.)

Peace-time consumption.	Deficiency or Imports.	Cost of Production.	Remarks.
20,000 tons	12,298 tons	Rs. 2 to Rs. 6 per ton.	Expansion essential for the development of paint industry.
....
....
....
....
....
....
....
22,964 tons	All	Rs. 85 per ton.	Being worked during war-time at Baluchistan. Gypsum may be an alternative source. Essential for developing chemical industry.
....
....
22,143 tons	22,143 tons	....	Possibilities at Zawar under investigation.

CHAPTER II.

Our Sources of Power.

FORTUNATELY, for us, coal may no longer determine the industrial destinies of the nations in the post-war period, for the present war is a good augury to remind us of our serious limitations in this respect. Our coal supplies have already fallen so short of the demand that the Government has been obliged to promulgate a Colliery Control Order from 1st April 1944 and to adopt the plan of production bonus to stimulate raisings and regulate consumption. Our shortcomings of this essential food of industry lie not only in its present low output but also in its small total known reserves in the country. According to the report of the Coal Mining Committee 1937, India's reserve of workable coal of all grades to a depth of 1,000 ft. is estimated at 20,000 million tons or 20,320 million metric tons. This estimate is based on that of Mr. C. S. Fox. If we take an older but more optimistic estimate of the Federation of British Industries the figures stand at 79,000 million metric tons and yet it is no consolation to find that it represents only about 1 per cent of the world's reserves. Poverty could not have been written in darker colour than this. The shortcoming is seriously enhanced by the fact that only about 7.5 per cent of the total is coking coal and coal supplies are rather concentrated and not evenly distributed over the entire country. The country cannot look forward to any further industrial development on the basis of power to be supplied by coal and in so far as we have the world's best iron ores on which we naturally hope to build a mammoth steel and heavy machinery industry we must not spare any improvement either in technique of mining, methods of marketing or in blending and use which may result in the conservation of our coking coal reserves to prolong their availability. Reservation of such coals exclusively for metallurgical purposes is a suggestion requiring serious consideration. Looking ahead we may look forward to an agreement between this country and Australia for our future supplies. The utility of our coal supplies can substantially be increased by following the recommendation of the Coal Mining Committee 1937 of utilising low grade coals for generation of power. The most advantageous way for doing it would be to generate thermal electrical energy at suitable sites on the coal fields and thus develop even our poor and lesser known reserves and lignite deposits. The railways may be the largest bulk consumers of this energy and thus we may obviate the wicked waste of high class coal on certain lines at least. Incidentally, it shall reduce the demand on rolling stock and at the same time enable the railways to provide greater comfort, better speed and more frequency. Anyway we cannot expect much, after all, from coal—electrification of railways will be just like making the best of a bad bargain. Prospects of thermal electric generation at the coal-

fields therefore, should not be judged from the narrow angle of finance but ought to be examined from the right perspective of an industrial step by a nation.

In petroleum too the country is deficient in spite of the recent location of several structures, which may merely offset the decline of the established oil fields. The Indian oil source rocks are relatively poor but prospecting is still going on. The total peacetime imports of the mineral oils in the country were more than 400 million gallons and the bulk of our requirements were supplied by Burma. Certainly, the Act which separated Burma from our country in spite of being constitutional was a wicked one, for it made an ugly hole in our mineral and food economy. Burma too stands sorely in need of our products and has proved, as a separate unit, a poor link. The federation or confederation of India, whatever it may be, shall be a better economic unit with Burma as a partner in it. It may not yet be too late to aspire for that unity. Nonetheless, with developments in the road transport and civil aviation the demand for fuel oils shall obviously grow. We may be able to import as much as we require but that dependence may not be in the best interests of the ultimate security of the nation. In any scheme of the redistribution of the mineral reserves the country's claim for mineral oils must be fully pressed. Alternatively, we may continue to adopt and improve upon such oil-saving devices as have come into practice during the war time, *e.g.*, the use of gas plants on light motor traffic. We should further explore the full possibilities of the use of power alcohol from molasses. But when all has been done the country shall still depend on foreign supplies, a situation not at all pleasant in times like the present one.

If Nature has been niggardly with regard to coal and petroleum, the main foundation-stones of modern industrialisation, it has provided us with our own sheet-anchor—the energy generated by water power. The Hydrographic Survey of India in 1919 revealed unmistakably the numerous sources throughout the country waiting for being harnessed to play their role in industrial progress. The minimum flow of the seven great rivers eastward from the Indus is stated to be capable of giving not less than 3 million horse-power for every thousand feet of fall from the Himalayas. Similar considerations apply to other rivers while the hills provide many sites where rain-water may be stored to give thousands of kilowatts of continuous energy for machines and water to the plains below. An estimate of a total potentiality of 27 million kilowatts is not an unreal one and when it is realized the country shall have enough energy almost in every village and town to derive all the machines that we shall possibly want. As yet, however, we have hardly developed a fraction of our reserve and that too very lately. In many cases the full projects are still in the course of completion. To-date the installed capacity of electric power plant per capita is among the lowest in the world and yet nowhere else its development is so peremptorily demanded. Only 17 per cent of towns

with population of over 5,000 have the benefit of electric energy. We have already noticed how the limitations of coal and mineral oils make the development of hydro-electric energy incumbent on us for any future advance towards industrialisation. Few, however, realize that even for the agricultural development of the country, it is the first step, for without it there is little power to irrigate our fields, where we have already reached the limits of flow irrigation works. Let aside the controversy whether industries first or agriculture first the development of hydro-electric power ranks at the top in the list of the priorities of the nation. It is too obvious. All progress hinges on power, which, at one and the same time, we have and have-not. The plan which we adopt makes all the difference.

Wood-fuel in the shape of charcoal may be a minor source of power, but can never become an important source. Its utility during war-time in gas plants has been well established. One finds no reason as to why it should not continue to be utilized during the post-war period. Molasses too can be a very good supplementary source of liquid fuel for motor traffic in the form of power alcohol. The Governments of U. P. and Bihar not many years back were satisfied fully about it and we may hope they shall renew their interest in the post-war period in developing this source which will not only help the power economy of the country but may indirectly benefit the sugar industry itself. Scientific research and improvements, both in regard to gas plants and power alcohol, may yet go a long way in popularising their use.

TABLE II.

Source of Power in India.

Source.	Estimated Reserve.	Distribution.	PEACE TIME.		Imports.	Remarks.
			Production.	Consumption.		
1. Coal	Total 20,000 ml. tons. Good 5,000 ml. tons. Coking 15,000 ml. tons.	Bihar and Western Bengal, C. P., C. I., Hyderabad, Eastern States, Punjab and Assam.	28.3 million tons	27 million tons.	45,063 tons.	Coking coal only in Bihar, Bengal, and likely to be exhausted soon.
2. Petroleum	Relatively poor	Punjab and Upper Assam.	80 million gallons	200 million gallons.	180 million gallons Kerosene. 130 million gallons fuel oil.	Pre-war production may be maintained.

TABLE II—(Concl'd.)

Source.	Estimated Reserve.	Distribution.	PEACE TIME.		Imports.	Remarks.
			Production.	Consumption.		
3. Hydro-electrical energy.	27 million Kilowatts.	Well distributed	5 million Kilowatts projected as under: 46,000 E.H.P. Mysore 20,000 H.P. Kashmir 246,000 H.P. Bombay 118,600 Kw. Punjab projected. 64,000 " Madras 30,000 " U. P. grid. ? Hyderabad.	5 million Kw.	....	Vast scope for development.
4. Wood-fuel....	Limited	Usually in hills of Assam and C. P.	....	....	....	Of no practical importance except in minor gas plants.
5. Power-alcohol from molasses.	400,000 tons of molasses per year.	U. P. and Bihar	Nominal ....	....	....	Not yet developed.

CHAPTER III.

Our Forest Wealth.

'MEN find forests—and leave deserts,' once wrote a distinguished Frenchman and it applies perhaps more to conditions in our country than to that anywhere else. The onslaught of forests during Pax-Britannica has devastated large areas and we have been left at present with only 94,457 sq. miles of forest area or a little more than 11 per cent of the total area in British India. It is distributed as follows:—

TABLE III.

Proportion of forests to the provincial area.

Province.	% of forest area.	Province.	% of forest area.
Assam	.... 38·0	Bengal	.... 9·3
Coorg	.... 32·7	Orissa	.... 6·5
C. P. & Berar.	19·7	United Provinces	.... 5·8
Bombay	.... 14·1	Punjab	.... 5·4
Madras	.... 12·3	Bihar	.... 2·8
		Sind	.... 2·4

Experts have estimated a minimum requirement of about 20 per cent of forest area for the economic needs of a progressive country. We fall too short of the minimum and in many provinces the situation is really precarious. Too few forests and at too remote places from the centres of population form one of the background of the scenes of Indian poverty. There has been an inevitable lowering of the standards of living of the peasantry by this almost 'clean sweep' in many places, for the loss of timber has meant the denial of a flat roof over the house, has left the door gaping wide without shutters and has deprived furnishing of all furniture. The loss of firewood has obliged people to burn their manure and get lower and still lower yields from their crops. Fodder has been lost and the cattle have become punier and weaker. Invariably, with the destruction of forests in the 'catchment' areas in the hills, Nature's giant sponges have been removed causing floods, eroding the cap-surface of the soils and reducing river and sub-soil water supplies for irrigation. Seasonal torrents are

spreading their ruin of 'detritus', cutting fertile lands into ever widening ravines, the river beds are sinking and there is increasing desiccation of land. Re-forestation of certain catchment areas and dotting the entire countryside with small patches of forestry should be our watchword. It may not yet be too late though the cost may be heavy. Planning with an eye on the immediate national dividend should not lose sight of the permanent interests of the country.

The country is poor in forests but the forests of the country are not poor in resources. They send forth a continuous stream of wealth as their major and minor produce though it is a sad reflection that we have not as yet made the best use of it. The average annual outturn of the major produce which consists of timber and firewoods is about 350 million cubic feet. The timber includes a large variety, e.g., teak, *sal*, *chir*, *deodar*, *semal*, *kail*, spruce, silverfur, *haldu*, *sisu*, *tun*, *sandan* etc. The supplies of teak are not self-sufficing but for all other timbers the local output is enough to meet the country's requirements whether it be that for railway sleepers, planks, beams or furniture or for industries based on timber such as match-manufacturing or pencil-making or for building purposes. But so far our *per capita* consumption has been very low and it still remains to be seen whether the forests of the country can supply without following any suicidal policy all the timber that may be needed, say, to provide shutters in at least one door in every house, or enough beams for roofing all huts, or for enabling each family to get a minimum supply of furniture compatible with a reasonable standard of life. The demand for firewood alone calls forth for a great extension of forest areas dotted throughout like patches over the entire area under cultivation. Let aside these considerations, the timber supplies are considerable and various for sustaining certain manufacturing industries. Of these, plywood industry has already received a stimulus during the war-period and the country is not only having its own tea chests but may soon be producing first class plywood furniture. Further research may lead to the eventual establishment of yet another important industry, viz., dry-wood distillation which may provide a nucleus through the production of benzene to the manufacture of numerous synthetic chemicals and dyes. The location of suitable sites, particularly in the vicinity of hydro-electricity generating plants in our coniferous forests may solve for good the problem of the country's newsprint. The site of the headworks of the Punjab Hydro-Electric Project at Jogendranagar seems to be particularly inviting in this respect. The country's production of paper is still too short of its requirements. Further experimentation and research may add a cheap wood pulp to give a stimulus to the paper manufacturing industry. Artificial silk too may be manufactured with wood pulp. Bamboo, a primary product of our forests, is one of the principal sources of chemical pulp. Improved processes may enable us to turn more bamboo into paper. By

tapping the *chir* plants we have manufactured rosin and turpentine and yet have left undeveloped the industries that could further be built on these, viz., paints, varnishes, polishes, printers inks, etc. The turpentine distillation is still capable of expansion provided suitable transport facilities in the forests are made available. Katha is still made by indigenous methods by local workers and thus we lose most of the *cutch*. The Indian Wood Products Company is a pioneer in this field but there is still scope for others. Lac is another important forest produce which still awaits for being moulded into a number of useful articles. The various grasses still require further patient research work to be put to better industrial uses. We have for example the raimie fibres which we export abroad for being manufactured into gas mantles. It may perhaps sooner or later be done locally. Our forests yield a variety of minor produce such as gums and barks and leaves, which industrial and scientific research may be successful in converting into commercial dyes, sizes, drugs or medicines.

To sum up, our forests are too little and remote; and, therefore, we have all the more reason to put them to the best use, which lies in cautious conservation and even afforestation on the one hand and in developing manufacturing industries based on forest produce on the other. True forestry in the country calls forth, not only for its combination with agriculture, but at the same time, with manufacturing industries. We require both agri-forestry and forest-manufacture.

CHAPTER IV.

The Agricultural Resources of India.

THE country grows almost every important crop of the world— an advantage which it enjoys on account of the vastness of its dimensions with variegated climate and soils. It is the sole producer of world's jute, it has the world's largest rice acreage, it is next only to U. S. A. in wheat, barley and cotton, it produces nearly one-quarter of the world's cane sugar and sesamum, in linseed it yields only to Argentina, it produces more rapeseed than the rest of the world put together and with the single exception of China it is the largest tea producer in the world. In addition, it is enriched by the cultivation of groundnut, coconut, castor, cotton-seed, mowra, coriander, cummin, *ajwan* and kardi among its oil-seeds; maize, gram, *gwar*, *bajra*, *ragi*, and a variety of peas and pulses among food crops; mangoes, apples, bananas, oranges, plums, peaches, grapes, guavas, pears, etc. among its fruits; potatoes, turnips, tomatoes, onions, cabbages, cauliflowers, brinjals, carrots, and many others among its vegetables; pepper, chillies, ginger, cardamom, and cloves among its spices; besides coffee, indigo, tobacco, rubber and opium. The list is by no means comprehensive, and yet all these riches of our agricultural resources look insignificant when we remember, that one man to be fed in every five in the world to-day is an Indian, that out of 81 million and odd tons of what we should consume we get only 48·7 million tons of cereals, that Japan with less than one-tenth of our rice acreage produces almost half as much rice, that the average yield per acre of wheat in the United Kingdom is thrice that of ours, that Germany with two-thirds of our barley acreage gets more than twice as much barley, that Hungary with less than half the area under maize that we have produces considerably more, that Java produces more than twice as much sugar with only 8 per cent of the area under sugarcane that we have, and that Egypt produces more than 40 per cent of raw cotton output and of a better quality with only about 5 per cent of our cotton acreage. This is only by way of illustration for poverty is writ large everywhere on the farm. It goes even beyond in the wake of our inactivity, for while we export our agricultural raw materials, in many cases we import the finished product.

Judged by present outputs alone, the country is a poor specimen of agriculture; but its resources are vast. There is still a great scope for the development of its farming both by intensive cultivation and by extending the margin to the hitherto uncultivated wastes. Its yield per acre has remained phenomenally low due to under-capitalization, under-cultivation, and lack of irrigation and manure. Likewise, the area under cultivation may be extended considerably. The figures given below clarify the issue:—

	Millions of Acres.	
Net area of British India in 1939-40—		511·90 acres.
Net available for cultivation	89·31 acres.
Net area cultivated	209·96 acres.
Forests	68·01 acres.
Current fallows	47·33 acres.
Other uncultivated land	97·19 acres.

Roughly speaking, therefore, there is still a possibility of adding more than a 100 million acres to the cultivated area, of which at present only 60 million acres are irrigated. If we treble our irrigation facilities and also bring these 100 million and odd acres under the plough the total yield under scientific agriculture is likely to be more than trebled. There has certainly been an under estimation of the national resources in the Bombay Plan in keeping the target of agricultural development at 130 per cent.

In crop-production, unplanned and unregulated as it has been, certain ugly features have crept in. It presents the thorny problems of surpluses and deficits for no obvious reasons. We are short of food and yet we are growing cotton, jute and linseed for export. Within the food crops there is a great dearth of protective foods. We have sooner or later to adopt some system of regulation based on a well-considered Crop Plan with a view to secure a balanced economy in crop production. In any case there should be no loophole left for famine, starvation and malnutrition. A strict vigilance over exports and imports shall have to be exercised to make crop—planning a success. The present embargo on the export of food grains may, in addition to being applied over a long period, be usefully extended to cover oil seeds. Minimum prices may have to be fixed and this may necessitate control of imports and even protection and prohibition in some cases.

The country has been made still poorer by the fact that we have been sending our raw materials abroad for the benefit of the foreign manufactures and have then in many cases been importing the finished commodities. There must be an embargo and protective duty on such exports to encourage local manufactures. Oil seeds, tobacco and rubber provide good illustrations of this leakage in the national income. The case for an embargo in the case of oil seeds is particularly strong for three good reasons, *viz.*, better nutrition, better manure and better industries. Groundnuts, castor, sesamum, copra, rape and mustard should all be crushed within the country to the last grain and thus we may add to the supplies of our edible oils. Linseed too can be exported with advantage

only after being crushed and the product even double-boiled. The stimulus that the oil industry shall thus receive may lead to further progress and developments in the manufacture of vegetable oils, compost manures, oil cakes, soaps, glycerine, toilet articles, polishes, hair oils, and even paints and varnishes. Again, our cigarette industry is still in its infancy and we import even leaf from Sumatra and Java as ours is unsuitable for wrappers. The country ranks first among the world's tobacco producers and yet the Imperial Leaf Tobacco Co. is the only purchaser of Virginia tobacco in India. An early development of the cigarette industry and an improvement in the quality of tobacco are greatly needed. Again, most of the rubber grown in the country is exported while we import manufactured rubber goods valued at some Rs. 150 lakhs. The country's interests shall be served best by the development of the rubber manufacturing industry, which has considerable prospects in the country. The demand for rubber goods in the post-war period is likely to increase manifold particularly due to the fitting of pneumatic tyres in our village carts, whereas the supply of raw rubber can easily be increased from its present output of 20,000 tons to 200,000 tons by the cultivation of *cryptostegia grandiflora*, which is capable of being grown even in sands, acid and alkaline soils. The food industries too, have except for their recent beginning, been left undeveloped, though the country has the best raw materials. We have considerable scope for the large-scale manufacture of biscuits, beverages, squashes and crushes, pickles and preserves, ground spices, malts, liquors, chocolates, special sugars, meals such as of barley and oats, etc. Breweries, distilleries, confectioneries, bakeries, ice factories, cold storages, refrigeration plants, all offer considerable field for the investment of capital. The prospects of the indigo dyes need a re-examination while the production of chemicals and medicines based on opium has yet to be undertaken. Floriculture and the industries based on it are yet capable of vast developments.

In brief, the potentialities of agricultural development in the country are great; but we shall be having a leaky bottom if we go on producing merely the raw materials for sustaining the manufacturing industries abroad. Farming and manufacture should go hand in hand.

TABLE IV (a)

The Agricultural Resources of India.

Crops with a pre-war surplus yield for exports.

Figures for 1939-40.

Crop.	Area under cultivation. (millions of acres.)	Principal producing tracts.	EXPORTS.				Remarks.
			Yield in millions.	Quantity in millions.	Value.	% of total production.	
1. Tea	0.83	Assam, Bengal, Madras, Travancore, Punjab, U. P.	452.60 lbs.	356.7 lbs.	Rs. 26 crores.	78.9	Consumption in India is also rapidly growing.
2. Cotton (raw)	21.35	Bombay, C.P. and Berar, Punjab, C.I. States, Madras.	4.91 bales.	.52 tons	Rs. 30 crores.	59.6	Exports have dropped during war period. Short staple should be curtailed.
3. Jute (raw)	3.17	Bengal, Assam, Bihar	9.74 bales.	.56 tons	Rs. 19.7 crores	33.0	Efforts to curtail its production further should continue.

TABLE IV (a) — (Concl'd.)

Crop.	Area under cultivation. (millions of acres.)	Principal producing tracts.	EXPORTS.				Remarks.
			Yield in millions.	Quantity in millions.	Value.	% of total production.	
4. Linseed	3.71	C. P., Bihar, U.P., Hyderabad, Bombay, Bengal.	0.47 tons	.21 tons	Rs. 3 crores.	46.9	Pressing into oil before exports is a likely development. Development of paints and varnish industries.
5. Groundnuts	8.20	Madras, Bombay, Hyderabad, C. P. and Berar.	3.15 tons	.54 tons	Rs. 7 crores.	18.3	Oil crushing and hydrogenation should be stimulated further.
6. Coffee	0.18	Mysore, Madras, Coorg, Cochin, Travancore.	40.11 lbs.	.16 cwts.	Rs. 73 lakhs.	....	Improvement in marketing and technological research lacking.
7. Rubber	0.13	Madras, Coorg, Mysore, Travancore, Cochin.	31.39 lbs.	21.5 lbs.	Rs. 94 lakhs.	70.0	Rubber manufacturing industry should be developed.

TABLE IV (b)

Crops more or less self-sufficing.

Figures for 1939-40.

Crop.	Area under cultivation, in millions.	Principal producing areas.	Yield in millions.	EXPORTS.			Suggestions.
				Quantity in millions.	Value.	% to production.	
<i>Food-Crops.</i>							
1. Wheat	34.01 acres	Punjab, U.P., C. P., C. I., Bombay, Sind, Bihar.	10.75 tons	.05 tons	Rs. 78 lakhs.	.5	Exports have rightly been prohibited since 1943. Production requires stimulus.
2. Jowar	33.39 acres	Hyderabad, Bombay, Madras, C.P., U.P.	6.50 tons	little	Rs. 7 lakhs.	....	" " "
3. Bajra	17.37 acres	Bombay, Punjab, Madras, U. P., Hyderabad.	2.45 tons	little			
4. Gram	13.04 acres	U. P. and Punjab	3.29 tons	little			....	....	Research in improving varieties.

TABLE IV (b) — (Concl'd.)

Crop.	Area under cultivation. (in millions.)	Principal producing areas.	Yield in millions.	EXPORTS.			Suggestions.
				Quantity in millions.	Value.	% to production.	
5. Barley	6.0 acres	U. P., Bihar, Punjab and N. W. F. P.	1.9 tons	Insignifi- cant.	Rs. 75 thousand	....	Development of barley food manufacturing industries and extraction of malt.
6. Maize	6.3 acres	U.P., Bihar, Punjab, N. W. F. P., Bom- bay.	2.2 tons	.. ..	....	....	Starch manufacturing industry.
7. Sugar- cane.	3.1 acres	U. P., Bihar, Punjab, Bengal, Madras.	4.59 tons	....	....	....	Further development of sugar industry and exports of white sugar.
8. Condiments and Spices.	1.50 acres	Extreme south ....	....	....	....	....	Cultivation should be extended. Development of provision industries.

Oilseeds.

9. Sesamum	4.05 acres	Madras, C. P., Bom- bay, Hyderabad, U.P., Punjab, Bengal, Bihar, Orissa.	0.42 tons	.004 tons	Rs. 7 lakhs	0.8	Crushing before ex- port.
10. Rape and Mustard	6.11 acres	U.P., Bihar, Punjab, Bengal, Assam.	1.12 tons	.02 tons	Rs. 33 lakhs	2.2	Exports to be disallow- ed.
11. Castor	1.0 acres	Hyderabad, Madras, Mysore.	.09 tons	.04 tons	Rs. 71 lakhs	45	Crushing before ex- port., manufacturing of soaps, paints and hair oils, etc.
12. Indigo	0.04 acres	Madras, U.P., Bihar, Punjab, Bengal.	.005 cwts.	little	Rs. 17,000	....	Prospectus of develop- ing indigo manufactur- ing industry should be reconsidered.
13. Opium ....	.007	U. P. and Punjab ....	....	....	....	....	Development of opium, chemicals, etc.
14. Tobacco	1.3 acres	Madras, Bengal, Bihar, Orissa, Bombay, U. P., Punjab.	?	57.6 lbs.	Rs. 1.81 erores	....	Improvement in quality and development of tobacco manufacturing industries.
15. Fodder....	10.47	Punjab, Bombay, U. P.	....	....	....	....	Introduction of better varieties and increased production to sustain dairying industries.

TABLE IV (c)

Crops with a deficit.

Figures for 1939-40.

Crop.	Area under cultivations millions of acres.	Principal producing tracts.	Yield in millions.	IMPORTS.	Potentialities.
				Quantity or value.	
1. Rice	73.20 acres.	Bengal, Bihar, Orissa, Madras, U.P., C.P., Assam.	25.36 tons	326,000 tons (paddy) 1,659,000 tons (rice)	Production requires stimulus and habitual dietary to be substituted by more nutritive grains.
2. Fruits and Vegetables.	3.91 acres.	Throughout	?	Rs. 1.6 crores	Extension of areas under vegetables and fruits. Development of canning, preserving and dehydrating industries.
3. Spices ....	....	....	....	Rs. 1.8 crores	
4. Cotton (Long staple)	....	....	....	Rs. 8 crores	Imports have almost doubled during the war period.

CHAPTER V.

The Cattle Wealth of India.

IN A WAY, it may be said that the cattle are the basis of our rural economy providing almost the sole tractive and transport power to the cultivator. Their number is large—in India including States there being more than 388 millions, consisting of 162 millions of cows and bullocks, 45 millions buffaloes, 47 millions sheep, 48 millions goat, 2.2 millions horses and ponies, 7 millions mules, 2 millions donkeys, 1 million camels, 2.7 millions pigs and 86 millions of poultry. It is certainly the largest in the world and it accounts for one of our fundamental weaknesses. The multiplication of numbers has given us decrepit and semi-starved beasts with little working efficiency, perhaps poorest in the world. The soil has been burdened to-day with much of useless cattle and we might have done better with much fewer and more efficient ones than we do to-day with 22.1, bullocks, 17 cows, and 7 cow-buffaloes per 100 acres of net cultivated area. Here we find poverty not only amidst plenty but caused by it. Here we have bullocks being fed for twelve months to work ordinarily for not more than 100 days in the year. At an average a pair of bullocks cultivates about 9 acres of land, which implies in most cases the sowing of a single crop. Perhaps, half as many but certainly better type of bullocks, may suffice for the work. Any indiscriminate reduction however, without being counter-balanced by an improvement in efficiency may well result in a shortage. This is what actually happens when such conditions occur. To illustrate, in November 1943, a Survey by *Times of India* in the Bombay Province revealed a general shortage of live-stock chiefly of bullocks, the prices having gone up four times the normal level. At places it became so acute that a correspondent reported 'men will have to draw the ploughs next year.' In general, no cultivator keeps more cattle than what he needs; he keeps a pair of bullocks because one singly cannot draw the plough, he gives a preference to the inferior pair because his holding is too small to find enough work for the better one, he keeps it throughout the year because his work is intermittent even though at long intervals and he cannot find any other power when his work demands it. So whereas it is true that as judged by broader standards a considerable portion of our cattle is useless and burdensome, its solution through the reduction of the present numbers is circumvented by many practical considerations even when we have found the knife to slaughter or sterilize it. To put better cattle at a premium, holdings must be enlarged; and to enable the cultivator to do with less bullocks supplementary power sources must be supplied to cultivate his field, irrigate his holding and transport his produce. Better cattle shall follow larger holdings, lesser holdings shall cause a great saving in the use of draught cattle, while mechanization of large farms will finally square up the accounts. The remedy

repeated *ad nauseum* of improving cattle efficiency by better feed starts with the wrong end, for with the present holdings it is just like suggesting to destitutes to take cakes if they can't get bread. Let the question be examined thoroughly if the present number and size of holdings is not a real block in our way to improve cattle efficiency and reduce their number.

Counting the cows and cow buffaloes we come across an impressive number and here too, it adds to our poverty. Mathematically it may be wrong and yet it is a fact that can hardly be denied that these numbers represent more mouths than teats; and leaving aside the good ones, which are as ever in a minority, they cause more leakage in the national dividend than add to it. They remain half-starved, and occasion under-nourishment for their owners. To illustrate, the live-stock census 1930 of U. P. shows that about 6.8 per cent of cows in that province give at an average 3 seers or more of milk per day, whereas of buffaloes only 26.5 per cent have an yield of more than 4 seers of milk per day. The report added— 'Three seers of milk per day from a cow may not permit of it being brought to market, but it is the minimum that would pay the cost of a cow's upkeep to one who may work on it for the sake of good milk with one's own hand, as many an Indian does.....As a buffalo needs greater attention and is costlier to keep and its calves are less valuable, the amount was fixed for it at 4 seers.' The conclusions are obvious that the number of useless, uneconomic and redundant cows and buffaloes is staggering. The U. P. has the best dairying tracts in the country and what holds good there in this respect represents the best conditions. The average milking capacity of an Indian cow has been worked out at 525 lbs. for a whole year. It is certainly a very poor record and yet it is capable of great improvements for some of our selected breeds are yielding under normally good conditions more than 7500 lbs. The average for the buffalo too is very poor being only 1270 lbs. but this too is capable of considerable increase. With reference to our milch cattle we have the twofold problem of the elimination of the unfit and their systematic replacement by better grades. The solution resolves itself into three parts—better feeding, selective breeding and a reasonable outlook. A considerable number of our cows and buffaloes are capable of giving many times more milk than that they yield at present provided proper attention and investment is made over their feeding and here we touch the complicated problem of the entire reorganisation of the national agriculture and dairy on an economic footing with no room for the inefficient. Better feed will not however repay investment in all cases. Here we have the complex problem of the elimination of many and the improvement of the indigenous strain by careful selection and scientific breeding so as to evolve out a dual purpose cattle. Breeding has been left to Shiva's bull, which is now our weakest link. More widespread efforts are required to introduce the improved bulls from the Government breeding centres. At present the total number of breeding bulls in British India is about 5,65,000 of which the

distributed ones are almost insignificant. Finally, to solve the problem of cattle poverty a proper outlook is required, for the most economic way to eliminate the unfit is through the abattoir. Slaughter of any other type of cattle, the country can ill afford. In any case, the milk yield must be increased in the near future, for we are producing daily about 5 ounces of milk *per capita* as compared to 244 ozs. of New Zealand, 148 ozs. of Denmark, 69 ozs. of Australia, 37 ozs. of U. S. A., and 34 ozs. of Germany. The health and to some extent even the intelligence of the young ones of a nation depends on its milk consumption.

The other cattle are less important in the agricultural economy of the country and are seldom kept by the cultivators though it shall add substantially to their incomes if they can be persuaded to keep a poultry of a moderate size. Horses and ponies too can add much to the speed of rural transport.

In spite of having the world's largest cattle population we have got all its drawbacks but none of its advantages for the manufacturing industries that thrive on the raw materials of the animal world have been left almost untapped except in a few minor cases. To quote a few instances, our pre-war imports included wool raw and manufactured, worth more than Rs. 4 crores per annum, tallow and stearin of Rs. 39 lakhs, boots and shoes of Rs. 22 lakhs, condensed milk, brushes, buttons etc. Besides, we exported raw hides and skins of about Rs. 5 crores, leather of Rs. 7 crores nearly, bristles of Rs. 31 lakhs, bones of Rs. 43 lakhs, and horns tips etc. of Rs. 4 lakhs. Our exports of live-stock products are very small in comparison to our resources and at the same time we do not use them at home either. The production is capable of much increase. It has merely to be collected. There is a great scope both for the manufacturing industries and for our exports to increase.

The shoe and leather industry together with tanning has yet to go a long way to meet the internal requirement alone. A pair of shoes from a factory is at an average shared by one in more than eleven individuals and even taking into consideration all the cottage produce we find a great majority without any shoes. Likewise, the large scale meat industry has yet to be established, the industry which may use every single part from the hair to the hoof and give a hundred-and-one commodities which we import at present. The war has given a little stimulus to dairying but much more can be achieved than the mere production of butter and cream. Modern plants which may give many by-products have considerable scope in the country at present.

TABLE V.
India Live-Stock Statistics—1940.

		British India ¹ .	U. P. and Orissa (1935)	Total Br. India.	Indian States ² .	Pressure on net cultivated area.
Cattle	....				
	Bulls & Bullocks	34,912,150	11,864,973	46,777,123	17,002,221	22.1 per 100 acres.
	Cows	28,909,369	7,470,523	36,379,892	15,889,362	17.0 per 100 acres.
	Young Stock	23,853,246	8,325,058	32,178,304	14,191,025	15.4 per 100 acres.
	Total	87,674,765	27,660,554	115,335,319	47,082,608	55.2 per 100 acres.
Buffaloes	....				
	Males	3,804,311	1,106,229	4,910,540	1,370,376	2.3 per 100 acres.
	Cows	10,745,659	4,060,877	14,806,536	6,760,983	7.1 per 100 acres.
	Young Stock	7,865,523	4,185,138	12,050,661	5,213,663	5.9 per 100 acres.
	Total	22,415,493	9,352,244	31,767,637	13,345,022	15.4 per 100 acres.
Sheep	....	25,183,062	2,338,677	27,521,739	19,924,025	13.2 per 100 acres.
Goats	....	30,212,044	8,533,245	38,745,289	19,506,934	13.1 per 100 acres.
Horses & Ponies	....				
	Horses	402,316	235,260	637,576	269,041	.3 per 100 acres.
	Mares	407,265	202,121	609,386	255,055	.3 per 100 acres.
	Young Stock	191,384	74,791	266,175	185,614	.1 per 100 acres.
	Total	1,000,965	512,172	1,513,137	710,473	.7 per 100 acres.
Mules	....	40,270	18,825	59,095	17,325	.03 per 100 acres.
Donkeys	....	1,157,459	261,402	1,418,861	520,040	.7 per 100 acres.
Camels	....	428,563	32,087	460,650	532,430	.2 per 100 acres.
Pigs	....	1,955,396	?	1,955,396	821,892	.9 per 100 acres.
Poultry	....	61,128,354	?	61,128,354	24,694,155	29.3 per 100 acres.

NOTE:—(1) Excluding United Provinces and Orissa.

(2) Relate to about 79 per cent of the total area of Indian States.

CHAPTER VI.

India's Man-Power.

NUMERICALLY great to the extent of nearly 389 millions, the country's man power apparently represents nearly one-fifth of that of the whole world; but these gargantuan statistics have hardly any real significance at present in relation to the country's wealth production; for, in spite of being rich enough in all resources, it is poor in space and living. Anyway, here we have a density of 341 persons per square mile in British India or 95 per square kilometre as against 15·9 for the earth taken as a whole. It may be interesting to observe here that the densities of the other large countries of the world including their dependencies are many times much less. Kuczyunski's figures for 1939 reveal that U. S. A. and the British Empire have only 15 persons per square kilometre, Japan has 69·1, China 42·2, France 9·0 Soviet Russia 8·1 and Italy 13·9 while we are forced to maintain 95 in the same area. A dependent country cannot of course aspire for colonies to solve its problem of living space but does certainly hope for the equity of being given an equal right with the other members of the Commonwealth to settle and develop the hitherto sparsely populated regions in Australia, Middle East and the islands of the Indian ocean. A complete reorientation of the policy of the Dominions with regard to the Indian emigrant is of vital importance to develop fully the resources of the Empire in a spirit of co-ordination; and the 'Open Door' of the Americans should not merely imply the exploitation of our markets but should be consistent with an equal share in the goods of this world for all the people irrespective of the colour. On the other hand if the Dominions and the white races persist in their present policy of the extermination of the Indians from places, which they incidentally happen to administer or occupy, the country may soon present the spectacle of an extensive ghetto for a people, who admittedly ushered in the era of civilization to the entire world. Colour should not be a bar to our share in the space and goods of the earth.

We require facilities for emigration and settlement abroad not only because we have too little living space, or because there are our men, who are in the forefront of this global war and are clearing vast territories from the enemies of the Allied nations but also because quite for natural reasons a large accession to human life is inevitable in the country. By 1941, within a decade we had added over 50 millions to our population—the increment itself being larger than the entire population of any European country except Germany or Russia. If a campaign for the saving of infant life, whose mortality was as high as 160 per mille in 1940, be carried on, substantial additions of 7·0 and 13·0 millions are likely to result by 1951 and 1961. If, further maternal mortality is

reduced by 10 per thousand, (which at present is in the neighbourhood of 20 per 1000, as against 2·9 for England and Wales) there would be an additional saving of 6 millions female life in a decade and in addition to this direct increase there shall be the second and the third degree of addition also. Finally, an increasingly wide application of preventive medicine to the life of the community will bring further accretions of population and lengthening of the span of life. The next decade may, therefore, witness an addition of at least 75 millions more to our population. Any peace to be lasting and fair should provide a due space for our people and children. We cannot look for the solution of this complex problem to inter-provincial migration as its scope is but very limited in the country in spite of the fact that all the provinces and States are not equally dense in population. It is true that there are degrees of density varying per square mile, say, in British India, from 9 in Baluchistan, 94 in Sind, 186 in Assam to 518 in U. P., 779 in Bengal and 1599 in Delhi; but equally great are the differences in the resources and potential.

The distribution of the population between the town and the country reveals at once that India is a land of villages with agriculture as its main occupation and that the urban element like its large scale industries is of recent growth and yet a very small minority. But with the growing industrialisation large aggregations are being rapidly formed so that the number of cities with a hundred thousand inhabitants or more has risen from 35 in 1931 to 58 in 1941; and the population living in cities of this size has increased in the same period from 9·1 to 16·5 millions—a rise of 81 per cent. One cannot fail to look that the country is in for urbanization. Town-planning should no longer be ignored particularly by a province like the U. P., which shows the largest accretion in numbers to the city category, otherwise squatter's freedom and general squalor with filth, immorality, slums, disease, and death all around shall follow the lack of control.

Coming to numbers again, it is obvious that not the entire population constitutes the working strength. We have no age figures unfortunately for the census of 1941. According to the census of 1931 the percentage of population between 0 and 15 years was 39·9, between 15 and 50 years 50·5, and 50 years and over 9·6. We can thus say that nearly half our population or say, 200 millions people constitute our working population. And yet the whole of it is not available for employment for the cloistered lives that the high caste women are still made to live in the country makes a serious encroachment on the potential supply. Taking the figures for 1931 we find that the proportion of actual female workers to male is 317 to 683 in every 1,000 while among working dependents females number 733 to 267 males. The actual labour supply available at present in the country is thus in the vicinity of 130 millions with a span of life which may be measured with

an average expectation of life of 26.91 years for males and 26.56 years for females. The average expectation of a male in England is 55.62 years and of a female 59.58 years. The country however has failed to find full employment for its workers and there is a considerable surplus which can gainfully be employed in new industries or territories. A little more than two-thirds of the workers find employment in agriculture; and yet this employment is more hypnotic than real, for, as the Royal Commission on Agriculture rightly pointed out, that by far the greater number of cultivators have at least from two to four months' absolute leisure in the year. If agriculture is properly organized not only shall it release a vast labour force for ancillary and cottage industries in the villages but multitudes of labourers shall be available for the large scale industries in the cities.

We may at this stage as well recount the limits of our labour supply which arise primarily due to three factors, *viz.*, inefficiency, illiteracy and lack of technical training, and the defective organization of our agriculture. To illustrate the first point let us consider the testimony of Dr. W. Burrige, an eminent Physiologist, given in his book on *Climate and Labour*: The Indian workman in the U.P. seldom weighs as much as 120 lbs., usually he is nearer 100. This implies a basal metabolism, which is approximately obtained by multiplying the weight by 11 to 1,100 calories. But the differences in weight outside are so much that in Europe and America the standard figures are 1,600 calories for summer and 1,800 for winter. To the basal figure are added 75 calories per hour for light labour, 150 for medium work and 200 for heavy work in Europe and U.S.A. The Indian workman being lighter requires less. But whereas a European worker requires some 1,600 calories more than the basal for doing his work, the Indian factory worker, say in Cawnpore, gets only about 800 more—the difference being largely due to the difference of work done by each.... Fifty calories per hour or about 500 per day, Dr. Burrige suggests, would easily be enough for the actual physical work an Indian factory worker does. Without taking the greater technical efficiency and skill into consideration does it not imply that judged by physical work alone a European worker is good enough to replace three Indians? Our small caloric turnover implies a low resistance to diseases, and therefore a high labour turnover in factories, absenteeism and loss of many labour units.

But a greater limitation is imposed particularly on industrial man-power in India by the paucity of trained craftsmen, technicians and engineers, who constitute an infinitesimal minority of our population and yet on whose skill and intelligence and supply depends our position in the post-war industry. ...In this respect we are almost in an incipient stage and it is therefore, that, during the present war, the slight stimulus to our industries had of necessity to be limited by the paucity of men, trained scientific men. Man

to man we are not inferior to any in the world—what is required are facilities both for scientific research and training. It is really alarming that the literacy even as defined by the ability to read and write a letter was as low as 8 per cent of the total population in 1931 or 9·5% for persons aged 5 and over, being 15·6 per cent for males and 2·9 per cent for females. By 1941 there was an increase of some 70% in literacy for the country as a whole—the male increase being 60% and the female 150 per cent. But still it means very little and the country's economic progress hinges on no less a way on an all round increase in literacy.

Finally, the further labour supply for the large industries is very limited unless we reorganize our agriculture on scientific footings. The great defect with our present-day agriculture is that it neither gives full employment to the men engaged therein nor releases them for employment elsewhere. It provides non-continuous periods of spare time for all, which cannot obviously be utilized in industrial centres. For a phenomenal industrial progress, a definite diversion of surplus labour from agriculture to industries shall have to be made, which is practicable only with a scientific reorganisation of our agriculture. We cannot have the present tenants of an acre or two and millions of new workers to man the post-war industries at one and the same time. It is too obvious which way the choice shall lie.

TABLE VI.

**India's Living Space and Population,
Census of 1941.**

Province or State.	Area in sq. miles.	Towns *	Villages.	Density.
Madras	126,166	407	35,430	391
Bombay	76,443	185	21,472	272
Bengal	77,442	149	84,213	779
U. P.	106,247	445	102,388	518
Punjab	99,089	202	35,269	287
Bihar	69,745	88	68,869	521
C. P. and Berar	98,575	119	38,985	170
Assam	54,951	30	33,560	186
N. W. F. P.	14,263	28	2,826	213

* Town is a place with not less than 5,000 inhabitants.

Provinces or State.	Area in sq. miles.	Towns *	Villages	Density.
Orissa	32,198	17	26,653	271
Sind	48,136	26	6,583	94
Ajmer Merwara	2,400	5	706	243
Baluchistan	54,456	12	1,637	9
Coorg	1,593	2	301	106
Delhi	574	9	305	1,599
Total Provinces	865,446	1,724	459,391	341
Total States & Agencies	715,964	979	196,501	130
Total India	1,581,410	2,703	655,892	246

* Town is a place with not less than 5,000 inhabitants.

TABLE VII.

Distribution of Population in India in 1941.

000 omitted.

	MALES.			FEMALES.			PERSONS.		
	Urban.	Rural.	Total.	Urban.	Rural.	Total.	Urban.	Rural.	Total.
Province	21,036	131,985	153,020	16,511	126,277	142,789	37,547	258,262	295,809
States & Agencies....	6,352	41,654	48,006	5,797	39,386	45,184	12,149	81,040	93,189
Total India	27,382	173,638	201,026	22,308	165,664	187,972	49,696	339,302	388,998

CHAPTER VII.

Disequilibrium of Occupations.

TABLE VIII.

Percentage of working Population engaged in

	Agr., fish- ing etc.	Industry and mining.	Trade and Transport.	Liberal Profession.	Others.
India 1931	67·2	10·2	6·6	1·5	14·5
Great Britain	7·1	47·2	20·7	4·4	20·6
U.S.A.	22·0	31·7	24·5	7·0	14·8
Japan	50·3	19·5	20·2	....	10·0

TABLE IX.

Contribution to National Dividend in India in 1931-32 from

Industry	....	....	17%
Agriculture	....	....	53%
Services	....	....	22%
Others	....	....	8%

A MONG the civilized nations of the world no where is dependence on agriculture for livelihood so great as in India. There is certainly nothing like a natural or normal equilibrium as between different occupations which holds good for all countries, but certainly there is a normal equilibrium of occupations for each individual country with reference to its own natural resources, which, if distorted or disturbed, vitally reduces its well being and the national dividend. Considering our great potentialities in natural resources for industrialisation one can assert without any fear of contradiction that by nature India is fitted to be an industrial rather than an agricultural country. It therefore implies that so long as we depend on agriculture to the extent as we do at present we fail to exploit to the fullest extent our natural bounties. Our labour cannot be as effective or productive in agriculture as it is or can possibly be in industry or manufactures with the inevitable consequence that an *agricultural* India is likely to remain poor whereas an *industrial* India can look forward to much higher standard of earning and living of

its people. Even to-day more than two-thirds of the total workers are engaged in agriculture, but these workers contribute only a little more than half to the national dividend, while about 10 per cent of the total engaged in industry contribute 17 per cent. This clearly establishes that labour in India is more effective in industry than in agriculture and points unerringly to the fact that the proper way to set our house in order is to withdraw vast forces from the agricultural front and concentrate them on the industrial and the commercial fronts. In spite of the so called increase in the industrial activity during war-time the total number of workers engaged in organised industries in the country is about 23 lakhs only. Granted, that the resources of the country promise a great industrial future, we have to go a great way in the process of industrialisation and thus bring about the normal equilibrium, which alone can guarantee a living income to the people of the country. The Bombay Plan envisages a contribution to national dividend from industry, agriculture and services in the ratio of 35, 40 and 20 per cent respectively. One of its weaknesses is, that it ignores to take into account the proper place of commerce and trade. None can however minimise the importance of industrialisation for increasing the national dividend. It is true that the agricultural output of the country is capable of vast increases but equally true is the statement that without adequate industrialisation to the extent of absorbing about half of our present population engaged in agriculture we can never reach the maximum standard either in agriculture or industry. To maximise our national dividend therefore, we shall have to redistribute our population so as to withdraw considerable numbers from agriculture and employ in industry and trade.

CHAPTER VIII.

National Income and Standard of Living.

THE fact that poverty is widespread in India is known to many, but that it is so tragic as to imply actual starvation in many cases, was not fully realised until recently, when thousands died per day for no other cause than shortage of food. According to Dr. Radhakamal Mukerjee, India is deficient today in her food supply for about 63 million persons. The Foodgrains Policy Committee pertinently remarked that owing to the low *per capita* standards of consumption generally prevailing in India as a whole, the degree to which subsistent levels can be cut is considerably less than in more fortunately situated countries. According to Dr. Aykroyd, an adult male requires about 2600 calories but actual investigations show that we do not get on an average that minimum. More food therefore has to be produced and consumed and before we can march forward the problem of starvation should be solved. The investigation carried by Dr. Burrige indicates that poverty with low turnover makes men listless and apathetic. 'Nations like armies, march and obtain the will to go forward through their stomachs.' So long as the standard of nutrition remains what it is not only is there much waste of life and potential energy, but we are likely to stay where we are, rather than go ahead to a happy India. The Bombay Plan fixed the target at 130 per cent of agriculture production to ensure adequate nutrition to all. The target however is low.

In clothing standards too, as compared with other nations we are almost half naked and though our climate might have made it possible for us to survive even with these scanty raiments, decency and considerations of health demand a much higher standard of consumption. The National Planning Committee put it at the modest figure of 30 yards per person as a desirable minimum. Other nations putting on more than twice as much should not rightly grudge if we plan for it.

We are not only insufficiently nourished and badly clothed, but are not even adequately sheltered against the inclemencies of weather. According to the estimate of the Bombay Plan it shall require an investment of some Rs. 1,400 crores if the minimum requirement is to be made available to all.

The figures depict the deficiencies with reference to the prime necessities of life; it can well be surmised what comforts such people must be allowing themselves. The only comfort which people living in such abject poverty can perhaps enjoy is, by resigning themselves to fate and then watch with Platonic love the flirtations of the West. What comforts in goods and services can we really

think with only -/3/- per day as against some Rs. 4 in U.S.A. or Rs. 2/11/- in the United Kingdom? It should therefore be a very modest plan which aims at a mere doubling of our *per capita* income and a Government must really be very unsympathetic which does not lend its fullest support even to such an objective.

TABLE X.

Annual per Capita Income in rupees.

			Rs.
U.S.A.	....	....	1,406
United Kingdom	....	....	980
Germany	....	....	603
Japan	....	....	218
British India	....	....	65

TABLE XI.

Average per Capita consumption of the necessities of life.*Food—*

German workmen	....	....	....	3055	Calories.
American	....	....	....	3500	„
English	....	....	....	3400	„
Indian peasant	....	....	....	2500	„
Cawnpore Labourers	....	....	....	1900	„
Women cottage workers (Lucknow)	....	....	....	1200	„

Clothing—

U.S.A.	....	....	64.0	Yds. per annum.
Germany	....	....	34.0	„ „ „
Japan	....	....	21.4	„ „ „
India	....	....	16.1	„ „ „
World	....	....	42.0	„ „ „

Shoes—

U.S.A.	....	....	3.37	Pairs per annum.
Germany	....	....	2.08	" " "
India	....	....	0.09	" " "

Floor Space—

Minimum required....	....	100	Sq. ft.
Bombay Labourers....	....	27.58	Sq. ft.

TABLE XII.

Estimates of per capita Income in British India.

				Rs.	a.	p.
1867-70	Dadabhai Naoroji	....	....	20	0	0
1882	Cromer & Barbour	....	....	27	0	0
1898-99	William Digby	....	....	17	8	0
1899-1900	" "	....	....	12	8	0
1900	Lord Curzon	....	....	30	0	0
1913-14	Wadia & Joshi	....	....	44	8	0
Pre-War	Shah & Khambhata	....	....	36	0	0
War & Post-War.	" " "	....	....	38	0	0
1921-22	" " "	....	....	67	0	0
1922	Findlay Shirras	....	....	116	0	0
1931-32	Dr. V. K. R. V. Rao	....	....	65	0	0
"	Rural	....	....	51	0	0
"	Urban	....	....	166	0	0
1938-39	Student, Commerce 18th December, 1943	....	....	66	0	0
"	Rural	....	....	47	0	0
"	Urban	....	....	200	0	0
1942-43	Same	....	....	142	0	0
"	Rural	....	....	91	0	0
"	Urban	....	....	483	0	0

CHAPTER IX.

Crop Production in India.

THE tiny holdings of the cultivators coupled with the self-sufficing character of the village economy leave little scope for commercial farming and hence subsistence farming has become a more or less permanent feature of Indian agriculture. It means growing largely the food crop, the area under which in the country gradually increased from 182.11 millions acres in 1900-01 to more than 204 millions acres in 1909-10. It recorded a slight reduction in the next decade and then remained more or less stationary till the year 1929-30. During the Depression it declined again being only a little more than 196 million acres before the outbreak of the present war. There was growing a disparity in the country's production and demand for food with the consequence that while prior to the Great War the country had an exportable surplus of food grains, this surplus gradually disappeared and was turned into a negative quantity during the period of the Great Depression. But this deficiency was not apparent, as the purchasing power of the masses in the country had sunk so low that the demand for food in the markets was sometimes even less than the supply available for sale. It however does not mean the country was producing enough food for meeting its requirements on a reasonable standard of consumption.

But what is a more striking feature of Indian agriculture is its complete lack of response even to vital economic forces. During the first years of the present century while the population of British India has increased from 220.60 millions in 1901 to more than 295 millions in 1941 *i.e.* nearly by 34 per cent, the net cultivated area has registered an increase of only about 5 per cent and even if we take into consideration the double cropped area, the total cultivated area has increased by only 10 per cent. It has proved irresponsible not only to the population pressure and the increased demand in the country but is remarkably inelastic even to the impact of the price variations. If it has shown any response to prices it has been in a reverse direction. During the Depression no where did it record a downward tendency with a fall in prices. On the other hand, in contrast with the manufacturer, the farmer's first reaction to the falling prices has been to lower the margin of both intensive and extensive cultivation. A close scrutiny of prices and cultivated area reveals that rising prices do not stimulate the cultivator's efforts while a downward trend in prices tends to stimulate agricultural production; but the stimulus is very much limited. The under-sized holdings of the cultivators in India had become unshrinkable and almost unexpansive before the outbreak of the present war. This stagnation or inertia was an outcome of the defective organisation of the agricultural industry, which had made farming a tradition rather than an occupation. Non-intervention by the State, tantamount

to gross negligence, was its marked feature in spite of the provincial agricultural and rural development departments. The industry was in the hands of millions with little capital, initiative or even ambition whose standard of living had sunk to such low levels as to make them impervious to all economic progress. The yield per acre was not only very low relatively to other countries but had either remained stationary or had even declined in some cases. This had caused suspicions of soil exhaustion in the country and economists were not lacking, who even predicted a new equilibrium in production at a lower level. In spite of being one of the oldest agricultural country, its soils were still virgin, for modern methods of exploitation had not yet been employed nor sufficient capital, commensurate with the fertility of its land, or the employment of the labour units on it, was invested. It was in this state of disorganisation, inertia and stagnation that the War overtook the agricultural industry in India making fresh demands and widening still more the inherent disparities in it.

With regard to the trends in crop-production the cultivation of the commercial crops and the oilseeds before the Great Depression was definitely gaining ground—the tendency reflecting the growing commercialisation of farming in the country. But there has been an appreciable fall in the production of non-food crops in the early years of the slump. A decline in outside markets effected the prices of commercial crops sooner than those of the food grains and sugarcane, and this explains the preference of the farmer for the cultivation of cereals over the commercial crops. If prices rise or fall together, other factors remaining the same, the movement obviously has no impact on crop production. The relative movements however are significant, for the cultivation of various crops even under a system of small scale farming is competitive. During the period of Recovery *i.e.*, since 1935-36 the cultivation of non-food crops recorded an increase year after year while the acreage of food crops remained either stationary or even declined. In particular, the area under cotton, Jute, mustard and rape recorded substantial declines during the depression while that of sugarcane and groundnut increased considerably though for different reasons. The area under rice and wheat remained almost constant and showed a strong trend before the outbreak of the present war while that of Juar and Bajra was registering a weaker trend. Dairying, and in consequence the cultivation of fodder crops, received a stimulus during the slump. Due to unfavourable seasons total acreage was also recording substantial declines during the quinquennium preceding the war.

The outbreak of hostilities made fresh demands on our food resources, effected adversely our outside markets of agricultural raw materials, and later on cut off the supplies of Burma rice. The cultivation of more food crops became imperative and the conditions were also quite favourable. The Government too was anxious to increase the area under food crops and under the weight of the

'Grow more food' campaign inaugurated early in 1942 an additional 8 million acres under food crops are claimed. Reviewing the war-time agricultural progress we find a substantial decline in the cultivation of rice during the first three years, though the year 1942-43 recorded an increase of more than 1 million acres of rice. The output of wheat also declined in the first three years. Obviously there was a shortage, which, as a consequence of the cessation of rice imports from Burma together with the increasing amounts of food exports, resulted in the grim tragedy of the severest famine of the present century last year. The only redeeming feature about the food situation has been that the cultivation of coarser food grains such as Juar and Bajra has been on the increase. Likewise the cultivation of maize, gram and barley has been stimulated. On the other hand the cultivation of oilseeds has recorded substantial declines particularly in the case of groundnuts, rape and mustard. The food situation has thus considerably deteriorated and the ordinary deficiency today is many times more than what it was at the outbreak of the present war. The cultivation of short-staple cotton though on the increase during the first three years of war has in the year 1942-43 recorded a substantial decline.

Our failure to increase agricultural production can largely be attributed to the defective organisation of the agricultural industry before the outbreak of the war. With that organisation, no Government could have done better, but any other Government with a sense of responsibility to the nation would have raised much with a programme of rationalisation of the agricultural industry as a war emergency. It would have equipped it with the necessary means of production *i.e.*, fertilizers, machines and implements, power and irrigation facilities and above all proper units of farms. It is tragic, that, we usually forget that capital equipment and proper organisation are as much essential for agricultural production as for the manufacturing industry.

TABLE XIII

A. Acreage under various crops in India in the pre-depression period.

Area in millions acres.

	1900-01	1909-10	1919-20	1929-30
Food crops	182.11	204.10	199.67	200.01
Commercial crops	16.47	20.40	23.38	24.62
Oilseeds	12.91	14.53	12.57	16.33
Rice	69.02	78.52	80.63	78.71
Wheat	20.10	24.40	24.79	23.53
Millets	48.28	48.85	47.15	48.79
Maize and gram	21.80	20.25	20.09	19.69
Pulses	27.81	32.07	30.03	29.02
Fodder crop	3.03	4.74	8.20	9.17

B. Acreage in British India since the great depression.

	1930-31	1931-32	1932-33	1933-34	1934-35	1935-36	1936-37	1937-38	1938-39	1939-40	1940-41
Food grains	188.03	190.58	186.91	191.66	185.94	185.60	189.35	186.76	186.26	187.05	187.15
Food crops	197.85	200.75	197.23	201.79	196.74	196.70	200.77	197.32	196.17	197.45	198.45
Oilseeds	14.52	14.12	15.53	15.50	12.46	13.45	15.57	16.99	16.19	16.29	16.70
Total non-food	45.07	43.77	44.05	46.07	43.24	45.10	47.43	49.54	47.41	47.12	49.54
Rice	67.58	68.75	67.24	67.50	66.83	63.39	69.04	69.45	69.92	70.10	68.85
Wheat	24.76	25.28	24.96	27.56	25.61	25.09	25.19	26.63	26.78	26.13	26.45
Juar	22.34	20.96	20.81	20.80	21.23	20.98	23.48	20.70	20.83	21.68	21.25
Bajra	13.70	13.94	14.01	13.14	13.10	13.07	11.45	12.50	12.78	13.36	14.09
Gram	13.39	15.68	13.73	16.33	13.47	14.55	15.53	13.66	11.68	11.69	12.71
Fodder	9.10	9.39	9.73	9.97	10.08	10.54	10.57	10.41	10.37	10.47	10.47

C. Wartime aggregate supplies of seven food grains in India, (thousand tons.)

	Total yield.	Net imports after exports.	Net amount available for consumption.
1939-40	53,061	+2,221	55,282
1940-41	50,173	+ 993	51,166
1941-42	51,817	+ 431	52,248
1942-43	53,928	- 361	53,567

D. Average yield per acre 1936-37.

	Rice.	Wheat.	Barley.	Juar.	Maize.	Gram.	Linseed.	Sugarcane.	Cotton.
British India	939 lbs.	774 lbs.	872 lbs.	575 lbs.	939 lbs.	685 lbs.	345 lbs.	3161 lbs.	127 lbs.
U. P. Irrigated	1050 „	1050 „	1100 „	....	....	900 „	....	3050 „	220 „
U. P. Unirrigated	800 „	750 „	750 „	600 lbs.	1050 lbs.	750 „	450 lbs.	....	120 „

TABLE XIV.
Agricultural output of the Principal Crops in British India 1915 to 1941.
030 omitted.

Year.	Rice tons.	Wheat tons.	Cotton 400 lbs bales.	Jute 400 lbs bales.	Linseed tons.	Rape and Mustard tons.	Sesamum tons.	Ground- nuts tons	Gur (Sugar Cane) tons.	Rubber lbs.
1915-16	32,730	8,653	3,738	7,344	476	1,092	482	1,058	2,633	....
1916-17	35,054	10,236	4,492	8,309	526	1,193	513	1,196	2,762	....
1917-18	35,999	9,922	4,055	8,867	515	1,155	382	1,056	3,434	....
1918-19	24,342	7,507	3,977	6,955	235	768	278	626	2,466	....
1919-20	32,028	10,122	5,799	8,481	419	1,153	449	822	3,039	13,615
1920-21	27,662	6,706	3,600	5,915	270	859	382	1,022	2,522	13,789
1921-22	33,235	9,830	4,479	3,986	436	1,167	518	959	2,599	9,056
1922-23	33,703	9,974	5,073	5,408	533	1,209	482	1,236	3,045	11,913
1923-24	28,198	9,660	5,161	8,401	463	1,149	441	1,084	3,317	14,462
1924-25	31,072	8,866	6,088	8,062	501	1,220	513	1,485	2,546	15,601
1925-26	30,737	8,696	6,215	8,940	402	909	421	1,999	2,977	19,970
1926-27	30,669	8,973	5,024	12,132	406	1,004	414	2,046	3,267	23,004
1927-28	29,192	7,791	5,963	10,188	348	840	543	2,718	3,217	26,042
1928-29	33,187	8,591	5,782	9,906	322	910	495	3,211	2,704	26,839
1929-30	31,132	10,469	5,243	10,335	380	1,095	455	2,362	2,752	28,023
1930-31	32,198	9,306	5,226	11,205	377	988	526	2,766	3,228	24,351
1931-32	33,001	9,024	4,007	5,542	416	1,025	476	2,268	3,975	20,117
1932-33	31,114	4,455	4,657	7,072	406	1,042	551	2,997	4,676	6,381
1933-34	30,907	9,370	5,108	7,987	376	943	541	3,330	4,896	19,915
1934-35	30,238	9,729	4,857	8,500	420	900	406	1,884	5,140	37,156
1935-36	28,211	9,434	5,918	7,215	388	957	463	2,258	5,931	48,545
1936-37	27,828	9,752	6,180	9,611	420	964	439	2,714	4,476	30,448
1937-38	26,737	10,794	5,660	8,656	457	1,021	449	3,436	5,307	32,267
1938-39	23,818	9,934	5,045	6,819	445	926	396	3,196	4,108	31,066
1939-40	25,364	10,752	4,909	12,547	466	1,120	416	3,148	4,590	31,391
1940-41	22,191	10,005	5,903	5,408	432	1,094	433	3,702	5,807	35,530

TABLE XV.

Wartime area and outturn of the Principal crops in British India and States
(Burma excluded).

000 omitted.

	Acres.				Tons or Bales.			
	1939-40.	1940-41.	1941-42.	1942-43.	1939-40.	1940-41.	1941-42.	1942-42.
Rice (tons)	74,225	73,059	73,579	74,919	25,800	22,150	25,351	24,533
Wheat „	34,009	34,849	34,039	34,298	10,768	10,027	10,037	10,971
Jowar „	21,676	....	....	21,924	....	....	....	....
Bajra „	13,362	....	....	16,055	....	....	....	....
Maize „	5,765	....	....	6,318	....	....	....	....
Gram „	11,690	....	....	13,300	....	....	....	....
Barley „	6,101	....	....	6,695	....	....	....	....
Sugar cane „	3,640	4,598	3,515	3,590	4,662	5,794	4,371	5,692
Ground nut „	8,410	8,770	7,070	7,431	3,165	3,702	2,586	2,714
Rape and Mustard.	6,113	6,218	6,204	5,784	1,117	1,103	1,080	1,043
Sesamum „	4,031	4,097	4,145	4,328	415	433	414	463
Linseed „	3,715	3,619	3,348	3,408	466	434	361	411
Castorseed „	1,005	1,021	958	1,352	97	105	91	147
Jute (bales)	3,161	5,669	2,160	3,297	9,750	13,186	5,474	9,015
Cotton „	21,500	23,286	24,151	18,812	4,909	5,903	6,127	4,554

CHAPTER X.

Agricultural Holdings in India.

THE unit of agricultural production in the country has with the increasing pressure of the population on soil been reduced and there has been a definite trend towards small scale farming consequent upon a growing fractionisation of holdings. The tendency has been so marked as to make cultivation in many cases uneconomic. To illustrate, the average size of holding in village Suraya in Mainpuri has been reduced to 7.1 acres by 1940 from 11.7 acres in 1870, in village Pimpla Soudgar surveyed by Dr. Harold Mann, to 7.0 acres by 1915 from 40 acres in 1771; and such progressive decline has been a marked feature of agricultural progress throughout the country. Unlike the manufacturing industries our agriculture has undergone since the nineteenth century a reverse movement of the large and medium size farms to small and petty, usually, uneconomic units of cultivation. This reflects the decline of cottage industries in the beginning and the failure of factory industries later on to create sufficient employment for the growing population of the country. The agricultural population is obliged today to eke out a living with less than an acre of cultivated area *per capita*. The average size of a holding for a family is less than 2 acres for 46 per cent of the Bengal cultivators, while 76 per cent of the raiyatwari holdings in Madras have an average area of 2.4 acres. An inquiry spread over 2400 villages of Punjab revealed that 43 per cent of the cultivators' families have less than 3 acres each, of whom nearly two-fifths have less than an acre. Conditions elsewhere are not much different. These small holdings do not obviously permit any of the economies of large scale farming nor make it practicable to introduce machineries or scientific methods of cultivation. But above all their owners do not get sufficient even for their own living nor are fully employed. In certain cases the size has been so reduced that the concentration of family labour on it fails to earn even a minimum wage. The undersized holdings have too much of labour and too little of capital that the cost of production has increased a great deal. Agricultural efficiency has definitely suffered due to the movement towards smaller units of cultivation and agricultural yield per acre could not improve inspite of the application of more units of labour. In addition, a great amount of labour is wasted, as agricultural idleness is enforced due to the paucity of work on the holding itself. Low standard of living and agricultural poverty become inevitable under the circumstances. To improve such conditions and establish fair-sized farms, which may be worked as economic units, should no doubt be the objective of our planned agriculture. It cannot however be attained unless the industries draw out multitudes of labourers from cultivation. Agricultural progress is therefore limited by our industrial progress. The cultivation of the culturable waste, the

extension of irrigation facilities and the consequent intensification of cultivation, the adoption of mixed farming and the popularisation of agricultural improvements shall no doubt all contribute towards the solution of the problem of the undersized holdings, but their contribution shall not be much. The true remedy lies in restoring the economic equilibrium of occupation, which alone can enable us to effectively establish the economic unit of cultivation. From the narrow point of view of an individual, an economic holding, which should be our aim to guarantee to all the cultivators, should be of a sufficient size to be a suitable means of livelihood *i. e.*, which may yield sufficient to enable the worker to maintain himself and his family at a reasonable standard of comfort. The actual size shall however differ in each case according to the agricultural efficiency of the worker, the amount of capital invested, the system of farming practised and the productivity of the soil. The objective to assure each worker such an economic holding shall therefore not only be illusive but may prove injurious, even if practicable, for it may tend to perpetuate agricultural inefficiency and may even discount all agricultural progress. Hence our objective should be economic units of cultivation from a national standpoint *i. e.* farms whose size at any given time will enable us to raise the maximum agricultural output with the help of the units of labour and capital available for cultivation. Such an economic size may be different for different agricultural regions of the country and can not be fixed once for all. It will be a moving standard, moving with the improvements in the methods of cultivation and changes in the available supplies of labour and capital.

The problem of the under-sized holding has been made more acute by fragmentation *i. e.* by the fact that it is usually scattered all over the village in tiny plots sometimes lying miles asunder and in extreme cases so small as not to permit even the drawing or turning of a plough. If not carried to extremes, it might have provided an insurance against vagaries of season and enabled the cultivator to practise subsistence farming with sufficient diversification of crops. But the average dispersion of holdings in the country today has been carried to such extremes as to be labelled an unmitigated evil involving an endless waste of man, money and material. It increases the costs of cultivation, makes intensive farming impracticable, checks agricultural improvements, prevents the use of better implements, makes watch and ward difficult, exposes crops to damage by the stray cattle, and obliges the cultivator to keep the open field system without any farmstead on a holding. Efforts to consolidate holdings began as late as 1920 in Punjab through the co-operative agency. Progress in the beginning was slow and arrested, but patient effort yielded substantial results later on. During the first 8 years, only about 1.62 lacs acres could be consolidated but the movement soon gathered momentum and the total area consolidated till 1941 was more than 1.13 million acres or a little less than 4 per cent of the total cultivated area. The cost of consolidation has varied from year to year ranging normally between

Rs. 1-10-0 to Rs. 1-12-0 per acre, of which the tenants have to pay eight to ten annas. To accelerate the movement, Consolidation of Holdings Act was passed in November 1936, which has given power to the consolidation officers to compel the small and stubborn minority. In the United Provinces, about 77,672 pucca bighas have been consolidated through the co-operative agency and an Act has been put on the statute book since 1938, which gives power to the Revenue Department to start consolidation work in any village on the application of tenants, cultivating not less than one-third of the area in the village. C. P. however was the first to make provision for compulsory consolidation of holdings in 1928. Not less than half of the permanent right holders, holding not less than two-thirds of the occupied area in a village, may agree to a scheme of consolidation, which becomes binding on all when confirmed. 500,000 acres of land have been consolidated at an average cost of about 0/4/0 per acre. Action in other provinces has been rather slow.

The scope and purpose of consolidation is limited, and though, in the absence of anything more significant, it appears to be a major agricultural improvement, really speaking, it is no more than a paltiative for the small-size holdings. A co-operative drive should not end only with a reshuffling of the fields, it should penetrate much further into farming itself and thus restore in a new form the village communities of India, which may eventually be entrusted with the organisation and execution of an agricultural plan under the supreme direction of the state. It shall be the final stage in the evolution of our agricultural holdings with a village or even two or more combined together forming a single unit of cultivation under the collective management of the agricultural workers of the village community, who shall all have their respective shares out of the total produce rather than as they have at present from this or that particular fragment only. All land and capital equipment shall be owned jointly, as to a very great extent it was before the British rule in India. The economics of small scale farming necessitates co-operation on a much wider sphere.

TABLE XVI.

Size of Holdings.

A. Average cultivated area per cultivator: (Census of India 1921)

In Acres

Bombay	Punjab	C. P. & Berar	Madras	Bengal	Bihar Orrissa	Assam	U. P.
12.2	9.2	8.5	4.9	5.1	3.1	3.0	2.5

B. Percentage of families in Punjab cultivating

Less than one acre	1 to 2.5	2.5 to 5.0	5.0 to 10.0 Acres
22.5	15.4	17.9	20.5

- C. Percentage of families in Bengal with (Land Revenue Commission)**
 Less than 2 Acres 2-3 Acres 3-4 Acres 4-5 Acres 5-10 Acres
 46.0 11.2 9.4 8.0 17.0
 Above 10 8.4
- D. Percentage of Cultivators in Bombay (Land Revenue Administration 1921)**
 Less than 5 Acres 5-15 15-25 Above 25 Acres
 48 29 12 11
- E. Percentage of Ryotwari Holdings in Madras (Bengal Land Revenue Commission)**
 with
 Average area of 2.4 Acres 76
- F. Percentage of holdings in two tehsils of Agra District U. P. in 1931 with**
 Less than 2.5 Acres 2.5 to 4.5 5.0 to 10.0 Above 10.0 Acres
 27.3 23.3 28.9 20.5
- G. Average size of holdings in U.P. Tracts (U.P. Banking Enquiry Committee)**
 Southern Western North Central South Central Eastern
 10.5 to 12.0 8 to 10.5 6.0 to 7.0 5.0 to 5.5 3.5 to 4.5
 Acres
- H. Percentage of cultivators in U.P. (in a tehsil (Land of the two of Meerut) having Rivers)**
 Less than 5 Acres 5 to 10 10 to 20 20 to 50 over 50 Acres
 37.1 31.9 23.0 7.7 1.3
- I. Percentage of holdings in village Suraya in Mainpuri, U. P.**
 Under one Acre 1-3 Acres 3-5 Acres 5-10 10-20 over 20
 17.9 25.5 14.9 18.7 12.5 10.5
- J. Size of holdings, costs and profits in 13 typical villages in U. P. (Mukerjee—Economic Problems of modern India)**

Size.	Percentage of cultivators.	Expenses per Acre.			Gross income per Acre.			Net income including wages of farm labour.			Family-labour per holding-man days.
		Rs.	a.	p.	Rs.	a.	p.	Rs.	a.	p.	
Less than 3 Acres	11.5	41	1	0	40	0	0	-1	1	0	150
3 to 5 Acres	16.4	35	15	0	36	12	0	+0	13	0	184
5 to 10 Acres	38.5	33	5	0	35	12	0	+2	7	0	267
10 to 20 Acres.	26.5	32	0	0	37	2	0	+5	2	0	358
Over 20 Acres.	7.1	32	5	0	40	5	0	+8	0	0	390
All	100.0	34	3	0	37.	2	0	+2	15	0	274

CHAPTER XI.

Irrigation Facilities in India.

THE country had before the advent of the British a large number of inundation canals in Upper India, tanks, dams and storage works particularly in the Madras Presidency, besides wells and field embankments. Unfortunately these were neglected in the times of the East India Company and even after the assumption of power by the Crown the development of irrigation was little till the year 1880. The East India Company interested itself only in the restoration of the East Jumna and the West Jumna canals, the Cauvery and Coleroon anicuts and a few new irrigational works of the Ganges Canal and the Godavri anicut. The Lower Ganges Canal, the Agra Canal. The Sirhind Canal, and the dam at Khadakwazela are the main contributions of the early period of the Crown rule in the country. A Famine Relief and Insurance Fund was established after the famine of 1877-78 by an earmarked grant of Rs. 150 lakhs per annum, a portion of which was to be spent on the construction of such irrigation works, which could not be paying. The Famine Commission of 1880 in determining the policy of famine insurance laid down the foundations of an irrigation policy; and the Sutlej and the Chenab canals in the Punjab, certain parts of the lower Ganges and the Betwa canals in the U. P. and the canals between Cuttack and Hooghly are the results of its recommendation. The Government had undertaken the construction and maintenance of productive irrigation works even by raising loans when necessary but the progress, as a whole was very slow while protective irrigation works were badly neglected. The Irrigation Commission appointed in 1901 therefore, emphasised in its report in 1903 the great urgency of developing productive irrigation works to enable the country to grow more food and recommended in particular the construction of protective irrigation works as a part of famine insurance. The irrigation works had certainly received very little attention by that time for only a sum of Rs. 38 crores had been spent by the Government on these till then as against Rs. 350 crores spent upon railways. The recommendations of the Commission speeded up the construction and completion of new irrigation projects and form the basis of the Government's policy in this direction.

The last two decades of the nineteenth century had added some 9·0 millions acres more to the irrigated area through Government irrigation works and the achievements of the first twenty years of the present century were almost the same. After the Reforms of 1919 Irrigation became a Provincial subject and though remarkable irrigation activity has been apparently displayed since then, statistics actually show an increase of only about four million

acres in area irrigated by Government works in the next two decades—the increase being only about one million acres in the last decade and merely nominal since the inauguration of Provincial Autonomy. It is true that some of the new major works of importance have been completed since the Reforms, *i. e.*, the Sutlej Valley Works, the Sukkur Barrage and Canals, the Cauvery Reservoir and Mettur Project, the Bhandardara Dam, the Lloyd Dam, the Sarda-Oudh canals and the Damodar canals. But irrigation progress has been slow and arrested mainly on account of the limited financial resources of the provinces, the exhaustion of the possibilities of any further extension of flow irrigation from the rivers and the absence of any Irrigation Plan based on a systematic survey. Nearly three-fourths of the cultivated area in British India is still dry exposed in entirety to the vagaries of the seasonal rainfall. This above all limits our agricultural progress in both intensive and extensive farming. We have therefore to find new ways and means of irrigation, which may largely mean the exploitation of our sub-soil or low level water reservoirs to a greater extent through mechanization of our irrigation by well laid out pumping batteries in grids spread all over the country, the adoption of flood irrigation through rainfall water by suitable embankment and drainage works, and the construction, preservation and improvement of minor irrigation projects. Such an irrigation programme depends not only on a cheap power supply throughout the country but may be executed by combining the power and irrigation schemes in one co-ordinated plan. Financially, the Central Government shall have to assist the Provinces by suitable subventions for carrying out their irrigation schemes.

Since the Reforms, works costing less than Rs. 50 lakhs could be undertaken by a Provincial Government, though the approval of the Secretary of State and the Government of India is necessary for those exceeding that limit. All works can be financed by loans since 1920 although the provinces have availed little of the opportunity. The total capital outlay on Government irrigation works until 1938-39 was Rs. 152 crores out of which Rs. 114 crores were invested in productive works yielding a net profit of Rs. 418 lakhs in that year. It is now desirable that the success of an irrigation project should in no way be judged by direct monetary returns for it is not an end by itself but like a protective tariff a means to progress and prosperity. The Local Governments shall be well advised to undertake huge capital expenditure on sound irrigation projects by exploiting fully their credit resources in the market. The charges for irrigation water differ not only from crop to crop but vary from part to part and the basis of assessment is nowhere uniform. In Sind the water charges are included in the land revenue assessment, in parts of Madras, U.P. and Bombay the land revenue rates differ for irrigated and unirrigated lands, while the water charges for canal irrigation are levied separately at a flat rate according to the crops grown irrespectively of the water

used. This has resulted in waste and over-irrigation. It is therefore suggested that in so far as irrigation charges form part of the cost of production, standardisation of water rates throughout the country should be the objective in this direction. On the same principle we advocate their revision from time to time to bring about crop adjustments in any system of planned agriculture.

The progress of irrigation has not been uniform throughout the provinces. The irrigated area ranges at present from 4 per cent of the net cultivated area in Bombay, 7 per cent in Bengal, C.P. and Berar, 14 per cent in Assam, nearly one-third in Bihar, Madras, and U.P., to 60 per cent in Punjab and 84 per cent in Sind. The main factors responsible for this uneven progress have been the differences in the nature of soils and rainfall in the various provinces.

The principal sources of irrigation in the country are canals, tanks and wells. Of the total irrigated area in India more than half is irrigated by canals, the contribution of private canals being about 14 per cent. The country with its 20,000 miles of canal and 54,000 miles of distributaries has the world's largest canal system and this form of irrigation has developed most in Punjab. Sind comes second though at a great distance with U.P. and Madras following it at a close range. Nearly one-fourth of the irrigated area is served by more than 2.5 million wells of which the United Provinces has 1.35 millions, Madras .65 millions, Punjab .34 millions, and Bombay .29 millions. Well irrigation is not of any considerable importance elsewhere. Orissa having only 188 wells. It is on the decline in Madras and Bombay whereas in Rajputana the number of wells is remarkably declining year after year. Tanks serve about 11 per cent of the irrigated area and an equal percentage is served by other miscellaneous sources. Out of a total area of some six millions acres irrigated by tanks in 1940-41 3.89 millions were in Madras, 1.40 million in Bihar, .8 million in Bengal whereas Sind, Punjab, U.P., C.P., N.W.F.P. and Assam have practically speaking little or no tank irrigation. Tanks are certainly a risky source of irrigation whereas progress in well irrigation lies in using power for lifting water.

The war in the wake of a countrywide food scarcity and famine has once again focussed the attention of the Government on the problems of irrigation. Punjab proposes to construct the world's highest dam across the Sutlej and has schemes for a canal near Delhi while it is already planning for the completion of the Thal Project. Sind is contemplating an Upper and Lower Sind Barrage comparable to the great Sukkur Barrage, while its immediate war-time programme may bring four lakhs of acres into rice cultivation. The U.P. has planned for new reservoir projects on Dhasan, Shahzad and Ninadeh rivers whereas its wartime irrigation progress may add 36,350 acres of Rabi and 17,750 acres of Kharif at a

total cost of Rs. 3,12,000. An additional area of 50,000 acres is being planned to be irrigated by constructing 200 new tube wells. The plans of Bengal include an irrigation and flushing project for an area of 916 sq. miles in Burdwan, Hooghly and Howrah, and Darakeswar Reservoir Project. It has already undertaken the execution of minor irrigation or drainage works. Madras has a project for impounding the water of Tungabhadra river and the lower Bhavani Scheme. It has already undertaken the construction of an anicut in East Godavari District and a tank project in Coimbatore. Bombay is also planning the extension of Ekruk tank, Gokak left bank canal and a reservoir on Dharma river.

These schemes will certainly make their own contributions to the irrigation progress in the country and may be welcome as emergency schemes for whatever they are worth. But the long term projects must include far more bigger strides based on an alliance of electricity and irrigation projects, which may give to the countryside the wherewithal of both agricultural and industrial progress.

TABLE No. XVII—(a).

Percentages of irrigated area by various sources in British India.

1940-41.

Province.	Canal irrigated.		By tanks.	By wells.	By other sources.	Total.	% of irrigated area to net sown area.
	Government.	Private.					
Ajmer-Marwar	...	...	29	70	1	100	36
Assam	...	58	...	...	42	100	14
Bengal	13	15	46	2	24	100	7
Bihar	14	18	27	11	30	100	30
Bombay	21	6	10	60	3	100	4
C. P. and Berar	...	87	...	9	4	100	7
Madras	43	2	37	16	2	100	30
N. W. F. P.	43	41	...	8	8	100	42
Orissa	22	4	21	1	52	100	23
Punjab	69	3	...	27	1	100	60
Sind	91	...	...	...	9	100	84
U. P.	33	...	...	51	16	100	32
British India	45	8	11	25	11	100	26

TABLE XVII (b).

Principal Crops irrigated in British India in 1940-41.

000 acres.				000 acres.					
Crop.			Area sown.	Area irrigated	Crop.			Area sown.	Area irrigated
Rice	....	....	68,849	20,329	Bajra	....	....	14,085	1,373
Wheat	....	....	26,446	12,285	Maize	....	....	5,730	9,259
Barley	....	....	6,328	2,806	Sugarcane	....	....	4,402	2,801
Jowar	....	....	21,249	1,454	Cotton	....	....	14,082	4,055

TABLE XVII (c)

Progress of irrigation in India.

Area Irrigated.		1880.	1903.	1913-14.	1929-30.	1937-38.	1938-39.	1939-40.	1940-41.
Million acres	....	29	44	46.8	51.01	52.83	53.73	55.08	55.79

TABLE XVII (d)

Area irrigated by Government Works.

	1878-79.	1900-01.	1919-20.	1929-30.	1937-38.	1938-39.	
Million acres	10.5 4.5	19.25 10.5	28.1	31.61 25.60	32.81	32.61 24.71	Total By productive works.

TABLE XVII (e)

Area irrigated in millions of acres by various sources.

	1921-22.	1925-26.	1929-30.	1935-36.	1937-38.	1938-39.	1939-40.	1940-41.
Government canals	20.48	20.53	23.07	23.76	24.66	24.41	25.18	25.36
Private canals	2.68	3.83	3.65	3.87	3.61	3.53	3.94	4.48
Tanks	6.99	5.80	6.30	6.11	6.25	5.87	5.87	6.14
Wells	12.13	11.72	12.70	12.72	12.57	13.2	13.45	13.76
Others	5.57	5.68	5.28	5.13	5.19	6.7	6.60	6.05

TABLE XVII (f)

Working of Public Irrigation Works in 1938-39.

	Mileage in operation.		Total capital outlay.	Net profit.	Area irrigated.
	Canals.	Distributaries.	Lakhs of rupees.	Lakhs of rupees.	Acres.
Productive	13,639	43,807	114,00.50	418.07	24,709,120
Unproductive	4,760	10,558	34,68.28	—93.65	28,84,259
Drainage, etc.	1,577	....	4,10.99	18.40	....

CHAPTER XII.

Marketing of Agricultural Produce in India.

CO-OPERATIVE approach or State control were both denied to agricultural marketing in India until a few years back, since when, some half-hearted measures have been taken to improve the conditions. The subject seemed to be no body's business and the prevailing chaotic conditions passed under the label of the free play of economic forces. Attention could not however remain diverted for ever as it was realized during the Great Depression that agricultural marketing is the crux of the entire problem of rural prosperity. The entire agricultural co-operative structure, based mainly as it was on credit, was menaced with collapse during the slump. It was then realised that co-operative marketing could have saved the situation. Fanatic efforts were made to organise production and sale societies among the cultivators. Within the course of four years after 1934-35 the number of such societies was more than doubled and stood at 4,118 in 1938-39, the increase in that single year alone being greater than the total number of such societies before the Depression in 1928-29, which was 1061. In 1939-40 the total number of trading societies in India was 4,120 with a membership of about 4.5 lakhs. These handled agricultural produce valued at Rs. 11.42 crores. The progress of co-operative marketing has certainly been very slow and hardly stands any comparison with its success abroad, say, in U. S. A., where as back as 1935-36 the producers' co-operatives handled goods valued at more than 40 times the value of goods handled by similar societies in India in 1939-40. The United Provinces has the largest number of producers' co-operatives with Bihar as a close second and Orissa, Assam and N. W. F. P. at the bottom. There are about 1,900 sugarcane societies handling cane valued at about Rs. 7 crores. These are mostly in U. P. and Bihar. In the former province, in 1940-41 they supplied 80 per cent of the sugar cane required by factories whereas in the latter though the number of societies is more, only 13 per cent of such cane was handled by them. The cotton sale societies, which are concentrated in Karnatak and Gujrat in the Bombay Province, undertake the sale of cotton and in some cases even by the 'hedging' method, whereas a few also gin and press it. The main object of the marketing societies is to arrange for the efficient disposal of agricultural produce and also to provide facilities for obtaining better prices by an even distribution of the supplies in the market. The co-operative supply of milk has developed most in Madras and Bengal while ghee societies are concentrated mostly in the south-western and western districts of the United Provinces, Societies for the sale of eggs have usually failed while those of fruits and vegetable growers are small. Credit and marketing are both an integral part of the cultivator's economy and a close alliance between the two lays down the lines of future deve-

lopment. Equally important is the provision of warehouse and godown facilities which are badly needed. The Local Government should try to provide such facilities by liberal advances for the purpose. Moreover, co-operative marketing shall find much encouragement if it is linked with certain privileges in the various food procurement schemes of the Government *e. g.* it may be given a preference in the appointment of Government commission agents.

The establishment of the Central Agricultural Marketing Department with effect from 1st January, 1935 marks a turning point in the marketing policy of the Government of India. The provinces have also appointed separate marketing officers. In addition to the development work, the central marketing staff in conjunction with the provincial staff was entrusted with the two-fold duty of (i) marketing surveys with a view to formulate lines of future improvement and (ii) drawing up suitable grade specifications. A number of surveys have already been completed and their reports published, while many are still in the various stages of progress. The results of these surveys have formed the basis of a number of practical improvements in the conditions of agricultural marketing in the country. The Agricultural Produce (Grading and Marking) Act 1937 marks the beginning of an important effort to prescribe grade designations for scheduled products, which include fruits, vegetables, eggs, dairy produce, tobacco, coffee, hides and skins, fruit-products, ata, oil seeds, vegetable oils, cotton, rice, lac, wheat, *sann* hemp, sugarcane, gur, myrobalans and *bura*. The development of AGMARK trading is on the high way to progress and during 1942 goods valued at Rs. 241 lakhs were sold under the standardised graded label for whose marking there were 736 commercial centres. Graded 'Ghee' alone accounted for more than Rs. 78 lakhs in value. Another effort has been towards the adoption of standard contract terms, which were finally agreed in 1938 for wheat and linseed, and in 1939 for ground-nut. To make them more uniform certain amendments in terms have been made as a result of an informal conference of trade associations in 1941. Standard containers for the transit of eggs and fruits are also being adopted. To disseminate market information arrangements have been made for broadcasts of weekly market-news, in particular of the closing quotations in the Hapur market from the Delhi Station of the All-India Radio in English and Hindustani. Public demonstration in the technique of grading and advertising AGMARK products is another useful activity of the marketing department.

Attempts have also been made to establish regulated markets administered on a statutory basis by a representative marketing committee to safeguard against defective marketing practices, false weighing, unauthorised deductions and unduly low quotations. Though the first step in this direction was taken with the passing of the Berar Cotton and Grain Markets Law of 1897 more compre-

ensive legislation has come only during the last one decade or so. The Agricultural Marketing Adviser in 1938 circulated a draft model bill for the regulation of markets which has since formed the basis of necessary legislation in a number of provinces and states. Regulated markets have thus been established in Punjab, N.W.F.P., Sind, Madras, Bombay, C. P., Mysore, and Hyderabad on the basis of Agricultural Produce Markets Acts. The cultivator had also been adversely affected by the confounding variety of weights and measures in the markets. With a view to secure standardization some of the Provincial Governments adopted legislation. Such attempts have been supplemented by the Standards of Weights Act 1939 enacted by the Central Government. It has come into force with effect from 1st July, 1942.

In spite of all these remedial measures the various marketing surveys reveal a great leakage in the marketing economy of the cultivator, who gets for a rupee paid by the consumer only annas 10 for linseed, annas 9 pies 3 for wheat, annas 8 pies 3 for rice, annas 8 for potatoes and annas 7 pies 6 for groundnuts. His produce passes through a long chain of middlemen. The producer himself sells in the assembling market only $\frac{1}{2}$ of the marketable surplus of groundnuts, $\frac{1}{8}$ of that of rice, $\frac{1}{5}$ of that of linseed and a minor quantity of potatoes.

Conditions of agricultural marketing have been remarkably affected by certain measures adopted since the war. As a result of the fifth Price Control Conference held in April 1942, the Food-grains Control Order was issued in May 1942 according to which all persons other than producers engaged in trade in quantities exceeding 20 mds. had to take a licence from the Provincial Governments and were required to keep accounts and submit monthly returns of purchases, sales and stocks. It originally applied to major foodgrains but later on its scope was extended to cover minor millets and pulses also. By a notification of 22nd May 1943 the Provincial Governments were empowered to include within the purview of the Order the producer as well. The food grains trade is thus no longer free and though exact statistical information is not available, this change must have shortened the long chain of middlemen. It is therefore, not wrong to assume that the producer has been getting during the war-time an increasing share out of the price paid by the local consumer.

The war-time measures of price control have further modified the free-play of economic forces. In the beginning the most comprehensive of such measures was the Wheat Control Order promulgated in December 1941 fixing a maximum statutory price and later controlling the movement of stocks as well. The Foodgrains Futures and Options Prohibition Order came into force with effect from 28th May 1942 while the wheat control Order was withdrawn on January 25, 1943. On the whole, the administration of price

control, was left to the Provincial Governments, who unfortunately did not follow any uniform policy. With no freedom of movement of crops the integration of agricultural prices in the country no longer obtained. Any way, by August 1943, Madras had fixed maximum prices for paddy and rice, Sind had enforced statutory price control covering a large number of commodities, U. P. had laid down maximum prices for wheat, gram, barley and peas, Bombay had statutory price control while C. P. had price control as well as ceiling prices. Bengal had fixed maximum prices for wheat, Atta and flour only. Orissa, N.W.F.P., Bihar and Assam had no price control nor any ceiling prices. Punjab had fixed maximum prices for export only. The provincial administrations were actuated in their price policies by narrow considerations of creating Funds for post-war development. They vied with each other in devising control measures designed to inflate prices outside their own jurisdiction and make a profit out of the bargain by robbing in reality their own producers. The Governments of Sind and Punjab tried to profiteer out of the exports of wheat, while U. P. imposed a licence fee for exports of Gur, which was equivalent to 40 per cent of the price. Not only did it break up the integration of prices in the country but was a potent cause of food scarcity and famine, while the producers suffered by getting less than what was paid by the final consumer of the produce in an outside province. This has certainly reduced the producers' share in the price paid by the consumer on that portion of the produce, which is exported to the other provinces. The Food Grains Policy Committee 1943 favoured statutory price control of major food grains. The Central Government has accepted this recommendation and it is hoped within a short time a uniform policy shall be adopted by the different provinces and states restoring once again the economic unity of the country. The maximum wholesale price of wheat for the current harvest has been fixed at Rs. 9/8 per md. to Rs. 10/10 per md. in Punjab, and at Rs. 10-4 per maund in the assembling markets of U. P. Price Control should be so administered as to reduce the difference in the prices paid by the consumers and those received by the producers to the minimum.

The Provincial procurement arrangements have further modified the free play of economic forces in the marketing of agricultural produce. Regular requisitioning or the general creation of Provincial or state monopolies has not yet been adopted and we fear any attempts in these directions shall give a rude shock to public confidence. Rigorous enforcement of the Foodgrains Control Order and of Anti-hoarding measures may procure all that is needed. The procurement machinery is not uniform. In U. P. it consists of five Regional Food Controllers with Deputy Controllers, Transport Officers and large marketing staff and works through the agency of Purchasing Agents. It has strict control over movement. In Sind on the other hand there is a syndicate of the four Karachi flour mills for wheat which makes direct contact with the producers

through brokers and sub-brokers. Usually the Government procurement plans have lengthened the chain of middlemen and prevented competition among buyers. It is therefore necessary that in the interest of the producers the minimum prices that must be paid to him should also be fixed along with the maximum prices otherwise his interests are likely to suffer under the present procurement arrangements.

Regarding the marketing of fibre crops *viz.*, cotton and jute different schemes have been adopted. During the early period of the war cotton prices had been falling and the Government was obliged to enter the market as a purchaser in March 1942 to arrest the downward trend. Later on, cotton prices soared very high and the Government banned 'Teji Mandi' and prohibited forward contracts by an order, of 30th April 1943, to check the inflationary rise. Dealings in 'futures' however were re-opened with certain stipulations on the last Dewali Day. Cotton prices too are not the result of the free play of economic forces for floors and ceilings have been fixed at Rs. 400 and Rs. 550 respectively for Jarila. By the Jute (Price Control) Order 1944, which came into force with effect from 5th April 1944 maximum and minimum prices for raw jute and maximum prices for manufactured goods for export have been fixed.

The war may give to the country an administrative machinery to control prices. It should not be dismantled readily in the post-war period for it shall be needed, if the cultivators' interests are not to suffer by default, for assuring minimum prices to the producers and for reducing to the minimum that part of the price paid by the consumer which does not go to him at present either because of the long chain of middlemen, the inadequate transport and ware house facilities, or because the price variations between the harvest and the 'off' season are great. Let us perfect our administrative machinery with that long term objective in view.

TABLE

Average Merchandising charges on Wheat in

	Punjab.		U. P.
	Colony.	Non-Colony.	
	Rs. a. p.	Rs. a. p.	Rs. a. p.
A. <i>Payable by sellers.</i>			
1. Handling (a) Up to weightment Market	0 11 8	0 7 9	0 6 10
(b) Weightment to Godown	....	....	0 3 1
2. Karda, Dhalta and Dana	0 0 9	....	0 2 5
3. Commission	0 15 2	0 6 6	0 4 5
4. Brokerage	0 1 2	0 1 7	0 1 6
5. Charity	0 1 0	0 0 9	0 1 0
6. Miscellaneous	0 3 0	0 6 8	0 4 1
Total	2 0 9	1 7 3	1 7 4
B. <i>Payable by Buyers.</i>			
1. Handling			
(a) Up to weightment	0 9 0	0 1 7	0 0 7
(b) Weightment to godown	....	0 9 0	0 6 3
2. Commission	0 4 10	0 15 6	1 0 8
3. Brokerage ....	....	0 0 6	0 0 4
4. Charity ....	....	....	0 0 4
5. Miscellaneous ....	....	....	....
Total	0 13 10	1 10 7	1 8 2
Total Market Charges	2 14 7	3 1 10	2 15 6
Octroi, Toll etc.	0 0 6	0 9 7	0 8 6
Grand Total	2 15 1	3 11 5	3 8 0

XVIII.

wholesale assembling markets per 100 rupees.

C. I.	Rajputana.	Sind.	C. P.	Bihar and Orissa.	Bombay.
Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.
0 7 6	0 6 8	1 6 9	0 3 2	0 1 11	0 8 4
....	....	....	0 2 8	....	....
1 14 0	0 10 0	....	1 3 2	0 10 8	....
1 0 0	0 12 0	0 15 0	0 11 9	0 13 7	1 0 7
0 1 0	0 3 4	0 5 3	0 1 1	0 1 8	....
0 0 6	0 1 8	0 5 3	0 3 11	0 3 11	0 2 1
0 2 0	....	....	0 8 5	....	0 0 11
3 9 0	2 1 8	3 0 3	3 12 2	1 15 9	1 11 11
....	0 3 4	....	0 0 11	0 4 7	0 2 11
0 6 0	0 3 4	0 10 6	0 2 9	....	0 10 0
....	....	....	....	0 15 11	0 15 0
....	0 3 4	0 7 0	0 0 9	....	0 9 0
....	....	....	....	0 2 4	0 0 4
....	....	....	0 1 3	0 2 0	0 1 10
0 6 0	0 10 0	1 1 6	0 5 8	1 8 10	2 7 1
3 15 0	2 11 8	4 2 6	4 1 10	3 8 7	4 3 0
0 3 9	....	0 10 6	0 8 10	....	0 15 10
4 2 9	2 11 8	4 13 0	4 10 9	3 8 7	5 2 10

CHAPTER XIII.

Pre-War Industrial Progress in India.

AT the outbreak of the present war, India ranked eighth among the industrial countries of the world. It had then, more than ten thousand factories, daily employing about 17½ lakhs workers, and nearly 1850 mining concerns providing employment to some 3 lakhs workers per day at an average. If we reckon plantation and small scale factories employing not less than ten workers each, these industries provided employment to some 2·70 million workers more. The paid-up capital of the joint-stock companies registered in India amounted to more than Rs. 290 crores in 1939 while the total capital invested in industries was estimated at Rs. 750 crores of which a substantial portion was foreign. The total British capital investments in India were estimated before the Great War in the vicinity of 600 crores of rupees. According to a memorandum of the Associated Chamber of Commerce submitted before the Simon Commission the total foreign capital investments in India were placed at £ 1000 million sterling. The Indian Finance has estimated that between 1920 and 1935, £ 260 millions of foreign capital have been withdrawn from India. Any way, these foreign vested interests in our industrial structure are a cause of weakness and sooner they are liquidated the better it is. Again, industrial development until the present war had hardly led us on the highway to industrialization. Total employment in factories and mines taken together was outnumbered by say a half-year's increase alone in population. We had established only a few industries or large scale *viz.* cotton, jute, iron and steel, sugar, tea, cement, and some paper mills, leather factories and electricity generating plants. Leaving aside the case of jute and tea, which falls under a different category we were self-sufficient in neither, though a high degree of self-sufficiency was lately reached in the case of cotton textiles, sugar and cement. Nevertheless, in 1938-39 we imported cotton manufactures valued at more than Rs. 14 crores. Nearly 30 per cent of our steel requirements were met from outside and we entirely depended on imports for special steels and for certain machinery and mill works, for locomotives, automobiles and aeroplanes. The production of paper was only 1·18 million cwts., while we imported 3·07 million cwts. and did not produce at all special papers including the newsprint. We imported nearly 20% of cement produced in the country while the imports of matches still amounted to more than 1·2 million gross of boxes. The 51 leather factories turned out some 40 lakhs pairs of shoes but in addition we imported 4·50 lakhs pairs. In 1938-39 we imported glass valued at Rs. 125 lakhs, soaps of Rs. 22 lakhs, toys etc. worth Rs. 37 lakhs besides a number of other finished consumers' goods. The large scale chemical industries were only in an incipient stage and

imports of chemicals amounted to more than Rs. 305 lakhs. Subsidiary industries for turning out accessories and minor products had just begun to emerge. On the wholesome of the basic and key industries were badly neglected while a few consumers' good industries without any plans had been established. This ill-balanced and meagre growth of industries which came out of a slow and arrested progress failed to create the employment which the interest of the country's growing population demanded. Consequently, in the wake of continuous underemployment and unemployment for millions, the demand for manufactured goods was little in spite of a very low standard of living, which limited the scope of further industrial expansion in the country from the private capital point of view. During the Depression industrial profits had sunk very low and the industry was still faced with the menace of overproduction particularly in jute, cements, sugar and even in matches.

Industrial progress in India has been very slow and arrested not because as we are often told by interested theorists, that by nature the country is not suited for factory industry or that capital is shy. The chief desideratum has been the absence of freedom to shape our economic policy; and the foreign vested rights, who administered it, have not quite unnaturally looked to their own interest first. Laissez faire and Laissez passe were the sheet anchor of British economic policy in India until 1924 and these succeeded well in first crushing the Indian cottage industries and then in checking the growth of factory industries in the country. And yet the foundations of the cotton mill industry in Bombay and of the Jute industry in Bengal were laid in 1855 for the natural and other economic advantages were so tempting. But the development in the beginning was irregular and halting, although the Swadeshi movement in the former case and the monopoly of the raw material in the latter had stimulated growth. A few engineering workshops had also emerged during this early period while Tata's enterprise had established an iron and steel plant at Sakchi in 1911. So, when the Great War broke out in 1914, the country had a few industries with almost a total absence of basic engineering and heavy chemical industries. The war checked the free flow of imported consumers' goods in the country and this created conditions for placing on a firm footing the few established industries. But it did no more than this and the country emerged out of the Great War with all the weaknesses of the industrial structure of the pre-war period. To set matters right, the Industrial Commission in 1917 had advocated the placing of the responsibility of industrial development on the State. The Fiscal Commission made a definite move towards this changed policy by advocating discriminate protection for any industry having natural advantages, which cannot be developed without protection, and which eventually will be able to face world competition.

The Fiscal Autonomy Convention was adopted in 1921 although it still lacks substance. It was nonetheless a turning point

in the history of industrial progress of the country. A number of industries have been granted protection after 1924 and the results of this policy may be judged by the success achieved in the case of cotton, steel, sugar, paper and match industry. But in the absence of a definite plan it could not achieve much except the fostering of a few consumers' goods industries and the industrial structure remained as ill balanced as before with little development of power resources, or of heavy and basic industries. The dependence of industries on imports for various essentials, capital equipment, machinery and spare parts from the pin to the prime movers, was as great as before. Industrial research and education were almost totally lacking while the supply of trained technicians was very inadequate. Above all, the country was turning out goods for which the masses had little purchasing power but was depending on imports for those, which its own industries and men badly needed. It was in this state of disorganisation and ill-balanced industrial economy that the present war broke out and leaving aside a few commodities here and there, it did not find any new weapons in the industrial armoury of the country.

TABLE XIX.
Joint-Stock Companies, Factories and Mining Statistics.
1894—1939.

Factories.			Joint-Stock companies.			Mines.		Index ¹ of Industrial activity (1935=100)
Year.	Number.	Daily workers (in lakhs.)	Year.	Number.	Paid up capital (in crores of Rs.)	Number.	Daily workers (in lakhs).	
1894	815	3.49	1910	2,304	72.11	....	....	....
1898	1,092	4.23	1914	2,744	76.56	....	....	....
1902	1,533	5.41	1918	2,668	99.11	....	....	....
1906	1,855	6.91	1922 ²	5,189	230.55	1804	2.58	....
1910	2,359	7.93	1926	5,305	276.96	1897	2.60	....
1914	2,936	9.51	1930	6,919	286.33	1669	2.61	....
1918	2,436	11.23	1931	7,328	282.68	1471	2.30	....
1922	5,144	13.61	1932	7,997	285.90	1281	2.04	....
1926	7,251	15.18	1933	8,715	286.47	1424	2.06	....
1930	8,148	15.28	1934	9,434	300.80	1675	2.29	87.7
1931	8,143	14.39	1935	9,842	304.04	1813	2.54	97.3
1932	8,241	14.19	1936	10,384	279.49	1973	2.69	100.7
1934	8,658	14.87	1937	10,951	285.77	1925	2.67	105.0
1935	8,831	16.11	1938	10,657	279.17	1953	3.06	111.5
1936	9,323	16.52	1939	11,114	290.41	1864	3.05	111.1
1937	8,930	16.76						
1938	9,743	17.38						
1939	10,466	18.44						

1. 'Capital's General Index of Industrial Activity.
2. Figures for 1924 for Mines.

TABLE XX.

**Production and Profits of the Principal Industries
in India.**

1900-1939

A. Textiles—

Year.	Cotton Mills.			Jute Mills.		Bales used in lakhs.
	Number.	Bales consumed ooo omitted.	Workers engaged ooo omitted.	Number.	Loom.	
1900	193	1,453	161	36	15,213	....
1905	197	1,879	195	39	21,195	2,957
1910	263	1,935	233	58	31,755	4,459
1915	272	2,102	265	70	38,354	4,805
1920	253	1,952	311	77	40,477	5,082
1925	337	2,226	367	90	49,399	5,519
1930	348	2,573	384	98	58,139	6,246
1935	365	3,123	414	100	60,397	4,454
1939	389	3,810	441	107	64,773	6,053

B. Pig Iron Production in 000 tons—

1900	1920	1930	1935	1938-39	1939-40
35	558	1,175	892	1,576	1,838

C. Steel Production in 000 tons—

	1916-17	1921-22	1926-27	1934-35	1938-39	1939-40
Steel Ingots	139	182	530	834	977	1070
Finished	99	125	374	604	726	804

D. Sugar Mills—

	1930	1935	1936	1937	1938	1939
No. of Factories	27	130	137	137	136	139
Production in 000 tons.	110	578	932	1,111	930	650

E. Coal—000 tons—

	1900	1910	1920	1930	1935	1939
Production	6,118	12,047	17,962	23,803	23,016	27,657
Imports	135	316	39	171	77	50
Exports	490	988	1,225	461	217	1673

F. Tea—

	1900	1910	1920	1930	1935	1939
Area 000 Acres	500	663	704	804	832	833
Output 000 lbs	200	263	345	391	394	453

Profit Index 1928=100.

	Cotton	Jute.	Iron & Steel.	Sugar.	Coal.	Tea.
1930	37.9	37.9	18.6 (1929)	91.3	122.1	14.9
1935	89.0	39.8	192.9	136.4	63.8	63.5
1939	154.6	13.6	289.5	151.8	139.1	96.2

TABLE XXI.

**Factories and workers in different industries in
India in 1939.**

Industry.	Number of factories.	Average daily number of workers.
Cotton Textiles	423	569,000
Jute mills	105	309,000
Cotton Ginning etc.	2,526	182,000
Railway and Tramway works	171	111,000
Engineering	760	111,000
Sugar	175	79,000
Tea	991	67,000
Rice mills	1,009	44,000
Printing, Book Binding, etc.	452	41,000
Jute presses	101	36,000
Ordnance	24	23,000
Dockyard, ship building	21	19,000
Cement, Lime, Potteries	40	17,000
Oil Mills	265	17,000
Match	118	16,000
Rope works	47	16,000
Bricks and Tiles	142	16,000
Leather, Shoes and Tanneries	51	13,000
Woollen Mills	18	12,000
Tobacco	30	11,000
Dyeing and Bleaching	76	10,000
Carpentry etc.	58	8,000
Coffee works	32	8,000
Paper Mills	12	8,000
Glass works	63	8,000
Stone Dressing	18	8,000
Rubber Factories	30	8,000
Hosiery works	110	8,000
Silk Mills	69	7,000
Coach Building	97	7,000
Flour Mills	74	6,000
Kerosene Tinning and Packing etc.	32	6,000

CHAPTER XIV.

Indian Industries and the War.

THE WAR created certain direct and indirect conditions for giving a jolt to the Indian industries. Among the direct conditions the significant are—the organisation of an Eastern Group Supply Council in the earlier stages, the purchases made by the Chief Controller of Purchase (Munitions) in India, the orders placed by the Supply Department, and the assurance given by the Government in a notification issued in June 1940 to protect the newly established essential war-time industries even in the post-war period. The visits of the Roger and Grady Missions too were not without their own contributions towards industrialisation. The force of these factors may be judged by the fact that the orders of the Supply Department amounted to Rs. 85 crores in the first 16 months of the war, Rs. 118 crores in 1941, Rs. 223 crores in 1942 and to Rs. 142 crores for the first five months only of 1943; the total purchases made by the Chief Controller of Purchase were over Rs. 100 crores in 1940, 1941 and 1942; and the Roger Mission gave twenty new projects by March 1942. Among the indirect conditions created by the war favourable for the development of industries mention may be made of the cutting off or diminution in the supplies of the imported manufactured goods, which altogether blunted the edge of foreign competition for the time being, the cheap money conditions prevailing in the country, the unending labour supplies and the setting up of a Board of Scientific and Industrial Research in 1940. People seem to be out for industrialisation and no less than nearly 500 applications involving an aggregate investment of Rs. 15 crores were approved during the first six months alone of the Control of Capital Issue Order of 1943 for starting or expanding industries. The Capital index of general industrial activity gradually rose from 111.1 in 1938-39 to 122.7 in 1941-42 but fell again to 108.8 in 1942-43 touching the lowest point of 96.3 in September 1943. The number of workers employed in factories increased from 17.51 lacs in 1938-39 to 22.82 lacs in 1941-42. Our war time industrial progress has been but slow and limited and got a set back last year. According to an estimate made by *Indian Finance* the industrial earnings in India increased by about Rs. 100 crores in the first three years of war, but here it has to be remembered that earnings depend not only on production but equally on prices. In any case, industrial output has not increased as fast as say in U. S. A. where with 1935-39=100, the index number of aircraft and ship-building had risen even by 1941 to 550, of machine tools and engines to 370 of electrical machinery to 210. Index of goods currently consumed also rose to 140 while in India the supply of consumers' goods has remarkably fallen not only on account of the greatly reduced imports of these goods from abroad but because the gap has not been filled to any substantial extent by internal pro-

duction and the Government takes away nearly the whole output of the woollen industry, the iron and steel industry, aircraft and shipbuilding industries and obviously of the munition factories; 60 per cent of that of the cotton mills and nearly one-fifth of the production of jute mills; 70 % of paper production and a major portion of the output of the leather industry; and the civilian building industry has come to almost a standstill.

Surveying the individual industries we may note among our new enterprises the manufacture of aluminium for the first time during the war period though the plants were ordered much before, the opening of a shipbuilding yard at Vizagapatam in 1940, which now gives employment to some 30,000 men in building of small naval vessels and repairing, the organisation of the Hindustan Aircraft Company Limited, at Bangalore in 1941 for assembling and repairing, the contemplated move of the Birlas for the manufacture of the medium sized motor cars and light trucks; and above all the emergence of a heavy chemical industry. The Alkali and Chemical Corporation now owns a caustic soda and chlorine factory near Calcutta and a soda ash factory in the Punjab. Tata Chemicals set up their plant in 1941 while more than 50 new chemical minor plants have been added. The Government has also erected a plant for the manufacture of special bleaching powder.

Of the war time expansion in the established industries the largest has been in iron and steel. The output of finished steel is now more than 50 per cent of the output of 1938-39 with the second largest steel plant having commenced operations since November 1939. A large variety of special steels are also being manufactured now within the country. The output of pig iron has also increased by about 40 per cent. The cotton industry, which at the outbreak of the hostilities was gradually recovering from the depression, found favourable conditions during the war period to increase production, which actually however did not increase except in 1941-42 by about 220 million yards and was actually short in 1939-40 and 1942-43 by nearly 250 million yards each year of the output of 1938-39. Yet it reaped very high profits for drastic diminution of imported cloth and the reduction of home production coupled with a significant expansion of exports from 177 million yards in 1938-39 to 818 million yds. in 1942-43 caused considerable shortages, which shot up the prices in summer 1943 to more than five times the pre-war level. The Jute industry expanded in the first and the third year of the war but had to suffer set backs in the second and the fourth year due to the loss of markets, shipping difficulties, erratic course of the American Orders and coal shortage of late. The sugar industry had a unique position after the fall of Phillipines and Java in 1941 and yet the output of sugar was only 7.78 lac tons in 1941-42 as compared to 10.95 lacs tons of 1940-41 or 12.41 lacs ton of 1939-40. It was mainly due to the restrictive policy followed by the Government, and therefore, the output

improved in 1942-43 when that policy was given up. Due to the rise in prices the industry was able to establish itself on firm footings. Production of paper increased from 11.84 lakhs cwts. in 1938-39 to 18.71 lakhs cwts. in 1941-42 but fell again by 32 per cent in 1942-43. It has however been insufficient for the country's requirement which is almost suffering from a paper famine with 70 per cent of production being earmarked for the Government. The output of cement has considerably increased and the imports have dwindled to a nominal figure but at the same time it has become scarce. The output of glass factories too has expanded greatly and the country is now capable of meeting 50 per cent of its own requirements. A considerable expansion has taken place in the leather industry mainly due to the military requirement and the cessation of Czechoslovakian and Japanese made footwear. But perhaps the most striking expansion has been witnessed in the drugs industry which now manufacture more than 75 per cent of the drugs formerly imported. The manufacture of machine tools is another notable feature of the wartime industrial expansion of the country. Over 4500 out of 5000 items of small tools are now made in the country while 50 per cent of the items required by the defence services are now being supplied from India. The production of miscellaneous articles such as toilet goods, pencils and inks, buttons, hats, electrical household goods, toys, confectionery and tinned fruits, dehydrated vegetables, rubber goods, lead pipes, binoculars, safety razors etc. has all been stimulated either due to the diminution in imports or due to the military requirements.

On the whole, we have moved a little in industrial production, mostly of consumers goods, while the countries outside during this very period have taken big strides in an all round industrial progress keeping heavy industries in the forefront. We shall perhaps come out of the war still lower on the list of the industrial countries of the world and even if we retain our position, we shall certainly lag far behind. We did not lack resources in money or material but we did lack machines, power, trained men and above all a free National Government to take up the responsibility of industrial progress on its own shoulders. The post-war is not going to record to record a better progress unless these desiderata are removed. Our progress is limited by our ill-balanced industrial economy in so far as our basic industries have not developed enough to grease the wheels of a Great Industrial Progress. We must have enough of electric power throughout the country at cheap rates and simultaneously enough machines and machine tools must be made available. These are vital for our very existence and if private enterprise and capital with necessary State guarantee and control fails to establish industries for their supply, the Government should immediately in the post-war period, if earlier execution is not practicable, undertake their operation. This is practicable only when we have a truly representative Government with complete freedom of action. The Bombay Fifteen Year Plan has really much to commend for it seeks

to establish a balanced industrial economy and recognises at once the greater urgency of developing basic industries over the others. We should have without delay plant for the manufacture of producers' goods.

TABLE XXII.

War-time Industrial Progress in India.

A. Capital Index (1935=100)	1938-39	1939-40	1940-41	1941-42	1942-43
General Industrial Activity.	111.1	114.0	117.3	122.7	108.8
Coal Production	118.8	120.1	124.5	116.6	114.7
Paper	125.1	147.8	183.6	193.2	153.9
Pig Iron ,,	108.6	127.1	135.5	101.6	130.6
Steel Ingots ,,	113.4	124.3	139.1	157.3	144.2
Jute Manufacture....	121.8	128.0	110.8	122.1	117.8
Cotton Consumption	120.4	114.3	128.2	150.3	154.4
B. Cotton Manufacture, in million yards.	4269.3	4012.4	4269.4	4493.5	4029.2
Factory Sugar in 000 tons.	651	1241	1095	778	1070
Tea in 000 lbs.	453	464	464	568	535
Jute Manufactures in 000 tons.	1,222	1,277	1,108	1,259	1,100
Pig Iron 000 tons	1,576	1,838	....	....	....
Finished Steel 000 tons.	935	1,066	...	....	....
Paper 000 cwts.	1,184	1,416	1,753	1,871	1,326
Coal 000 tons	27,657	29,387	....	....	....
C. Indices of Industrial Production used by Dr. L. C. Jain.					
Iron and Steel	100	110	125	150	200
Cotton Manufacture	100	94	100	153	92
Jute ,,	100	106	91	103	85

Sugar Manufacture	100	191	168	120	163
Paper „	100	118	149	159	112
Electrical Energy generated.	100	109	115	135	135
D. Profit Index (1928=100)					
Cotton Mills	154·6	217·1	533·2	....	....
Jute Mills	13·6	48·9	46·8	....	....
Sugar Mills	179·4	186·8	248·3	....	....
Paper Mills	151·8	342·0	419·8	....	....
Iron and Steel	289·5	300·8	387·4	....	....
Coal Cos	139·1	140·2	115·0	....	....
Tea Cos	73·9	96·2	95·5	139·9	...
E. Factory Workers (in lakhs).					
Total	17·51	18·44	21·56	22·82	....
Textiles	8·17	8·29	9·53	9·65	....
Engineering	1·48	1·59	2·04	2·24	....
Minerals and Metals	·55	·62	·76	·82	...
Food, Drink etc.	·97	·1·04	1·20	1·21	....
Chemicals and Drugs	·56	·57	·71	·73	....
Paper and Printing	·44	·46	·48	·49	....
Wood, stone and Glass.	·52	·50	·78	·82	....
Hides and skins	·13	·18	·24	·30	....
Miscellaneous	·20	·22	·35	·38	....

CHAPTER XV.

Our Basic and Key Industries.

INDUSTRIAL progress so far, as we have already seen, has been seriously handicapped by the lack of even the minimum equipment of industries, whose products are indispensable to other industries. These basic and key industries include electricity, iron and steel, engineering, chemicals and fertilizers, transport and building material. The narrow principles of a discriminating protection cannot decide their establishment if we are out for industrialisation. It has been contended that a liberal policy of protection may help us in balancing our economy in this respect. Sir Padamji P. Ginwala has advocated the immediate enactment of a Key Industries Protection Act on the lines of the British Act providing for the levy of an *ad-valorem* duty of not less than 33½ per cent with provision for compensatory protection to the industries using, as part of their raw materials, the products of the key industries. It shall mean protection in most cases of consumers' goods of second and even third degrees—something, which a poor people like ourselves may not be able to afford. John Matthai in his interesting pamphlet on tariffs and industry, on the other hand comes to the conclusion that in the immediate post war period, a moderate restriction on capital goods may be sufficient while later on a policy of low tariffs and generally of free trade in capital goods shall have to be adopted, although finally, more restrictive measures will have to be applied. It is feared his way of thinking gives too much weight to the consumers' goods industries in the initial stages of post-war industrial development. Perhaps our best interests lie in importing freely in the immediate post-war period plants for the manufacture of producers' goods and at the same time strictly restrict the import of capital goods required for the consumers' goods industries to the essential needs. The imports of the later as well should be free of duty while the former should start work under the protection of requisite subsidies. Gradually, as the out-put of capital goods within the country increases no industry should be permitted to import its equipment or accessories from abroad unless the same are not available locally. If any industry suffers due to such restrictions it may be encouraged by compensatory subsidies. All this envisages a participation by the state in the operation of basic industries. Private capital shall have its own place in the scheme but it can no longer be left unaided and unbridled. Protection is too insignificant for the work ahead while private enterprise is too young to be shouldered with the entire responsibility of laying down the basic foundations of an industrial programme. But state control to be beneficial must be exercised by the free representatives of the people of the country. So long as the present foreign administration lasts none can possibly advocate the entrusting of the country's industrial destiny to it. In case it lasts, the expansion of key industries is

bound to be limited. Protection or subsidies cannot remove a major block in our way to industrial prosperity.

We have already examined the power and other resources necessary for the establishment of key industries and are satisfied that the country is destined to be an industrial one. To recapitulate, the position with reference to the key industries, leaving aside electricity which has been considered elsewhere in detail, in iron and steel it is claimed that we produce the basic and foundry pig iron of such high quality and at such low costs that in the pre-war period in some cases in spite of high protective duties we were able to compete successfully in the markets of Japan, the U. K., U. S. A. and Europe. The ordinary B. S. S. mild steel was produced at no higher costs than in any other large steel producing country. The position is equally favourable with regard to iron and steel alloys. Yet our total steel production in spite of the increased war time capacity is no more than a very minor fraction of the wartime increase alone in steel production of U. S. A. Tremendous strides have to be taken as there are great opportunities. With the expansion of the iron and steel industry the establishment of heavy engineering industries should be a concurrent step. The manufacture of locomotives, automobiles, aircrafts, internal combustion engines, power and industrial machinery and machine tools shall lay the foundations of our industrial progress on permanent footings. It can therefore no longer be delayed. Likewise is the case of heavy chemicals and it is satisfactory to note that significant progress has been made in this direction since the outbreak of the hostilities. But much still remains to be achieved, for which the chances are exceptionally bright. To sum up the establishment of basic and key industries is essential for industrial progress and hence our scheme of post-war reconstruction or planning should give these a priority with electricity at the top.

CHAPTER XVI.

Development of Foreign Trade.

THE figures given are not strictly comparable as these include prior to the year 1937-38 those of Burma as well. Remembering that however, they serve a useful purpose and indicate unmistakably that the record of the development of the country's foreign trade has been one of steady progress until the Great Depression. Beginning with a total of less than Rs. 88, crores per annum before the opening of the Suez Canal, both imports and exports went on increasing until the peak level was reached in the quinquennium 1924-25 to 1928-29, when the figures for the value of the total foreign trade stood at more than Rs. 604 crores annually. The opening of the Suez, the vast improvements in naval transport of the foreign countries, the building of roads and railways within the country, the development of large scale industries in the west and the exploitation of our own mineral and agricultural resources all tended to foster our foreign trade till the Great War, which for obvious reasons temporarily checked the speed of its growth. The immediate post-war period released the suppressed momentum again and this time with a greater velocity. The post-war boom was too fast to be a long one and the country with the rest of the world was soon plunged in an unprecedented slump, which started after the Wall Street collapse in 1929. Recovery, though very feeble in the beginning, began after the year 1933 and the succeeding years marked further progress. International trade yet throughout the world before the out-break of the present war was no better than a convalescent, being supported by high tariffs, quotas, clearing agreements etc. Bilateralism was its most outstanding feature and we had entered into trade agreements with some of our chief customers—Great Britain, Japan and Burma. The present war affected international trade not only through blockade and inter-blockade measures, difficulties of shipping space, the abnormal risks on the seas but also through the fundamental shift in the basis of trade policy from the peace time bias towards maximising exports and creating export surpluses to minimising the draft on domestic resources through exports and encouraging the flow of essential imports by every possible means. But our country seems to stand aloof from such war time consideration of draft on national resources for it has already more than doubled its balance of trade in the year 1942-43 as compared to 1940-41. Whereas the foreign countries no longer supply us even with half the goods that they used to send to us before the Depression, we served our customers in 1941-42 with goods of 50 per cent more value than in 1938-39. Is it therefore any wonder that scarcity looms large in the country?

The Government of India's foreign trade policy is open to suspicion not only during the war-time but at the same time it fails

to inspire confidence even for the post-war period. The post-war may witness ultimately a still greater struggle for markets and for survival in that struggle our foreign trade must not be left solely to the individual's care. The U. K. C. C. is a reminder and if we do not take up the challenge now, we may find the post-war period too late to prepare for a counter thrust against such new economic forces.

An outstanding feature of our foreign trade has been that we have always been exporting more of goods than what we imported. Obviously there was ever a drain on our domestic resources which led some to believe that it has been the main cause of our poverty. The drain was in part necessary for the payment of interest on loans that were taken on our behalf in London, for the civil and military services rendered by Europeans, and for the payment of profits of foreign exchange banks, shipping and insurance companies etc. But now, since during the present war we have practically speaking paid all our loans and we do not regard the European services as indispensable for administration and finally because the country cannot remain for long without its own exchange banks and mercantile marine an excess of exports can no longer be looked upon with equanimity. On the contrary, for building the post-war economy of the country we may have to import more than export for several years. All types of producer's goods shall be required badly in country after the war and if payment is insisted on for all these by an equivalent amount of exports the rate of our development shall be but grossly limited. An unfavourable balance of trade during the post-war period provided it is based on goods of our choice shall have the most stimulating effect on our economy. The orgy of a favourable balance of trade has already done enough of mischief.

Another characteristic feature which the statistics bring out is, that the country has always been a 'sink' of gold and silver except since the Great Depression when in 9 years from 1931-32 to 1939-40 we lost gold worth more than Rs. 382 crores at a price which was not even half of that at which the Allies are now again selling gold in the country. This gold was mostly 'distress gold' which the people had to sell to make the two ends meet. In a way it represented that some of the people were living on their small savings of generations rather than on their incomes during this period. The post-war in India may again witness a revival of the net imports of the yellow and the white metal.

TABLE XXIII.

Foreign Trade of India.

Value in Lakhs of Rupees.

Quinquennial average.	Imports.	Exports.	Balance of Trade.
1864-65 to 1868-69	31,70	55,86	24,16
1869-70 to 1873-74	33,04	56,25	23,21
1874-75 to 1878-79	38,36	60,32	21,96
1879-80 to 1883-84	50,16	79,08	28,92
1884-85 to 1888-89	61,51	88,64	27,13
1889-90 to 1893-94	70,78	104,99	34,21
1894-95 to 1898-99	73,67	107,53	33,86
1899-1900 to 1903-04	84,68	124,92	40,24
1904-05 to 1908-09	119,85	165,44	45,59
1909-10 to 1913-14	151,67	224,23	72,56
1914-15 to 1918-19	159,25	225,83	66,58
1919-20 to 1923-24	267,05	306,38	39,33
1924-25 to 1928-29	251,02	353,51	102,49
1929-30 to 1933-34	161,14	198,60	37,46
1934-35 to 1938-39	146,36	176,45	30,09
1939-40	168,95	213,08	44,13
1940-41	157,00	199,00	42,00
1941-42	173,00	253,00	80,00
1942-43	110,00	194,00	84,00

TABLE XXIV.

Net Imports of Treasure.

Value in Lakhs of Rupees.

			Gold.	Silver.
1900-01 to 1904-05	....	....	6,23	10,11
1905-06 to 1909-10	....	....	11,74	15,45
1910-11 to 1914-15	....	....	25,34	10,61
1915-16 to 1919-20	....	....	13,41	27,96
1920-21 to 1924-25	....	....	28,71	15,74
1925-26 to 1929-30	....	....	21,55	13,84
1930-31	....	....	12,75	10,08
1931-32 to 1935-36	....	....	-54,09	-2,95
1936-37 to 1939-40	....	....	-28,02	2,37

Later figures not available.

CHAPTER XVII.

Composition of the Country's Foreign Trade.

INDIA had considerable trade relations with foreign countries in ancient times and on Tavernier's testimony we may say that its exports fell into five classes—silks, cloths, cottons, spices and drugs. But this is an old story for the impact of the Industrial Revolution in the West was so terrible on the economy of the country that instead of having any exportable surplus of manufactured articles it became dependent for these very supplies on the foreigners. Before the Great War a few industries had been established mainly through British enterprise here and there, but the country remained industrially backward and mainly agricultural. This was revealed in the most outstanding feature of the country's external trade that while more than three-fourths of the imports consisted of manufactured articles, 77 per cent of the exports were accounted for by raw materials and foodstuffs. Jute manufactures were the only important manufactured articles exported and cotton manufactures accounted for 5 per cent of the total exports. Regarding imports with the sole exception of sugar, the country represented the picture of a self-sufficient food economy.

The Great War however, released an opportunity for an industrial development which in the absence of producers' plants in the country was but limited. The post-war period witnessed the inauguration of fiscal autonomy and the country was permitted to develop a few industries sheltered behind tariff walls. These changes were reflected in the country's foreign trade, the percentage of manufactured articles in the imports having fallen from 77 per cent in 1909-14 to 68 per cent in the quinquennium preceding the present war. We had developed during the inter-war period iron and steel industry, cotton textiles, cement, paper, glass, leather goods and sugar industry. Some of these were new while some were old and the degree of development reached differed in each case. We no longer required any sugar imports, but we were not permitted to export under the terms of the International Sugar Agreement. We however, required more of machines whose percentage imports increased from 4 to 10, and more of mineral oils and chemicals. Likewise we imported increasing quantities of raw materials. In exports, while the percentage of jute manufactures increased considerably that of cotton manufactures declined, largely due to competition from Japan. Tea exports were more than doubled but due to the increase in population the exports of grain, pulse and flour were reduced to less than one third.

The present war has wrought further changes in the country's economy, whose broad features are reflected atleast in part in the variations in the composition of the foreign trade though the utility

of the figures given is vitiated on account of the exclusion of the important trade on Government account. The exports of manufactured articles have increased remarkably, accounting in the year 1942-43 for more than half the value of the total. During the current year the percentage has increased still further. It is mainly accounted for by the tremendous increase in the exports of cotton yarn and manufactures, the value of the present export being more than six times the value of the pre-war exports. To conserve domestic supplies for civilian consumption, the export of cotton piece goods has been regulated since 1st July 1942 under a quota scheme based on exports during 1941-42. The decline of exports of cotton piece goods from the European countries due to short supplies or scarcity of freight and the cessation of exports from Japan has given the textile industry of the country a war-time opportunity to find outside markets; but whether the present position can be maintained when peace comes is a doubtful story. It depends on how our textile industry and commerce adapt themselves to the peace-time international competitive economy; and further on how Article 4 of the Atlantic Charter is applied in actual practice. The Anglo-American powers therein declare: 'They will endeavour, with due respect for their existing obligations, to further the enjoyment by all States, great or small, victor or vanquished, of access on equal terms to the trade and to the raw materials of the world which are needed for their economic prosperity.' Jute manufactures too, have increased during the war period as a result of the demand released directly by it and yet it must have given rise to the many substitutes abroad which may offer formidable competition in the post-war period. For the prosperity of the jute industry we can no longer look forward to a monopoly—its sheet anchor shall have to be a cheapening of the cost of production. Tea exports have also substantially increased and since 5th September 1943 a scheme of block purchase of Indian tea by His Majesty's Government has been adopted and exports on private account have been prohibited. The International Sugar Agreement 1939 has also been terminated since, 1st September 1942. Its revival or that of any like restrictive measure after the war shall be an injustice to the sugar industry. The percentage of exports of raw-materials has almost been halved. To a small extent it may be, that we are using more of some of the raw-materials which we used to supply abroad previously. But the main factor responsible for the decline has been the loss of the Japanese and the continental markets and the shrinkage of the Empire market. These changes therefore in our external trade should not make us unduly optimistic.

With the loss of Burma, the severest fall occurred in the imports of food-stuffs while we continued to export even larger quantities than before caring little about the increasing demand at home caused partly by conditions created by the war and partly by the natural increase in numbers. The result was obvious—a famine stalking the deficit provinces. The percentage of imports of raw-

materials increased from 21·7 to 47·3. The increase in their total value was not so remarkable being only a rise from some Rs. 33 crores to Rs. 52 crores. A part can be explained by the sharp rise in prices and only a little that is left over indicates the few steps that the country may have taken towards industrial development during the period. But the drop in the imports of machineries is deplorable and points unmistakably that the steps that the country may have taken towards industrialisation must obviously be short ones. On the whole, the percentage of the imports of manufactured articles has come down from 60·8 per cent in 1938-39 to 44·5 per cent in 1942-43. The drop looms still large when we consider that the value of the imported manufactured articles has declined during the same period from Rs. 92·79 crores to Rs. 49 crores and that, inspite of the sharp rise in prices. But it should not be construed to reflect any substantial advance of our industries. It merely represents a void, which except in a few cases has not yet been filled or bridged; and we fear that sooner or later, it may have to be dumped with foreign matter under the pretext of the supply of the essential consumers' goods. Instead, if we get the producer's goods, for which unfortunately the Allies have never any shipping space available, the present scarcity may be turned into a golden opportunity. Without the adoption of such a bold policy and plan however, the post-war period may witness a reverse movement to an abundance of foreign manufactured articles, depression and unemployment.

TABLE XXV.

Composition of the Foreign Trade of the Country in Percentages.

Quinquennial average.

Groups.	IMPORTS.							EXPORTS.						
	Pre-Great War.	Pre-present war.	1938-39.	1939-40.	1940-41.	1941-42.	1942-43.	Pre-Great war.	Pre-present war.	1938-39.	1939-40.	1940-41.	1941-42.	1942-43.
Foodstuffs	15	12	15.7	21.4	15.2	16.1	7.3	29	23	23.3	19.0	21.3	23.8	25.1
Raw-materials	7	18	21.7	21.9	26.8	28.8	47.3	48	48	45.1	42.9	34.4	28.9	23.1
Manufactured articles.	77	68	60.8	55.5	57.0	54.1	44.5	23	27.4	30.0	37.0	43.1	45.5	50.3

TABLE XXVI.

Inter-war Foreign Trade in Important Commodities in Percentages.

Quinquennial average.

IMPORTS.			EXPORTS.		
	Pre-Great war.	Pre-present war.		Pre-Great War.	Pre-present war.
Cotton and Cotton Goods....	37	17	Cotton raw and waste	15	20
Machinery and Mill work....	4	10	Raw Jute	10	8
Oils	3	9	Raw hides and skins	5	2
Chemicals	0.6	2	Grain, pulses and flour	21	6
Sugar	9	Less than 1	Jute manufactures	9	15
Grain Pulse and flour ....	....	6	Cotton manufactures	5	3½
			Tea	6	13

TABLE XXVII.

War Time Imports and Exports in Lakhs of Rupees.

IMPORTS.						EXPORTS.					
	1938-39.	1939-40.	1940-41.	1941-42.	1942-43.		1938-39.	1939-40.	1940-41.	1941-42.	1942-43.
Grain, Pulse and flour	1376	2181	1435	1502	31	Grain, Pulse and flour	780	514	206	1069	712
Sugar	46	332	36	108	2	Tea	2329	2630	2779	3930	3168
Oils	1562	1864	2103	2185	2728	Oils	106	143	246	268	144
Cotton, raw and waste	851	805	943	1534	1542	Seeds	1510	1191	1006	1056	1057
Wool raw	62	75	279	277	295	Cotton, raw and waste	2482	3117	2460	1791	558
Chemicals, drugs and medicines	562	....	807	876	639	Jute, raw	1340	1983	785	1047	901
Dyes and colours....	406	467	637	696	542	Hides and Skins	528	772	599	603	482
Machinery	1972	1537	1183	1373	1053	Metals	207	407	527	362	190
Cotton (Yarn and Manuf.)	1415	1405	1135	679	137	Cotton (Yarn and Manuf.)....	757	898	1752	3799	4686
						Jute, Manuf.	2626	4871	4538	5378	3638

CHAPTER XVIII.

Direction of Foreign Trade.

TILL the eighties of the last century the British Empire had practically a monopoly of the imports into the country for only about 7 per cent came from outside and the United Kingdom alone supplied more than 82 per cent. The dependence on the British Empire was not so great even then as regards the export markets. The United Kingdom took only 46 per cent of our exports, the rest of the British Empire 27 per cent and the foreign countries 27 per cent. During the present century the struggle for the Indian Market by the other European countries mainly Germany weakened the hold of the United Kingdom and the British Empire over the import trade. At the outbreak of the Great War, the Empire's share though still major, was reduced to 70 per cent of the value of imports and that of the United Kingdom to 63 per cent. The change was however more remarkable on the side of exports—60 per cent of our exports at the outbreak of the Great War went to non-Empire Countries and the United Kingdom could get 25 per cent only.

During the period intervening the two wars the importance of the United Kingdom and the British Empire in the import trade of the country in spite of a policy of Imperial Preference and the Ottawa Agreement since 1932 deteriorated still further. The deterioration was most marked in the case of the United Kingdom whose percentage share in the import trade fell from 63 to 30 in 1938-39. At the outbreak of the present war Burma accounted for nearly 16 per cent of our imports and Japan's share increased from a mere $2\frac{1}{2}$ per cent before the Great War to more than 10 per cent in 1938-39. Germany's share also increased while that of U. S. A. was more than doubled though it was not very important. On the contrary, the export trade tended to be concentrated more in the empire markets than outside it, particularly, after the Great Depression. The share of the United Kingdom had increased from 25 per cent to more than 34 per cent while that of the non-Empire countries decreased from 59 per cent to 46 per cent nearly.

The present war meant cessation of trade with the continent and later on with Japan, Burma and the other occupied countries. The relative share of the Empire countries in the imports has increased though that of the United Kingdom has continued to decline as previously. U. S. A. has gained most—from a mere 6.4 per cent, its share increased to 20 per cent in 1941-42, but it was reduced to 17.2 per cent last year. Imports however increased from countries surrounding the Indian ocean particularly Egypt and the Middle East countries. Iran got as large a slice as 16 per cent of the value of the total imports in 1942-43. The relative share of the

United Kingdom in the exports from the country declined but that of the Empire as a whole increased to more than 67 per cent. The increase has been particularly marked in the case of Ceylon, Australia, and South Africa. The importance of non-Empire countries in our export trade declined still further having been reduced to less than one-third. U. S. A.'s relative share during the war period has become increasingly important and so have exports to countries of the Middle East like Turkey, Syria, Arabia and Iran experienced substantial improvements.

These war tendencies, if they indicate any trends, disclose the growing importance of the Empire both in our exports and imports but with a deterioration in the position of the United Kingdom itself. They reveal still further that there has been a comparative decline of long distance traffic and the concentration of our trade with countries bordering the Indian Ocean and the Middle East. During the post war period while the country may look forward to the increased imports of producers' goods mainly from United Kingdom and the U. S. A. it cannot hope to find markets in these countries for its own manufactured articles except high class luxury and artistic consumer's goods. These countries shall of course require some of our raw materials such as mica and manganese. England may continue to take some of our cotton. But we will have to find our export markets nearer at home in the less industrially advanced countries of Asia, which may eventually also supply us raw materials that we may need. In the post-war period therefore the country's entry into a scheme of Empire trade may prove restrictive for our best interests lie in multilateral trade.

TABLE XXVIII.

Direction of Foreign Trade.

QUINQUENNIAL AVERAGES IN PERCENTAGES.

Imports.

	Pre-war 1909-10 to 1913-14.	Post-war 1919-20 to 1923-24	1938-39.	1939-40.	1940-41.	1941-42.	1942-43.
<i>British Empire.</i>							
U. K.	62.9	57.6	30.5	25.2	22.8	21.1	26.7
Burma ....	....	....	16.0	19.0	18.2	17.0	1.3
Ceylon	0.5	0.7	0.8	0.9	1.4	2.0	3.9
Australia	0.7	1.3	1.6	1.4	1.6	2.4	3.0
Total including others	69.7	65.2	58.1	56.3	57.3	61.0	55.5
<i>Foreign countries.</i>							
Japan	2.5	6.9	10.1	11.7	13.9	6.8	2.6
U. S. A.	3.1	8.5	6.4	9.0	17.2	20.0	17.2
France	1.5	0.9	0.9	0.9	....	....	....
Germany	6.4	2.8	8.5	4.0	....	....	....
China	1.1	1.2	1.1	1.6	....	....	....
Italy	1.0	1.0	1.8	1.2	....	....	....
Iran	0.4	0.7	2.3	1.9	2.2	3.5	16.1
Total foreign countries	30.3	34.8	41.9	43.7	42.7	39.0	44.5

TABLE XXIX.

Direction of Foreign Trade.

QUINQUENNIAL AVERAGES IN PERCENTAGES.

Exports including re-exports.

	Pre-war 1909-10 to 1913-14.	Post-war 1919-20 to 1923-24.	1938-39.	1939-40.	1940-41.*	1941-42.*	1942-43.*
<i>British Empire.</i>							
United Kingdom	25.1	24.2	34.3	35.1	34.7	32.3	30.6
Burma .....	....	....	6.6	6.3	8.7	4.9	....
Ceylon	3.7	4.8	3.2	3.1	3.9	4.1	7.7
Australia	1.4	1.7	1.8	2.6	3.9	5.2	8.9
Total including all	41.1	41.4	53.6	55.9	62.4	62.7	67.1
<i>Foreign countries.</i>							
Japan	7.5	13.3	8.8	6.6	4.9	2.0	....
U. S. A.	7.5	12.0	8.4	12.7	13.8	19.5	14.8
France	6.6	4.8	3.7	3.7	....	....	....
Italy	3.2	3.2	1.5	1.0	....	....	....
China	3.9	3.6	1.5	4.0	....	....	....
Iran	0.5	1.3	0.5	0.4	0.3	0.5	2.3
Germany	9.8	4.9	5.0	1.4	....	....	....
Total for foreign countries.	58.9	58.6	46.4	44.1	37.6	37.3	32.9

*Excluding re-exports.

CHAPTER XIX.

Roads and Civil Aviation.

THE country with an area of approximately 1,580,000 sq. miles has only four great trunk roads stretching diagonally across it and accounting for about 5,000 miles out of some 85,792 miles of metalled roads, but which judged by modern standards cannot rightly be classified as "all weather" trunk roads. The total mileage of roads, with modern surface either bituminous or cement is 9,650 only. In addition there are 260,000 miles of *kuchcha* roads, which are serviceable mostly during the dry weather only and even then can best be utilized by a bullock cart. The service which one gets from these roads is inadequate and these have continued to deteriorate in our own times.

We need therefore not only more roads but better roads. The recent conference of 30 Chief Engineers of Provinces and States held at Nagpur estimated a requirement of some 400,000 miles of roads, half of these to be all weather surfaced to bring all villages reasonably close to a planned roads system in the post-war period. The objective of such a plan is to bring every village within five miles from an all-weather road and 100 miles from a national highway. The construction of national highways stretching from north to south and east to west shall give the necessary stimulus not only to the development of the country's internal trade but shall link the country more closely to its neighbours in Asia particularly, Persia in the west and China in the east, where we may find responsive markets for our expanding industries. The scanty development of roads in the country has focussed our attention so far to a biased extent on foreign trade and sea routes rather than on internal trade and land routes. Within the framework of the country's national highways the need for building and improving provincial, district and rural roads cannot be over emphasized in view of the importance of these in the armoury for fighting against poverty, squalor, famine and epidemics in the rural areas, where India chiefly resides. Sir Kenneth Mitchell's objective that no village with a population of 1,000 and over should be more than, say, a mile or half a mile from a public road is certainly a realistic one; but the authors of the Bombay plan have decidedly underestimated the country's requirement in laying down a mere doubling of the present mileage to achieve this object. If the estimate of the Chief Engineers who met at Nagpur is correct we shall require Rs. 450 crores to execute a scheme of a planned road system.

Till 1929, roads were financed exclusively from the general revenues of the provinces, but since that year a Road Fund has been created by a special levy on petrol. The object of the Road

Fund was to supplement provincial resources for road development, but unwisely enough, the provinces after its introduction curtailed grants from their own revenues under this head. The result has been a greater neglect of the step-child—the feeder roads, as the Road Fund is used exclusively for roads of inter-provincial and inter-district importance. This has accentuated the problem of rail-road competition, which in future constructions should be avoided and solved by a planned co-ordination. The decision of the Government of India that at least 25 per cent of the provincial share in the Road Fund shall be used for feeder roads and not more than 25 per cent on roads competing with railways must be welcome to all. The post-war road development plan however should not be limited as hitherto by the exigencies of the general revenues and the Road Fund. A bold policy of financing through loans should be adopted. Likewise the Local Boards, which throughout the country are notorious for the management of their roads should no longer be burdened with this onerous duty, which financially is beyond their resources.

Together with the construction of new roads and the improvement of old ones, the country has to improve the vehicles too. The number of motor vehicles has certainly increased in recent years although the pace could not be maintained during the war period; and yet the total of 174,077 motor vehicles in British India and Indian States, both private and public, on March 31, 1940 is insignificant compared with our present or future needs. Roughly speaking, at an average there are more than 2,000 persons per motor vehicle in India whereas in U.S.A. one person in every five owns an automobile and in U.K. one in every 20. Even this small number of automobiles is all imported, meaning an outgoing of some rupees eight crores per annum to foreign countries. Simultaneously with road development, therefore, we stand in urgent necessity of erecting factories for the automobile manufacture and the proposed venture in 1940, therefore, of Mr. Walchand Hirachand in this line deserved a more sympathetic consideration from the Government than was given to it. During the post-war period in any case no attempt should be spared to establish this vital industry.

The bullock cart as of old however, remains the main carrier of goods and traffic in rural India. It cannot easily be replaced so long as our agriculture hinges on the bullock and the buffalo. But rural transport can be improved a great deal within the framework of a bullock cart by improving the vehicle together with the road. One such line of progress lies in replacing the present heavy wheels by pneumatic tyres, more so, because we have our own rubber. The roads shall last longer and the load capacity of the vehicles shall be greatly increased.

For speedier traffic India like U.S.A, affords a great opportunity for civil aviation and her needs are equally great not only on

account of the vastness of the country but also because the great inter-continental trunk routes for air traffic between Europe and Australia on the one hand and Asia and Australia on the other pass across the country. Before the war, the British Airways and Indian Transcontinental Airways Ltd., connected India with England, Australia and South Africa; and K. L. Mail Air Force flew between Amsterdam and Bandoeng and Paris to Hanoi. Within the country the air routes consisted of services between Bombay and Delhi and Bombay and Trichnopoly operated by Tata Air Lines; of services between Bombay to Portbunder, and Bombay, Poona and Kolhapur operated by Air services of India Ltd., of a weekly service between Delhi, Lahore and Karachi and a bi-weekly service between Karachi and Calcutta *via* Delhi and Lahore both operated by the Indian National Airways Ltd. To these have been added in 1940 Nizam's Airways service and Amreli Air service. But this is a very small beginning for to maximize national effort for the economic development of the country distance has to be annihilated to save time to the very second. The civil aviation plan for post-war period should link all towns having a population of a lac and over so that no two towns may be apart from each other by more than, say, 24 hours. Such a programme of civil aviation needs the backing of a mature aircraft manufacturing industry. The war has already witnessed the beginning in the form of Hindustan Aircraft Co., floated in December 1940 by Mr. Walchand Hirachand and now taken over by the Government for the duration of the war. But it is only an assembling plant so far and its first assembled aircraft went in the air for test flight in July 1941. The industry calls forth for a much more vigorous growth.

TABLE XXX.

**Mileage of extra Municipal roads in India as at
31st March, 1940.**

Province.	Bituminous or cement.	Total modern surfaced.	Total unsurfaced.	Grand total.
Bengal	662	3,887	87,305	91,192
Madras	144	21,441	14,276	35,717
Bihar	534	4,016	31,144	35,160
U. P.	1,263	8,200	23,389	31,589
Punjab	3,640	4,378	20,764	25,142

TABLE XXX—(Concl.)

Province.	Bituminous or cement.	Total modern surfaced.	Total unsurfaced.	Grand total.
Bombay	596	11,134	8,437	19,571
Sind	143	263	11,439	11,702
Assam.	272	692	10,379	11,071
C. P. and Berar	198	5,469	3,193	8,662
Orissa	19	2,023	2,772	4,775
N. W. F. P.	884	1,077	2,844	3,921
Total	8,355	62,560	215,942	278,502
Total for British India.	9,103	64,070	221,243	285,313
Total All-India	9,650	85,792	261,340	347,132

CHAPTER XX.

Railways in India.

IT was almost amidst a regular mania among the financiers in England for investing capital in railways that two companies under the designation of the East India Railway Company and the Great Indian Peninsula Railway Company were formed in 1845 and not very long after the Government adopted a policy of entrusting to English Companies the work of railway construction in India. Interest on the capital invested by these companies was guaranteed by the Government of India. In the absence of any incentive to economy the guarantee system proved too costly and the Government had to undertake direct construction as an alternative since 1869. But partly embarrassed by the famine of 1879 and partly by the Afghan War, the old system was again revived in 1881 to expedite construction of railways with a guarantee more favourable this time to the State than the old one. Nonetheless the construction and management of railways by English companies proved too detrimental to the interests of the country and was put to severe criticism. The Government therefore decided finally on the recommendations of the Acworth Committee in 1925 to gradually terminate the contracts of these companies and take over the management itself.

The country thus happens to possess some 41000 miles of railway lines in which some Rs. 850 crores have been invested—the bulk being the property of the State as well as managed by it. To be accurate, out of some 33000 route mileage of Class I railways in British India the State operated during 1943 about 25000 miles. A Railway Board was created in 1905 and the Government of India Act 1935 made provision for the constitution of a Federal Railway Authority.

Financially, the railways were a losing concern to the State till 1900 when profits commenced; and though small in the beginning had accumulated to Rs. 103 crores till 1924, after which year, the railway finances were separated from the general budget. Under the Separation Convention established then, the railways contributed some Rs. 42 crores to the general revenues during 1924-25 to 1929-30. During the Great Depression there was a change for the worse in their fortunes and the railways failed to pay their contribution, the arrears of which amounted to Rs. 36.25 crores by 1939-40 and in addition were obliged to make heavy borrowings from the Depreciation Fund to meet interest charges. Recovery however came early in 1936-37 and gathered momentum during the present war. For 1944-45 a net surplus of more than Rs. 52 crores is estimated and during the last five years the railways contributed nearly Rs. 89 crores to the general revenues, accumulated a depre-

ciation fund of nearly Rs. 88 crores and built up a reserve of nearly Rs. 21 crores. But these high level of earnings could not be reached even in the war time without gross increments in railway fares, for which there is hardly any justification unless profiteering by the State during a national calamity is a good ground, though the Member for War Transport has given 'three good reasons'—over-crowding, inflation and heavy depreciation.

The present war has also witnessed a diminution, although slight, in the mileage of railways, which, considering the inadequacy of the railway development in the country has been ill-afforded. The country has only 35 miles of railways per 100 sq. miles as against 100 in U.S.A. and 200 in the United Kingdom. None shall deny that we need many more miles of railway lines to exploit and develop the economic potentialities everywhere in the interior. The Bombay Plan aims at an increase of some 50 per cent in the present railway mileage during say, the next twenty years. The target in this respect is certainly set too low and does not stand any comparison with the standards of the great industrial countries. Even a doubling would have been a modest aim but as road construction in the country has been neglected to a greater extent, the transport policy should be so regulated as to bring about a healthier balance between the different transport systems without stinting or starving any.

But the shortage of railway mileage is not the only handicap in the sphere. A serious desideratum is to be found in the railway building industry which even today in some respects at least, is not even in the embryonic stage. The Railways still depend for their essential equipment on imports and therefore the news that plans for rolling billets, manufacture of wheels, tyres and axles have now been taken in hand at Jamshedpur is doubly reassuring, for it means not only another stride in the onward march of our iron and steel industry but envisages possibilities for an early construction of wagons and locomotives in the country. It is therefore gratifying to note that during 1944-45 all the broad gauge wagons, barring 5000 ordered for early delivery from overseas are to be manufactured, largely in the country. But the story is different with locomotives. Even the blue prints of broad gauge locomotives are not ready as yet; and this year too as usual we had to take the bitter pill of the import of 900 locomotives for 1943-45.

Rahabilitation and rationalisation of our railways shall necessitate in the immediate Post War period replacement of the rolling stock on a large scale, provision of better amenities to third class passengers, for our railways are notorious for the discomfort that they give to their best customers; a revision of rates and fares with a view to maximise national reconstruction and developmental effort; electrification, in particular of some of the main lines; and lastly but by no means less urgently, acceleration in the pace of Indianisation in railway administration.

TABLE XXXI.

Railways in India.

Year.	Mileage open.	Capital outlay. Lakhs of rupees.	% of net earnings to the capital outlay.
1860	838	26,66	1.11
1865	3,363	63,00	3.20
1870	4,771	90,00	3.37
1875	6,541	100,96	3.90
1880	8,996	128,57	4.97
1885	12,208	161,22	5.64
1890	16,404	213,67	4.85
1895	19,467	244,38	5.78
1900	24,752	329,53	4.99
1905	28,287	358,52	6.07
1910	32,093	439,05	5.46
1915	35,285	519,22	5.33
1920	36,735	566,38	6.80
1925	38,270	733,37	6.19
1930	41,724	856,74	4.74
1935	48,021	885,47	3.64
1940	41,155	852,59	4.61
1942	40,477	848,05	7.59

CHAPTER XXI.

The Shipping Problem.

THE country, which today has hardly any mercantile marine of its own, was till the Mughul rulers one of the foremost seafaring nations of the world. Its shipping during nineteenth century was hit hard by the British Navigation Laws and the English shipping interests, whereas the emergence of the ironclad ships during the second quarter of that century almost rung its death-knell. Not only has our external trade been monopolised by the foreigners but the profits of the carrying business of the country are drained outside. The loss is severe as this business is of a highly remunerative character covering some 25 millions tons of cargo and 200,000 passengers per year in the overseas traffic, besides 7 million tons of cargo and over a million and a half passengers in the coastal traffic. To this may also be added the passenger traffic between India and Burma which is more than half a million people carried annually. It has been estimated that foreign steamship companies thus carry away Rs. 9 crores in coastal traffic, Rs. 38 crores in sea-borne traffic and Rs. 3 crores in passenger business. No country aiming at the reconstruction of its shattered economy can look with complacence to such a serious drain in its national dividend howsoever much its naval defence may be guaranteed by the navy of a foreign protecting power. It is therefore high time that we demand in the post-war period an adequate share in any international scheme of shipping, particularly as it shall not mean any hardship to the Allies who, as obvious, will be faced with a surplus tonnage after the armistice. The United Kingdom has almost 135 times as large a mercantile marine as we happen to possess and by bringing about a better balance in the shipping of the two countries the problem of India's sterling balances as well many find a partial solution. U. S. A. too has added considerably to its merchant fleet during the present war, and that, according to fair estimates, it may emerge four times as large after the war as before it.

But the acquisition and transfer of ships may prove a mere palliative if we fail to protect Indian shipping against the foreign shipping interests both in the coastal and the overseas trade. Even in the coastal trade so far, which is usually reserved throughout the world for one's own ships, Indian company after company has been financially shattered by the heavy combination of British Interests and all attempts to safeguard it have been vetoed by the Government, so much so that the Government of India Act, 1935 takes away the power from Indian legislature even to foster and protect it. The post-war shipping policy of country must recognise the principle of reservation of coastal traffic and the levy of transport duty on goods carried in foreign ships in the overseas trade in

addition to the acquisition of a fair tonnage of shipping by drawing on our overseas credit balance at least to the tune of about Rs. 100 crores.

Simultaneously, we have to take measures to develop ship-building industry in the country. Our contribution at present in this direction is insignificant though only a century and a quarter back *i.e.* 1810-21 thirteen vessels were built for the British Admiralty in Bombay. Some progress in this direction has recently been made through the initiative taken by Mr. Walchand Hirachand in establishing a ship-building yard at Vizagapatam. This is however only a beginning. The Government should foster the ship-building industry in the post-war period by the grant of liberal bounties and ultimately let the nation build a real asset in the form of a ship-building industry and a mercantile marine protected by an impressive Indian Fleet.

TABLE XXXII.

World's Merchant Marine in 1939.

United Kingdom	....	.... 18 million tons.
U. S. A.	....	.... 13 million tons.
Japan	....	.... 5.6 million tons.
Germany	....	.... 4.5 million tons.
India	....	.... 0.13 million tons.

TABLE XXXIII.

Relative share in carrying the country's sea borne and coastal trade.

		<i>Sea borne trade</i>
British vessels	....	.... 66.6 per cent.
Foreign vessels	....	.... 30.0 per cent.
British Indian vessels	....	.... 3.4 per cent.
		<i>Coastal Trade.</i>
British Companies	....	.... 80 per cent.
Indian Companies	....	.... 20 per cent.

CHAPTER XXII.

Pre-War Currency in India.

LEGAL tender in India before the outbreak of the present war consisted of silver token coins of eleven-twelfths fineness and the Reserve Bank notes. Both were unlimited legal tender and in addition there were the bronze, nickel and copper tokens circulating as limited legal tender. It was in the year 1893 that on the recommendation of the Herschell Committee the Indian Mints were closed to the free coinage of silver mainly to counteract the continued fall in the value of silver. Rupee was then linked with gold bullion at the rate of 16*d.* The circulation of rupee coins fell from 180 crores in 1892 to 151 crores in 1895 and this strengthened the exchange value of the rupee from 1*s.* 1½*d.* in 1894 to 1*s.* 4*d.* in 1898. The Fowler Committee appointed in 1898 then recommended the effective establishment of a gold standard and currency. In consequence, sovereigns and half sovereigns were made legal tender in 1899 at 1*s.* 4*d.* per rupee and a Gold Standard Reserve was formed in 1900 out of the profits of the coinage of rupees. But it appears that the Government was not then determined to establish a gold standard in the country and so it soon came to the conclusion that people were not prepared to use gold coins and therefore its policy drifted towards the establishment of a gold exchange standard. Silver coinage was resumed on large scale in 1900. The Gold Reserve was shifted to London and invested in sterling securities. There was a confusion in the functions of the various reserves and the Secretary of State after 1904 extended the practice of selling Council Bills (a device used till then to transfer funds from India to meet Home Charges and other requirements of the Secretary of State), for transferring unlimited amounts from this country to London. An unfavourable balance of trade in 1907-08 led to the adoption of the system of Reverse Councils. An improvised gold standard usually known as the gold exchange standard was thus established, which in actual practice meant the circulation of token silver coins in India, linked with sterling which consisted of gold then, at 1*s.* 4*d.* to the rupee. Theoretically, the gold coins as well also remained unlimited legal tender in the country at this ratio. The Chamberlain Commission which reported in 1914 virtually approved this non-descript currency system. The opening of the Great War led to a general weakening of the currency and exchange position but later on there was an unprecedented rise in the gold price of silver particularly towards the end. Exchange was raised to 1*s.* 5*d.* in 1917 and afterwards the Secretary of State announced to vary rates according to the sterling price of silver. Exchange went on rising and the Babington Smith Committee, which intended to stabilize exchanges, recklessly enough through its own recommendation of fixing the rupee at 2*s.* gold sent up the exchange still further—the highest rate being reached in the first quarter of 1920,

viz., 2s. 11d. sterling. Later on, under the pressure of a great demand for Reverse Councils the exchange weakened and Government failed to arrest its downward trend. The Government first tried to maintain an official rate higher than the market rate and then finally abandoned their attempt to regulate the exchange. During 1921—25, it followed what has been called the policy of masterly inactivity. In September 1923 the pre-war ratio of 1s. 4d. gold was reached and 1s. 6d. gold in April 1925 and it was held there until September 1931 when it was changed for 1s. 6d. sterling. In the meanwhile, the Hilton-Young Commission whose report was published in August 1926 had recommended a gold bullion standard without the gold currency and the stabilization of the rupee at 1s. 6d. gold.

The Currency Act of 1927 provided for the sale and purchase of gold by the Government at Rs. 21-3-10 per tola of fine gold and so was sterling to be provided in London after meeting the normal cost of transport from Bombay to that place. Sovereigns and half sovereigns ceased to be legal tender. A gold bullion *cum* sterling exchange standard was thus established in India. But on 20th September 1931, Britain went off the gold standard and in spite of severe criticism in the country, the rupee was linked to the sterling at the rate of 1s. 6d. and it shared the fluctuations of the latter which when managed were in Britain's own interest. The gold bullion standard was substituted overnight with a fortuitous sterling exchange standard. Gold prices went up and gold began to flow out of the country for the first time in its history. The total amount of gold exported outside India from September 1931 to the end of June 1940 valued Rs. 351.40 crores. It was good that this gold came out of the hoards but it was bad that it was not retained by the Reserve Bank of India. Had it been retained, we would have not been obliged to purchase the same gold now from our former purchasers at double the price at which we sold it then. The constitution of Reserve Bank in 1934 maintained the *status quo* with regard to exchange. The Bank is under an obligation to sell and purchase sterling at the rate of 1s. 6d. so that it cannot now fall below 1s. 5 49/64d. or rise above 1s. 6 3/16d. The Victoria coins had by this time suffered considerable wear and tear and hence, though these continued to be full legal tender, their withdrawal was accelerated. With this very object in view restrictions on the acceptance of Victoria rupees were further relaxed in 1938-39 to encourage the public to return these coins.

Notes, which until the establishment of the Reserve Bank of India in 1935 were issued by the Government of India, have since then been issued by the Bank under the conditions laid down in the Act. Under section 26(i) of the Act the notes of the Bank are legal tender and are convertible in rupees, *i.e.*, another type of tokens. The Bank has a separate issue department, whose assets consist of gold coin, gold bullion, sterling securities, rupee coin

and rupee securities. The Bank has issued its own notes since January 1938. According to the Act the assets of the issue department shall consist of not less than two-fifths of gold coin, gold bullion, sterling securities, and the amount of gold shall in no case be less than Rs. 40 crores in value. 17/20th of gold coin and gold bullion are required to be held in British India. The remaining assets may be held in rupee coin, rupee securities and such bills of exchange and promissory notes payable in British India as are eligible for purchase by the Bank. Rupee securities were not to exceed one-fourth of the total amount of assets or Rs. 50 crores, whichever amount is greater. This sum could be increased by Rs. 10 crores with the previous sanction of the Governor-General-in-Council. For purposes of valuation, securities are taken at market rates, rupees at face value, and gold at its par value, *i.e.*, 8·47512 grains of fine gold per rupee. Every bank note had thus a cent per cent backing, and their popularity can be judged by the fact, that before the outbreak of the present war, they were well filling the gaps, caused by the withdrawal of the rupee coins. None perhaps ever cared to test their convertibility into rupee coins—a provision which appeared redundant.

TABLE XXXIV.

Notes in circulation in India 1913-14 to 1938-39.

Amount in lakhs of rupees in the month of March each year.

Average for 5 years.	Amount.	Year.	Amount.	Year.	Amount.
ended 1913-14	4446	1923	161,10	1932	165,17
1915	4396	1924	169,06	1933	150,34
1916	5319	1925	166,55	1934	163,88
1917	6708	1926	167,71	1935	163,56
1918	8430	1927	164,31	1936	168,82
1919	13358	1928	174,53	1937	194,35
1920	15078	1929	178,10	1938	186,12
1921	14788	1930	159,30	1939	189,10
1922	15723	1931	147,93		

TABLE XXXV.

Rupee coins in circulation in crores of rupees.

Estimate of rupee census—Reserve Bank Report on Currency and Finance 1940-'41—Dr.

1881—1940.

Year.	Amount.	Year.	Amount.	Year.	Amount.
1881	132	1912	230	1928	316
1882	147	1913	238	1929	282
1883	141	1914	231	1930	260
1884	139	1915	226	1931	241
1885	152	1916	267	1932	226
1886	138	1917	277	1933	213
1887	153	1918	338	1934	180
1888	154	1919	362	1935	158
1889	151	1920	364	1936	166
1890	168	1921	360	1937	173
1891	168	1922	356	1938	131
1892	180	1923	356	1939	125
1893	173	1924	350	1940	105
1894	164	1925	345		
1895	151	1926	329		
1896	160	1927	327		
1897	154				
1898	166				
1899	162				

CHAPTER XXIII.

Indian Currency during the Present War.

THE outbreak of the war gradually dealt a shock to public confidence, which was particularly acute after the fall of France in 1940. People began to hoard rupee coins and convert bank notes into rupees. The rush was not great in the beginning as it was in 1914-15. Since 1919-20 with the exception of three years there had been a net return of rupees but in 1939-40 there was a net absorption of Rs. 10·08 crores. Between September 1939 and April 1940, 22·09 crores of rupee coins were absorbed. The panic resulted in a craze for hoarding and turned into a scramble in June 1940, when the Reserve Bank had to part with 15·12 crores of rupee coins. The Mints, even when working at full pressure, could not cope with the situation. On 25th June 1940 the Government made the acquisition of coins in excess of one's personal or business requirements an offence. To meet the rush for the conversion of notes into coins, which had become serious since June 1940 the refusal to accept notes had been made an offence under the Defence of India Rules on the 10th of June. The hoarding of rupees was on such a large scale that there was a scarcity, which was eased with the introduction of the Government of India one-rupee notes on the 24th July 1940—a measure which had precedence in the last war. By an Ordinance promulgated on 26th July 1940, the fineness of the half rupee and by another promulgated on 23rd December 1940, that of the whole rupee was reduced from eleven-twelfths to one-half of silver. The Ordinance promulgated on the 11th October 1940 provided for the recall of the Victoria rupee and half rupee with effect from 1st April 1941. King Edward VII rupees ceased to be legal tender after 31st May 1942 and King George V and King George VI standard silver rupees from the 1st May 1943. The only silver rupee legal tender at present is the King George VI quaternary coin and thus the rupee which had previously been a full value silver coin has now been completely converted into a token—a policy, which was adopted to counteract the evil effects of the fall in the price of silver saw its culmination, strangely enough, in a period of unprecedented rise in its price in the country. The amount of silver coin, including half rupees, quarter rupees and one-eighth rupees withdrawn from circulation has been more than Rs. 88 crores whereas the mintage of quaternary rupee coins up to the end of March 1943 amounted to Rs. 54·29 crores. The absorption of the rupee coins including the Government of India rupee notes amounted to about Rs. 105 crores since the war till March 1943.

A war-time feature of bank-notes has been their enormous increase from some Rs. 182 crores worth on 1st September 1939

to more than Rs. 937 crores on 9th June 1944. In effecting this expansion the Reserve Bank has functioned of course within its statutory obligations, and even to-day, every bank note has got a cent per cent backing as required by the Act. The only change incorporated in the law regarding assets of the issue department during the war time has been with regard to the abolition of the statutory limit of the rupee securities. The assets of the issue department on the 1st September 1939 consisted of 35% rupee coins, 20% gold, 28% sterling securities and 17% rupee securities. On 9th June 1944 rupee coins including one-rupee notes were reduced to 1.3%, gold to 4.7%, rupee securities to 6.2% while sterling securities went up to 87.8 per cent. It is these latter which at once account for the structural weakness of the Reserve, have caused perhaps the world's largest expansion of currency during the present war, and may present issues not very pleasant to solve during the post-war period. Set aside the very remote possibility of a fall in the value of sterling securities, it is never safe that the Reserve be composed of foreign investments to such a great extent. As a result of the present war the financial position of Great Britain has deteriorated much and, therefore, it shall not be safe for us to build our currency on her paper promises. A statutory limit should therefore be laid down with regard to the maximum of the foreign securities that may be kept in the Reserve. Gold constitutes at present even less than 5 per cent of the Reserve though it has to be remembered that it has been valued at the old rate. The present gold prices in the country however are not in conformity with the world prices and therefore there is no case for the revaluation of the gold in the Reserve at some new price either. What constitutes a right step is the acquisition of gold instead of sterling at a reasonable rate and holding it even at some foreign centres, if its immediate shipment be impracticable. So long as no statutory limit is imposed on the holding of sterling securities in the issue department, due to the manipulations of the war finance coupled with the obligation of the Reserve Bank to convert sterling into rupees at 18*d.*, the expansion of currency shall go unabated till the war goes on. It shall gather momentum with the increasing military operations on our fronts and while the country shall be denuded each time of men and material we shall have merely paper coming out of the printing press to console us. The expansion has already been apparently inflationary and the Bank has even issued a note of a new denomination, *viz.*, rupees two, since 1st February 1943. It is sometimes said that the expansion is in part offset by a decline in the velocity of circulation of notes as suggested by the fact that notes of the larger denominations, which are presumably preferred for holding inactive reserves by banks, etc., have relatively increased. The off set, however, must be very little and it can hardly be denied that the country has received the world's largest expansion of war-time currency. A check should be imposed without any loss of time on the strength of sterlings in the issue department, or in the alternative, the Reserve Bank's obligation to convert sterlings into

rupees be immediately withdrawn so that the Allies may be obliged to find rupees for themselves. We are otherwise heading towards inflation whatever name we may give it. The Government of India, strangely enough, first becomes the motor of inflationary forces, and then, applies, at the other end, when these forces have already gone their way, the anti-inflationary measures in the shape of Ordinances controlling prices, hoarding and profiteering or in the guise of new taxes or loans. It is tragic, and yet the Government goes on playing, as if, it is a game. The sterling assets in the post-war period shall present no less complex problems. If we are to treat them as a part of our currency reserve, as they apparently are, their liquidation may mean a yet more painful process, *i.e.*, deflation. If their liquidation is not arranged within a short post-war period we are entertaining at present false hopes of building our industries on machines to be received in exchange for them. The currency system shall perhaps require a thorough overhauling to meet the changed situation.

The Reserve Bank has also exercised since the outbreak of war the powers to control dealings in coins, bullion, securities and foreign exchange for which purpose it has created a new Exchange Control Department. Transactions in foreign currencies have been prohibited except through authorized dealers. The policy of control is to ensure the foreign exchange rates quoted by the London Exchange Control combined with the current rupee rate for sterling and thus the pegging of rupee with sterling has been tightened still more during the war period.

Another notable feature of the Indian currency during the present war has been the scarcity of small coins. The war period has been one of absorption of small coins of every denomination. Between September 1939 and March 1943 the total absorption of small coins including eight-anna pieces was more than 23½ crores of rupees whereas during the last war it amounted to Rs. 5 crores in all. In spite of this there has been scarcity of small coins particularly since August 1942. It may be due in part to the greatly increased volume of currency in circulation but it has certainly been accentuated by panic resulting in hoarding. Semi-public and private institutions have in certain cases been obliged to issue their own coupons of small change. It has been made an offence by a Notification of 17th April 1943 to have small coins beyond one's personal or business requirements. New series of small coins have been issued—a new half-anna nickel-brass coin was introduced in January 1942, a new pice of only 30 grains, instead of 75 grains of old, in February 1943 and new standard weight of the two anna, one anna, half anna and quarter anna were fixed in January 1943. The output of the Calcutta and Bombay Mints was stepped up and a new Mint was opened at Lahore in August 1943. The situation has now eased a little and though the worst has passed the clouds are still hanging over the sky.

CHAPTER XXIV.

The Pre-War Price Structure.

A bird's-eye view of the price movements since 1861 reveals certain distinct tendencies. Price fluctuations were confined within narrow limits during the latter half of the nineteenth century; and though the eighties suffered a depression and the nineties a comparative boom, the price movements were confined within the narrow range of the general price indices of 87 and 113 with base 1873=100. The twentieth century however till the Great Depression was marked by a general rise in prices, especially, after 1905. Prices in other countries were also rising at this time but the increase before the Great War was greatest in India and was specially marked in case of raw materials and foodstuffs, *i.e.*, articles which were exported. There was striking parallelism between the rise in prices and the increase in the amount of currency during the years 1903 to 1907. Thus, when the Great War broke out, the value of rupee had already been reduced to about 12 annas as compared with a decade before and the rise in the general price level was above that in the United Kingdom or the U.S.A. The condition created by the war led to further increases in the price level so that by 1920 the commodity value of rupee was less than six annas in comparison to sixteen annas in 1903. But the war-time increase in prices in India was smaller than in other important countries—the indices of wholesale prices in 1920 being 201 in case of India (1914=100), 295 for United Kingdom (1913=100), 226 for U.S.A. (1913=100), and 509 for France (1913=100). A slight depression then set in which suddenly gathered momentum after the Wall Street collapse in America in October 1929. In a little over a year's time, the prices were reduced to almost half and the downward trend continued till the rock bottom level was reached in 1934. Price level at this stage steadied and then there was a gradual recovery, though it was never continuous or regular. By August 1939 practically the same price level was reached which prevailed at the time of the outbreak of the last war but with one significant difference that unlike the last time the general price level in India was much lower than in the United Kingdom, or U.S.A. or Japan. The fall during the depression was obviously greater in the case of this country and the indices of wholesale prices in August 1939 with 1929=100 stood at 71 in case of India, 86 in U. K., 79 in U.S.A., 124 in Japan and 107 in France.

The Great Depression had also caused a marked dispersion among the various price groups and seriously dislocated the par of the industrial and farm prices. In 1929, the ratio between the level of the farm and the industrial prices was 110 assuming the ratio of 1913=100. It declined to 68 in 1931 and stood at 70 in 1938. Within two years of the precipitous fall in prices the

farmers received less than half for their produce, while the amount of produce which they had to barter to get their supplies of the manufactured articles had increased by about 40 per cent. The conditions had not improved by 1939. To illustrate, whereas the index number (1914=100) of industrial prices in U. P. as grouped by us stood at 114 in 1939, the general index number for agricultural prices was as low as 88. Again within the group of agricultural products the price movements during the Depression were not parallel, for the prices of the commercial crops had declined faster than those of others. In 1939 the index number of the wholesale prices for cotton thus, was only 52 with 1913=100. The depression had thus introduced significant disequilibria in the price structure and there was no equilibrium at the lower level between the industrial and agricultural prices, at the outbreak of the present war. A greater amount of recovery in the agricultural prices was needed to bring these at par with the industrial prices.

TABLE XXXVI.

Index numbers of wholesale prices in India.

1873=100.

		Exported articles (28)	Imported articles (11)	General Index (39) articles.
1861	....	88	95	90
1862	...	88	95	90
1863	....	93	113	98
1864	....	103	132	111
1865	....	100	125	107
1866	....	110	126	115
1867	....	102	124	108
1868	....	94	107	98
1869	....	108	97	105
1870	....	105	95	102
1871	....	95	88	93

TABLE XXXVI.—(Contd.)

		Exported articles (28)	Imported articles (11)	General Index (39) articles.
1872	....	101	91	98
1873	....	100	100	100
1874	....	102	99	101
1875	....	95	90	94
1876	....	90	91	90
1877	....	110	88	104
1878	....	114	84	106
1879	....	112	83	104
1880	....	110	88	184
1881	....	99	86	96
1882	....	95	85	92
1883	....	93	79	89
1884	....	96	78	91
1885	....	91	75	87
1886	....	93	80	89
1887	....	94	83	91
1888	....	98	92	96
1889	....	104	91	101
1890	....	104	91	100
1891	....	103	84	98
1892	....	109	84	102

TABLE XXXVI.—(Contd.)

		Exported articles (28)	Imported articles (11)	General Index (39) articles.
1893	....	112	89	105
1894	....	110	84	102
1895	....	111	87	104
1896	....	117	94	110
1897	....	124	86	113
1898	....	102	80	96
1899	....	100	87	96
1900	....	124	96	116
1901	....	116	96	110
1902	....	113	86	106
1903	....	103	88	99
1904	....	104	93	101
1905	....	116	96	110
1906	....	139	105	129
1907	....	145	116	137
1908	....	151	106	138
1909	....	133	99	124
1910	....	127	109	122
1911	....	136	113	129
1912	....	145	117	137
1913	....	154	117	143

TABLE XXXVI.—(Contd.)

		Exported articles (28)	Imported articles (11)	General Index (39) articles.
1914	....	160	114	147
1915	....	155	146	152
1916	....	163	236	184
1917	....	170	262	196
1918	....	199	289	225
1919	....	277	274	276
1920	....	281	280	281
1921	....	239	228	236
1922	....	245	201	232
1923	....	224	193	215
1924	....	222	217	221
1925	....	233	211	227
1926	....	225	195	216
1927	....	209	185	202
1928	....	212	171	201
1929	....	216	170	203
1930	....	177	157	171
1931	....	125	134	127
1932	....	120	139	126
1933	....	118	128	121
1934	....	117	122	119

TABLE XXXVI.—(Concl'd.)

		Exported articles (28)	Imported articles (11)	General Index (39) articles.
1935	....	128	122	127
1936	....	127	122	125
1937	....	133	144	136
1938	....	128	142	132
1939	....	133	137	142
1940	....	158	183	163
1941	....	not available	not available	181

CHAPTER XXV.

War-time Prices in India.

WITH the declaration of war, there was a gradual rise in commodity prices in India, which became marked and rapid after the middle of 1942. The general index number of wholesale prices reached its peak in June 1943, when it stood at 241·7. The rupee now gives a little more than six annas in value. The price of its present silver content at its pre-war level is a little more than four annas while its gold value having fallen to less than six annas in the summer last year has now appreciated to about seven annas. There is no doubt that after June 1943, the rupee is on the high road to appreciation, but its march has been slow and halting—a feature desirable in itself, for it is stability rather than appreciation or depreciation which should be its goal. But in contrast to the wholesale price indices the cost of living index has continued an upward trend even after summer 1943 when in June it was 232 reaching 248 in November and December, after which it has registered a slight downward trend.

Obviously, due to the check in the free flow of imported articles in the country, and the maximum switching of industrial production to war requirements, there has been a greater rise in the prices of manufactured articles than in the case of agricultural produce until February 1943, after which due to the failure of the Government of India to make necessary provision for the shortage in the country's food supply, consequent upon the cutting off the supplies of Burma rice, the tendency seems to have been reversed. In any case, during the first three years of war, the Indian cultivator stood to suffer by the rise in prices, for at the outbreak of war recovery in the prices of his produce had been lower than in commodities which he purchased from the market. During the period of war until the first quarter of 1943 the barter terms of exchange moved against him for the disparity between agricultural and industrial prices increased all the more. In November 1942 the index number of wholesale prices of food and tobacco stood at 173·6, of other agricultural commodities at 179·5, and of manufactured articles at 220—all with base 1939=100. The true extent of disparity is realized when we remember that the prices of manufactured articles were already relatively higher to that of agricultural produce at the outbreak of the war as compared with 1929. This disparity was still greater in the first two years of the war than in the third and the cultivators were getting for their sugarcane, tobacco and cotton lower prices than even the pre-war level during the early stages of the war. It was really a period of hardship and suffering for them. At the beginning of the year 1943, roughly speaking, the cultivators were getting as compared to the prices at the outbreak of the war about twice for their rice

and oilseeds, two and a half times for their wheat, about 80 per cent more for their cotton and jute crops, 40 per cent more for their sugar crops and only half the pre-war price for their tobacco. As against this, they were paying more than four times for their cloth alone. In June 1943 the cloth wholesale prices had reached their peak when their index number stood at 513 but the rumblings of a famine were already audible by this time and the wholesale price indices by August 1943 had crossed 1035 for rice and 371 for wheat. The net result was that the prices for manufactured articles had lagged behind and in August 1943 the index numbers of wholesale prices were 298.2 for food and tobacco, 217.3 for other agricultural commodities and 251.6 for manufactured articles. Apparently, the cultivators now stood to gain, but in making such an assertion it is forgotten that even these prices hardly touched the parity of 1929, since when, continuously for a period of 14 years they had stood to lose. But what is a more serious fallacy in this way of thinking is, that, we are apt to forget that the very high prices of food produce do not give any substantial advantage to the majority of the cultivators, which still practises the system of subsistence farming with little surplus food grains to sell. Again, the large masses of the agricultural population engaged in the production of commercial crops have to buy their food from the market and they certainly suffer most by the steep rise in prices of food produce. It is not a mere chance that the Calcutta University Sample Survey of the destitutes during the last year's Bengal Famine revealed that 72.7 per cent of the sufferers were the farm labourers and cultivators. Food prices should therefore be brought down to a reasonable level by the grant of suitable subsidies in addition to rationing and price control measures.

On the Stock Exchange, prices in general rose by about 25 per cent by the middle of 1941 and with greater industrial activity as a result of conditions created by the war the "Capital's" security prices general index number reached 178.6 in November 1941. But the year 1942 witnessed many landslides, though the conditions improved towards the end. In 1943 very high levels were reached in many scrips and the upward trend continued even in 1944 until the recent Japanese attack on the Indo-Burma borders. With a cent per cent immobilisation of the excess profits since April 1944 and the industrial activity in many industries having already reached very high levels in 1941-42 many scrips have now little scope for capital appreciation. But such a view disregards the effect of currency expansion and of surplus purchasing power on security prices, which really, are the most important forces today. The security prices have risen much faster than the industrial profits and thus the return to the investor during the wartime has been much lower than the pre-war level, and yet the income from an invested rupee has not fallen as fast as the utility of a rupee spent on consumer's goods. There is a definite advantage in investing

rather than spending, for a rupee still yields 12 as. worth of income at the pre-war level whereas its spending value has fallen to say 6 annas.

The very steep rise in prices in India has been attributed to the methods of war finance resulting in a continuous currency expansion in the country, which in certain quarters has even been described as inflation. It is not very much far from the truth, for the wartime increase in notes in circulation today has been more than four hundred per cent while agricultural and industrial production has increased little. The Capital index of Indian industrial activity was 114.0 for 1939-40 with 1935=100. It reached 122.7 in 1941-42 and then receded downwards being 108.8 in 1942-43 and 96.3 in September 1943 and 100.6 in December of the same year. These indices are based on industrial and mineral production, internal and external trade, shipping and cheque clearance. Such condition of production and the vast purchases by the Government of India and the Allies for the armies created a scarcity of goods for civilian consumption in the country, which became another contributory factor of the rise in prices. Not very often, the speculative activity and hoarding, mainly associated with adverse news of the war, resulted even in artificial shortages. The administration has directed its activities against these latter anti-social activities, but has hardly moved its finger for increasing production or for checking the expansion of paper currency. What the country requires most, even for its maximum war effort and to stabilize prices, is the large scale import of producers' plants so that a lasting jolt may be given to step up industrial and agricultural production to the requirements in the country. Equally urgent is the problem of finding an alternative to the printing press for the Allies' war expenditure in India.

To check the onward rush of prices the Government thought of price control as late as 1941 and even then it did no more than control a few, such as petrol and kerosene. Wheat prices were controlled since November 1941 but the attempt was given up in January 1943. The provinces attempted their own measures then but all-India food price control had been thoroughly lacking until a few days back. From May 1943 the anti-inflationary measures have been applied with greater vigour and these included the fixation of the price of cloth, the abolition of speculation in cotton, oilseeds, bullion and scrips. The Anti-Hoarding and Profiteering Ordinance has been promulgated with the same object in view while fresh attempts have been made to draw off the surplus purchasing power from the small investor and agriculturists as well, though a scheme of compulsory savings has not yet been legally put on the Statute Book. But so long as the basic causes, *viz.*, scarcity of goods and currency expansion are left free to operate, the anti-inflationary measures of the Government are producing merely shop-window effects.

TABLE

Prices and Note circulation in

Year and month.	Notes in crores of rupees.	Gold prices per tola.			Silver prices per 100 tolas.			Capital security Index No. August 1939=100.
		Rs.	a.	p.	Rs.	a.	p.	
1939 August	178.89	....	....	....	....	....	100	
September	202.91	....	....	....	....	....	122.4	
October	210.30	....	....	....	....	....	125.6	
November	220.11	....	....	....	....	....	144.1	
December	235.92	....	....	....	....	....	149.5	
1940 January	237.84	42	4	0	57	6	0	135.0
February	239.55	42	7	6	59	5	0	132.2
March	238.55	42	9	6	57	5	0	131.9
April	239.62	42	8	0	58	5	0	132.8
May	248.53	45	15	0	63	4	0	125.9
June	246.94	42	15	0	62	2	0	....
July	237.92	41	10	6	62	14	6	121.3
August	231.49	42	8	0	63	10	0	118.7
September	229.18	42	0	6	63	13	0	118.8
October	228.67	41	11	3	61	6	0	122.1
November	229.15	41	12	6	61	11	6	126.2
December	241.25	41	13	0	60	14	6	128.8
1941 January	245.05	42	0	0	63	2	6	128.7
February	249.47	43	13	6	63	2	6	130.6
March	257.66	43	13	6	63	7	0	131.5
April	267.12	42	12	9	62	12	6	122.4
May	272.97	42	2	9	62	6	0	125.6
June	276.93	42	2	0	63	1	0	132.8

XXXVII.

India during the present war.

Index number of wholesale prices 19th August 1939 =100				Labour Office, Bombay, cost of living July 1933 to June 1934 =100.
Food and tobacco.	Other agr. commodities.	Manufactured articles.	General Index.	
100.3	100.7	100.0	* 100.3	105
110.7	123.9	....	....	106
112.7	123.0	....	....	108
123.7	167.4	....	....	109
127.1	187.1	145.1	138.3	113
122.1	174.8	....	....	114
119.2	162.6	....	....	112
117.9	151.5	133.0	127.5	110
112.7	157.9	131.5	125.0	110
109.6	135.9	127.3	120.8	111
103.5	112.8	117.1	110.3	111
106.5	110.4	113.5	112.1	113
103.2	98.2	109.3	108.4	114
107.6	107.1	111.4	111.1	112
109.6	100.2	112.9	112.1	113
109.1	106.4	118.9	115.7	113
107.8	102.5	119.8	114.4	115
107.4	99.6	121.6	114.8	117
103.6	94.5	121.5	111.1	119
108.1	112.4	131.7	118.8	119
103.5	103.2	131.5	116.4	121
104.6	121.0	139.7	121.5	122
114.7	128.7	146.7	130.2	122

TABLE

Year and month.	Notes in crores of rupees.	Gold prices per tola.			Silver prices per 100 tolas.			Capital security Index No. August 1939=100.
		Rs.	a.	p.	Rs.	a.	p.	
July	273·01	42	1	0	62	14	0	139·7
August	276·59	42	1	6	62	13	0	142·8
September	286·12	42	2	9	62	14	0	156·1
October	293·45	42	3	3	63	1	6	158·4
November	307·42	44	10	3	63	1	0	178·6
December	335·60	50	2	0	71	0	0	152·0
1942 January	356·41	46	12	0	70	6	0	148·6
February	379·68	50	9	0	79	8	0	143·1
March	410·07	51	0	0	84	7	0	142·0
April	413·86	47	11	0	81	4	0	139·6
May	431·84	48	8	0	80	12	0	141·5
June	443·19	49	6	0	84	6	0	145·3
July	451·00	51	15	6	84	6	0	147·4
August	474·25	54	2	0	85	1	0	146·8
September	492·58	58	0	0	93	0	0	157·1
October	514·70	60	4	0	106	4	0	162·4
November	540·36	65	8	0	109	5	6	170·3
December	570·36	64	7	0	105	0	0	167·4
1943 January	593·25	66	7	0	100	0	0	170·9
February	614·36	67	0	0	104	8	0	176·3
March	643·58	70	11	0	110	6	0	187·0

XXXVII—(Concl.)

Index number of wholesale prices 19th August 1939 =100.				Labour Office, Bombay, cost of living July 1933 to June 1934 =100.
Food and tobacco.	Other agr. commodities.	Manufactured articles.	General Index.	
127·0	142·2	157·3	140·9	126
128·6	152·7	161·2	142·5	131
125·8	141·6	167·3	142·2	129
126·6	134·6	163·0	142·1	125
128·6	146·3	165·3	146·5	126
127·1	137·5	153·8	140·0	129
130·6	129·9	161·4	145·0	137
133·7	123·0	162·3	145·1	135
132·9	117·4	165·2	145·6	137
138·5	114·8	157·6	145·9	138
144·9	123·2	162·6	149·9	142
160·2	135·8	167·4	158·6	152
155·5	148·7	175·6	161·2	168
160·2	141·6	174·6	161·1	168
164·1	159·7	182·3	167·3	170
169·9	178·8	194·4	175·0	172
173·6	179·5	220·0	182·7	178
181·1	178·2	222·2	186·0	188
201·5	193·8	225·8	195·6	203
211·9	202·5	225·3	200·4	205
271·0	212·3	227·9	220·1	208

CHAPTER XXVI.

Wartime Prices in India and Abroad.

WHEN war started, prices in India were at a relatively lower level than in certain leading countries abroad as compared to 1929. According to the Reserve Bank report on Currency and Finance 1942-43, 'the rise in the costs of living appears to have been less marked than in wholesale prices in all countries, owing to the comparative stability of certain elements in the former'. The indices with 1929=100 moved from 1939 to 1941 in the United Kingdom from 96 to 121 for cost of living and from 90 to 134 for wholesale prices, in U. S. A. from 84 to 89 in the former case and from 81 to 92 in the latter, while in Germany respective indices have moved from 82 to 87 and 78 to 82. The cost of living indices in Japan have risen from 123 in 1939 to 145 in 1941 while for wholesale prices the change during the same period has been from 126 to 150. Likewise in India, the Bombay cost of living index number has risen from 106 in 1938 to 157 in 1942 and 225 in 1943 whereas the wholesale price index number has gone up from 75 in 1939 to 177 in 1943. But here it has to be remembered that in case of India the price and the cost of living indices had practically reached the same level in February 1942, after which the cost of living indices gathered a much greater momentum, so that by March 1943 they had reached 225 while the wholesale prices had lagged behind at 177.

But what is more striking is, that, in foreign countries the rise in prices has been comparatively little, and, in spite of the greater pressure of inflationary forces than during the last war, the fall in the value of money has been much less during the present war. Thus in the United Kingdom the increase in wholesale prices between July 1914 and December 1917 was 125.5 per cent but it has now been only 64.0 per cent between August 1939 and December 1942. The difference is still more remarkable in the case of cost of living—the corresponding figures of increase during this and the last war being 27.4 per cent and 85 per cent. This at once suggests that the technique of war finance during the present war has been better designed to mop up excess purchasing power and to curb tendencies towards inflation. In contrast to this, wholesale prices have risen most in India—the Calcutta index number being 193 in March 1943 as against 105 of U. S. A. in November 1942, 101 of Canada in October 1942, 84 of Germany and 142 of United Kingdom in January 1943—all on the base of 1929=100. Contrary to world tendencies the value of money in India has fallen much faster and to a greater degree than during the last war. During 1942-43 alone, the Calcutta index number of wholesale prices recorded a rise of 78.3 per cent as against 19.7 per cent in 1917-18. In 1941-42 the rise was more than 24 per cent, and was 23 per

cent from August 1939 to March 1941. Against these, we may note a rise of 15·4% in 1916-17 and 23 per cent from July 1914 to March 1916. The rise in prices therefore has been correspondingly equal during the first period of the two wars but has been considerably greater now than before, during the later period. On the whole, prices in India today are much above world parity though when the war started they were lower than it.

One obvious explanation lies in the difference in the technique of war finance, particularly, in the varying success achieved in limiting the expansion of currency and then in mopping up the surplus purchasing power in the different countries. Not only has the country today one of the world's most expanded currency of the war time but at the same time it has, in the absence of any National Government at the centre, perhaps, the widest inflationary gap as well. The pressure on prices has been further relieved in markets abroad by rationing and price control. In India for several reasons the efficiency of such devices is but limited.

The Indian price level having gone up much above the prices prevailing abroad suggests unequivocally an immediate change in the exchange ratio. It should in no case be managed now at more than 12d. to the rupee. Such a change will strictly be in parity with the purchasing power in the United Kingdom and India, will arrest the rate of the increase of note circulation in the country at present as it will put a check on the speed of the accumulation of our sterling balances, and finally shall pave the way for a better post-war industrial expansion in the country. If it is not done, the country's markets shall lend themselves easy to the dumping of foreign manufactured articles in the post-war period and thus create conditions which we dread most. Let us not think in a miserly way in terms of sterling balances as an end by itself. If prosperity comes the other way let us be prepared to welcome it.

TABLE XXXVIII.

**Index Number of Wholesale Prices
in India and abroad.**

July 1939=100.

Quarters.	India.	U. Kingdom.	Australia.	U.S.A.
1939 III	105	102	100	102
IV	129	119	104	105
1940 I	125	130	108	104
II	117	136	112	104

Quarters.	India.	U. Kingdom.	Australia.	U.S.A.
III	116	143	114	104
IV	121	149	115	106
1941 I	120	152	111	108
II	131	154	111	112
III	150	156	117	119
IV	154	158	119	120
1942 I	154	161	121	128
II	169	163	127	131
III	185	163	....	132
IV	218	163	....	133
1943 I	258	....	....	....
II	....	....	....	....

CHAPTER XXVII.

Our Banking Progress.

MODERN banking in India is of recent growth and is, in general, confined to ordinary commercial functions. The Reserve Bank of India which acts as the central bank of the country was constituted only as late as the year 1935. Before the outbreak of the present war, *i. e.*, in 1939 there were in all 59 scheduled banks including the Imperial Bank of India and 19 exchange banks. Besides, there were 643 non-scheduled banks, four hundred of which were having paid-up capital and reserves below Rs. 50,000. To these may be added 304 co-operative banks with paid up capital and reserves of more than Re. 1 lakh. At the end of December 1940, the total number of offices of all types of banks excluding the co-operative ones was 2,074 of which 390 were of the Imperial Bank, 101 of exchange banks, 857 of other scheduled banks and 718 of the non-scheduled banks having capital and reserves of Rs. 50,000 or over. The scheduled banks had among themselves 1,348 offices and thus on an average served 281,900 people per office. Less than one quarter of the towns with a population of 5,000 or over had modern banking facilities. When compared with the foreign countries we provided an unfortunate contrast in the banking field which invariably suggested the vast scope for development. We reproduce below a table in this connection from Mr. Muranjan's *Modern Banking in India*:—

Figures for 1936 or the nearest year.

	Sq. miles per banking office.	Population per banking office.	Deposits per head in shillings.
India	1,392	276,000	Rs. 7.0
England and Wales	5.79	3,900	1,164
France	102.7	20,000	165
(Principal Banks of) U. S. A.	242.6	7,900	1,317

The exigencies the Government finance during the present war have not only enabled the banking system of the country to withstand the onerous strain placed upon it by the conditions created by the war but have actually brought about a large expansion in the

banking system. True it is, that bank credit is still playing little part in financing the war, yet the enormous war expenditure and the concomittant expansion of currency have placed large sums at the disposal of the banks and the opportunity has been well exploited by astute business men and industrialists in starting new banks and new branches of the old ones. At the beginning of the present year we had thus 70 scheduled banks in the country as against 55 on 1st September 1939 and the total number of their branches rose to 1953. The exchange banks numbered 17 only with 85 branches. The total liabilities of the scheduled banks increased from Rs. 236.60 crores on 1st September 1939 to Rs. 682.66 crores on 10th March 1944. This large expansion in deposits has been caused as well as facilitated by the increase in the amount of notes in circulation and is not to be construed as an index of an all round improvement in the *per capita* income of all classes of population. A similar hypothesis is forced on us when we find that these are the demand liabilities of the banks which have undergone a greater expansion than the time liabilities. The time liabilities of the scheduled banks increased during this period from 102 crores of rupees to only about Rs. 167 crores whereas the demand liabilities rose sharply from Rs. 134 crores since the beginning of the war to more than Rs. 515 crores at present. Such a lopsided preference for liquidity which has reduced the percentage of time liabilities from more than 43 per cent in 1939 to less than a quarter at present cannot but be explained by the fact that it is the businessman and not the ordinary depositor, who has been successful in swelling up his bank balances during the war time. Another notable change that has affected the banking system of the country during the war time has been the fall in advances and bills discounted by the banks. Commercial advances and the discounting of the bills were regarded before the war as the most obvious lucrative sources of the employment of the funds at the disposal of a bank. More than 44 per cent of the total liabilities of the scheduled banks were backed in this way. The war however meant a change, so much so, that, after the completion of the third year, the corresponding figures were only about 10 per cent. The fourth year meant a slight revival pushing up the figures to 25 per cent. Investments in Government loans therefore have now become the chief source of the employment of the bank funds and it cannot be denied that the banks are providing a tremendous volume of credit for the Government's war expenditure.

Nonetheless, with all the war time development of banking here, we have yet to plod a long way to provide sufficient credit facilities for the postwar economic development. We cannot look forward to the development of our trade, industry or agriculture without more banks and more branches to mobilize our savings and grease the wheels of production in all spheres of economic activity. Hitherto, we have left many important branches of banking either to be exploited by the foreigners, usually, against our own interest or have not cared at all to explore their possibilities. In the first category, the most serious desideratum is in the line of exchange banking.

Nothing is perhaps more urgently needed in the banking field than an Indian Exchange Bank. No less important is the need for the establishment of industrial banks to raise the tempo of industrial progress, and of land-banks to finance large-scale schemes of agricultural development. Banks have yet to draw more on our hoards, and to withdraw, yet more rapidly, the increasing surplus purchasing power in the hands of a few of us, and at the same time to release thousands of crores of rupees from the pool, for the post-war building of the economy of the country.

TABLE XII.

**Deposits in Banks in India in Lakhs of rupees
Prior to the Reserve Bank.**

Year.	Non-Government in Presidency or Imperial Bank.	Exchange Banks.	Joint Stock Banks.
	Rs.	Rs.	Rs.
1900	1,463	1,050	807
1905	2,745	1,704	1,155
1910	3,265	2,479	2,565
1915	3,860	3,354	1,787
1920	7,725	7,480	7,114
1925	7,588	7,054	5,449
1930	7,003	6,811	6,325
1935	7,243	7,618	8,444

Since the Reserve Bank.

	Reserve Bank.		Scheduled Banks.	
	Banks.	Others.	Demand.	Time.
	Rs.	Rs.	Rs.	Rs.
1935-36*	2,724	9	119,02	98,70
1936-37	2,656	40	128,62	101,35
1937-38	2,480	70	132,71	109,10
1938-39	1,620	76	130,01	107,86
1939-40	1,787	106	139,57	106,00
1940-41	3,883	193	163,86	104,95
1941-42	3,775	387	172,75	101,20
1942-43	5,736	330	30,628	104,21
1944-10th March.	5,515	718	521,51	167,96

*For nine months July to March.

CHAPTER XXVIII.

Pre-War Public Finance in India.

A Comparative Study.

ON the revenue side, we find a marked contrast between India and such progressive countries as the United Kingdom and the U. S. A. In the former case revenue of the central Government is mainly derived by indirect taxation such as excise and customs, whereas in the latter countries reliance is placed largely on direct taxation. The difference is obvious, but what is not so obvious at first sight is the fact that while in the case of the United Kingdom and U. S. A. the burden of the State expenditure falls on the broadest shoulders, in our country it is being borne more heavily by poor than by rich. On the whole, the system is inequitable for it taxes even the poor man's salt, betel nuts, vegetable oil, match box, tobacco, sugar, tea and coffee. It tends to perpetuate the inequalities in incomes—nay, even widens the gap. A better balancing between the two forms of taxation direct and indirect, should be our object; but the way to it is bristled with many difficulties, for, unless the national income increases considerably, direct taxation offers little scope except in one important direction namely, imposition of an inheritance tax, for which the Finance Member has now proposed legislation. The entire question of reforms in the policy of public finance is linked up with the problem of the economic progress of the country. We may look forward in the post-war period to the abolition of many excise duties while retaining customs to foster our industries and placing an increasing reliance on direct taxes and income from public undertakings such as the railways.

The expenses likewise, reveal great contrast and the heavy expenditure under Defence in India can only be compared with an aggressive Japan, which in the pre-war year was already at war with China and busy in making preparations to cast its die on other countries. The United Kingdom in peace time protects its vast empire extending over the entire globe with a mere 15 per cent expenditure, whereas the State in this country, which has not even its own independence, what to say of having any designs on others, has been spending, year after year, since the British rule, a little less than half of its total income on armies. Such heavy military expenditure leaves little for the nation-building departments or for schemes of social security or poor-relief. If therefore, the present war ushers in an era of real peace, we may look forward to a heavy curtailment of Defence expenditure, which may enable vast sums to be released for reconstruction and rehabilitation purposes. On the contrary, if Defence takes away even in the post-war period, a lion's share out of public revenues, every developmental activity shall have to be limited or postponed on plea of finances. We have therefore to clear the first hurdle by putting a limit on our Defence expenditure to, say, 50 per cent of the 1913 level. It is only in this way that we can improve our peace time budgets.

		Total.	Income tax.	Inheritance tax,	Excise.	Customs.	Land and property.	Sales tax.
<i>United Kingdom.</i>								
1935-36 million £	....	824.8	285.7	80.0	106.4	188.6	0.8	....
Percentage	....	100	34.5	9.7	12.8	22.8	0.09	....
<i>United States.</i>								
1936-37 million \$	....	5828.2	2372.9	....	428.3	446.8	305.1	....
Percentage	....	100	40.7	....	7.3	7.6	5.2	....
<i>Japan, 1936.</i>								
Million yens	....	1601.8	309.0	32.6	338.0	158.0	58.8	97.4
Percentage	....	100	19.3	2.0	21.1	9.8	3.7	6.0
<i>India, 1936-37.</i>								
Million Rs.	....	1227.6	156.7	....	23.0	414.2	2.2	....
Percentage	....	100	12.8	....	18.7	33.7	0.16	....

TABLE XL.—(Concl'd.)

EXPENDITURE.

	Total.	Defence.	Home Deptt.	Education.	Public Health.	Social welfare.
<i>United Kingdom.</i>						
Million £	824·3	124·2	17·0	54·1	23·3	137·5
Percentage	100	15·1	2·1	6·5	2·8	16·5
<i>U. S. A.</i>						
Million\$.	8480·8	1593·1	72·9	....	20·6	470
Percentage	100	18·8	0·9	....	0·3	5·5
<i>Japan.</i>						
Million Yens	2311·5	1060·1	194·9	142·8	....	....
Percentage	100	45·8	8·4	6·2	....	....
<i>India.</i>						
Million Rs.	1227·0	503·8	24·5	10·8	6·2	....
Percentage	100	41·2	2·0	0·9	0·5	....

CHAPTER XXIX.

Principal Sources of Revenue.

1861-1939.

Customs.—Till the outbreak of the present war, Customs duties contributed by far the largest share to the State revenues. Import duties till the Great War, and for some time even after, were levied scrupulously on the free-trade basis though the enormous expenditure during the Great War had necessitated increase in some cases to such high levels as to give uncertainties of a haphazard protection. Since 1924, however, a policy of Discriminating Protection having been adopted on the recommendation of the Fiscal Commission, a few commodities are subject to a protective tariff, whose incidence since 1930 has been modified by the grant of Imperial Preference and by the operation of Indo-British, Indo-Japanese and Indo-Burmese trade treaties entered later on. Our Customs policy was usually dictated by vested interests in the United Kingdom, so much so, that in 1894 when it was decided to levy a 5 per cent import duty on cotton fabrics and yarn an equivalent excise duty was also imposed in the country. At present too, we have to admit British goods at lower scales of duty than imposed on other foreign goods. In the post-war period, since Protection is to be our sheet anchor for industrial development, for a few decades, income from Customs may be maintained, but as one industry after another shall develop within the country income from Customs shall gradually become insignificant as is the case in U. S. A.

Land Revenue.—Almost until the Great War it was the most important source of public revenue. After the Reforms it has been transferred to the Provinces, where even today it is the most important single source of revenue. Viewed as a system of taxation it is very regressive as it does not exempt even the holder of an acre of land, howsoever uneconomic his holding may be, from the levy. The land revenue assessment is revised usually after a period of 30 to 40 years except in Bengal, Bihar, North Madras and a part of U. P. where it is permanently fixed. The Government cannot look forward to any increment under this head and the principle of progression, which should be introduced without delay is not likely to be an advantage financially to the State. Land revenue administration, however, requires a much bolder reform exploding the myth of tripartite interest in land, and abolishing once for all the zemindari system, which has so far stood in the way of all agricultural progress in the country.

Income Tax.—It was almost an insignificant source till the outbreak of the Great War when exigencies demanded its proper utilization and the results were not unsatisfactory. It is the index of a

country's prosperity and if one is to have faith in India's future as one should have, it cannot be denied that this source of revenue shall yield an increasing amount. Already during the present war the income under this head has increased from some Rs. 18 crores in 1938-39 to Rs. 102 crores at present. Not only should the present levels be maintained but it shall not be difficult to get twice as much amount if the tempo of industrial and agricultural production is raised by conscious effort to the optimum during the post-war. Agricultural incomes are excluded at present except in Assam and Bengal for no obvious reason. Their inclusion shall be a welcome feature.

Excise.—The provincial excises consist mainly of a duty on the manufacture and sale of intoxicating liquors, hemp, drugs, etc. The increase in yields under this head has been looked with alarm by many as a sign of increasing drunkenness of the people. Other regard it merely as a result of more efficient excise control. Conscientiously none can look to this source with complacency, but if prohibition is adopted as a national policy, an alternative source will have to be hunted for. The continuance of the Central excise duties on matches, sugar, vegetable oil and betel nuts etc. cannot be justified except during an emergency.

Opium.—The Government of India makes a monopoly revenue out of the manufacture of opium and also by exporting it to neighbouring countries, chiefly to China. The Government under an agreement with China entered into in 1907 stopped all exports to this country by 1914 and this explains the drop in income under this head after that year. In February 1925 the Government amended its policy to discontinue all exports and so now the receipts from opium are confined to opium sold for consumption within the country, which is still high according to the standard laid down by the League of Nations.

Salt.—One of the most unpopular taxes, whose burden falls too heavily on the poor, is the salt duty; and yet; it is the most convenient form for making each contribute something towards State expenses. It yields about 3½ annas per head per year which is a little more than the *per capita* national income for a day. Its burden absolutely speaking is not very severe and as such its retention is justified particularly if the national dividend is planned to increase.

Railways.—One of the largest State enterprises is the Railways of India, which yielded surplus only during the present century except during the Great Depression. At present however the yield is on the increase though at one time the low level of earning was particularly alarming. We can look forward to increasing prosperity of our railways while it is doubtful if war-time profits can be maintained in peace.

TABLE XL.

Principal Revenue (net) of India.*In crores of rupees.*

		Land Rev.	Customs.	Income tax.	Salt.	Excise.	Opium.	Railways.
1861-65	....	17.5	2.1	1.4	4.6	1.6	5.4	....
1866-70	....	17.6	2.2	0.8	5.3	1.9	6.3	....
1871-75	....	18.6	2.4	0.2	5.6	2.2	6.6	....
1876-80	....	18.0	2.2	0.4	6.4	2.6	7.4	-1.1
1881-85	....	18.8	1.2	0.5	6.0	3.7	6.9	-0.7
1886-90	....	19.9	1.3	1.5	7.0	4.5	6.1	-1.6
1891-95	....	21.2	2.6	1.7	8.1	5.2	5.6	-1.5
1896-1900	....	21.7	4.5	1.8	8.2	5.5	3.9	-0.8
1901-05	....	23.5	5.8	1.9	7.6	7.0	5.2	2.1
1906-10	....	24.8	7.4	2.2	4.7	9.1	6.8	1.6
1911-15	....	26.2	9.6	2.5	4.8	12.0	3.6	5.9
1916-20	....	26.0	20.0	12.5	6.1	16.3	3.0	12.3
1921-25	....	30.3	41.1	17.5	6.0	16.4	1.7	2.2
1926-30	....	29.3	47.7	15.3	5.9	17.1	2.7	5.9
1931-35	....	28.3	49.5	17.0	8.1	13.0	0.7	....
1936-37	....	58.3	52.0	14.5	7.7	13.5	0.2	....
1937-38	....	25.7	44.8	13.1	7.3	13.1	0.3	2.8
1938-39	....	25.0	40.51	17.28	8.3	12.29	0.5	1.37

CHAPTER XXX.

Principal Items of Expenditure.

1891-1937.

PUBLIC expenditure in India, both Central and Provincial, has mounted up from some Rs. 50 crores in 1891 to more than Rs. 230 crores in 1930-31. The Great Depression caused a slight reduction but the present war has once again like the Great War added enormously to the Defence expenditure. The most serious growth in Defence expenditure has been during and after the Great War. It was sufficiently high even in the pre-war period having stood at about Rs. 30 crores per annum but the Great War more than doubled it and it persisted with a tenacity even in the peace that followed. The Inchaape Committee recommended in 1922-23 its reduction to Rs. 50 crores ultimately, whereas the Simon Commission estimated that it might drop to Rs. 52 crores. Before the outbreak of the present war it stood at little more than Rs. 45 crores, and yet in spite of the heavy expenditure year after year, our armies had lagged far behind the times in modern equipment and mechanisation. The Air Force was not even born and it was only in 1938 that the British had agreed to the maintenance by India of a sea going fleet of not less than six modern escort vessels to be free to co-operate with the Royal Navy for the defence of India and forego the annual contribution of £ 100,000 made by this country towards her naval defence. In any case no country can afford to bear almost permanently such a heavy military expenditure without stinting and starving its developmental programme. Such expenditure should be reduced drastically in the post-war years and say limited to not more than Rs. 15 crores per annum.

The maintenance of internal peace and order as judged by expenditure on general administration, law and justice and police takes away another big slice equivalent to almost Re. 1 per head and there can be no doubt that not only is the Indian administration one of the costliest in the world but causes a serious leakage in the national dividend as the higher services are manned largely by the foreigners at excessive remuneration. The remedy lies in effecting enormous economies by Indianisation, and in limiting the salaries of the officials to a reasonable maximum. It is a sad reflection that such expenditure has grown largely after the introduction of so-called Reforms and until the last century it was not even one-third as much as it is to-day.

As contrasted to the increase in the expenditure of the above two classes the expenditure on education, public health, civil works and agriculture has increased little after the Great War. It has

actually declined since the quinquennium of 1926-30 from Rs. 36 crores nearly to less than Rs. 26 crores. The country's national expenditure on education is less than 5 as. per head per year whereas it is more than Rs. 18 in the United Kingdom and more than Rs. 20 per head in U.S.A. On agriculture we spend even less than an anna per head per year.

Public expenditure thus while calls forth for a vigorous pursuit of economy in certain directions should enormously be increased in certain others, so as to establish a balanced economy between national defence, peace and order and national development.

TABLE XLII.

Principal Items of Expenditure.

(In crores of rupees.)

Year.	Debt charges.	Defence.	Police.	Law and Justice.	General Administration.	Educa- tion.	Public.	Civil work.	Agricul- ture.
1	2	3	4	5	6	7	8	9	10
1891-95	4.4	25.1	3.9	3.9	1.9	1.5	1.9	4.0	....
1895-1900	3.2	25.0	4.3	4.2	2.0	1.6	5.0	4.0	....
1901-05	2.5	27.8	4.3	4.5	2.1	1.5	2.5	4.9	....
1905-10	3.0	29.2	6.0	5.4	2.5	2.4	2.9	6.2	....
1911-15	2.3	30.5	7.4	6.1	3.2	4.3	3.5	8.9	0.8
1915-20	11.0	64.4	9.6	7.5	3.9	6.1	4.4	8.7	1.3
1921-25	19.3	60.6	12.3	7.9	11.3	9.9	5.9	10.4	2.0
1926-30	19.3	55.1	12.8	8.6	13.4	12.9	6.8	13.4	2.8
1931-35	19.0	46.4	13.0	7.8	12.6	12.2	5.7	8.9	2.6
1935-36	15.5	45.5	13.0	8.0	13.1	12.6	6.2	8.8	3.1
1936-37	16.3	47.4	11.2	7.1	12.0	11.9	5.6	7.8	2.0

CHAPTER XXXI.

War and Public Finance in India.

THE present war is certainly a very costly one calling forth the sacrifices of men and material resources on an unprecedented scale, which perhaps has reached its limit. The magnitude of its costliness cannot rightly be judged by the mere figures of expenditure, Rs. 75 lakhs per day on defence, which has been budgetted for the coming year in the fifth war budget of the Government of India, for this is not the only burden, which the country has to bear and which has made the situation so critical, that even the Government of India have been obliged to communicate that no further substantial increase in the over-all quantum of war demands on India's resources can be met without grave risk of an economic collapse. This burden is largely imposed through the war expenditure of the Government of United Kingdom incurred in India and through the manner in which rupees are found for it. According to the terms of the Financial Settlement between His Majesty's Government and the Government of India negotiated in 1939, of the total war expenditure the Indian Budget is to bear (a) her pre-war normal net effective cost of the army in India, *i.e.*, Rs. 36.77 crores; (b) an additional amount to allow for rise in prices Rs. 15.05 crores for 1944-45; (c) the cost of such war measures as can be regarded as purely Indian liabilities by reason of their having been undertaken by India in her own interests, Rs. 215.58 crores for 1944-45; and (d) an additional contribution towards the extra costs of maintaining India's External Defence Troops overseas; and the rest is borne by His Majesty's Government. During the years 1939-40 to 1943-44 the total expenditure on Defence and Supply brought to account in India's books amounts to Rs. 1,641 crores as against the total expenditure in India in the last war of Rs. 550 crores including the free gift of Rs. 190 crores. Of this sum, the Government of India's budget bears Rs. 715 crores and His Majesty's Government bears Rs. 926 crores. But how does His Majesty's Government pay? It merely transfers to the Secretary of State in London an amount in sterling equivalent to her obligation in rupees. These sterling are transferred to the Reserve Bank, which is under a statutory obligation to pay them in rupees in India and it fulfills its obligation well by turning the wheels of the printing Press. It issues notes in India on the security of sterling held in its account in London, a process within its statutory obligations which, to illustrate, enabled it to put fresh notes worth Rs. 69 lakhs nearly per day from March 12, 1943 to March 10, 1944 alone. The total amount of fresh Notes added by the Reserve Bank since the beginning of the present war has been more than Rs. 700 crores to the then active circulation of only some Rs. 180 crores and yet it has not been officially admitted that the war is

being financed through the printing Press or that currency is being inflated? The Indian public opinion however looks with misgivings to the way in which His Majesty's Government bears the burden of her war expenditure. It has therefore been demanding that the Allied Governments should find rupees themselves to finance their expenditure in India, either by borrowing directly in the Indian money market or by transferring to the Indians the rights in property and securities in India held by them or their countrymen or by transfer of gold. None of these suggestions have been accepted. On the contrary the Allied Governments have begun taking advantage of the country's distress by selling gold at well over Rs. 70 a tola, the gold which the country had parted with in Britain's hour of need at less than half that price before the outbreak of the war.

Besides, there are the U.S.A. supplies to India under the Lend-Lease to the United Kingdom. The total value of the Lease-Lend goods and services has been estimated by the Finance Member up to the end of 1944-45 at Rs. 350 crores and India's share therein at about one-third. The estimated progressive total of reciprocal aid to be afforded to the U.S.A. up to the end of 1944-45 comes to a little more than Rs. 81 crores.

Even taking into account only as much of the war expenditure as is budgetted we find that taxation rather than borrowing has been the sheet anchor of the Finance Member, which has resulted in heavier and more extensive taxation. Increased taxes on income have been the main method of war-time direct taxation and next to direct taxes excise duties have been the most fruitful source of revenue. Of the war-time profits a business man pays 66 $\frac{2}{3}$ % as excess profit tax, of which one-tenth is to be repaid to the assessee in the post-war, 19/64 of the tax is made as compulsory deposit and the balance is taken away in income tax and super-tax. During the war-time, income-tax and super-tax too have been increased by levying and increasing surcharges. Corporation tax too has been increased. The combined effect of all these increases has been that the revenue from these sources is more than ten times its pre-war level and direct taxation at present contributes 58 per cent of the total tax income as against 22 per cent in 1938-39. The progress has been perhaps in the right direction and yet has not made our taxation system taken as a whole more progressive. This is so firstly because, taking into consideration the rise in prices, the burden of income tax falls heavily on assessee's falling within Rs. 2,000—5,000 income group, who as a matter of fact ought to be exempted and secondly it is still light on the very high incomes, and finally, the war has witnessed a number of new excise duties, whose burden is borne heavily by the poor. The scope of indirect taxation has thus been extended by an increase of excise duty on sugar by a rupee, doubling of that on matches, levying new ones on tobacco, vanaspati, tea, coffee and betel-nuts besides the raising of that on petrol and pneumatic tyres.

The transport and communication services have also been another fruitful source of revenue. Railway revenue has been increased partly by increased traffic and partly by the callous increment in fares and rates, which in the single year of 1944-45 was proposed at 25 per cent, though could not be adopted. Likewise the posts and telegraph rates have also been enhanced.

With regard to borrowing, the aim has not merely been to meet budgetary "deficits but also to bridge the inflationary gap." The loans thus raised during 1943-44 amounted to Rs. 279 crores, *i.e.*, more than the budgetted defence expenditure of the Government of India in that year; and yet the calculation of the finance department show that the outgoings of rupees have been so rapid that it still left a gap between incomings and outgoings to the extent of Rs. 250 crores during the current year.

TABLE VIII.

War and Public Finance in India.

	1938-39.	1944-45 (Estimate).
	Rs.	Rs.
Defence Expenditure ...	46·18 crores.	301·21 crores.
Civil Expenditure ...	38·97 crores.	86·57 crores.
Deficit	64 crores.	112·17 crores. (1942-43 actuals.)
Public debt	1205·77 crores.	1405·32 crores. (1942-43).
Income Tax including Corporation Tax and E. P. T.	17·2 crores.	174·0 crores.
Customs	40·0 crores.	27·0 crores.
Central Excise	6·5 crores.	50 crores.
Railway contribution....	1·4 crores.	31·37 crores.
Posts and Telegraphs ....	....	11·31 crores.

	Rs.
Total Defence expenditure including capital expenditure.	1,100 crores.
Defence expenditure per day estimated for 1944-45.	75 lakhs.
Total borrowings in India since the beginning of war.	547 crores.
Loans raised per day 1943-44	76 lakhs.
Total sterling holdings of the Reserve Bank in London, March, 1944.	950 crores.
Sterling debt redeemed	£350 millions.
Average increase in Note circulation per day, March 12, 1943 to March 10, 1944.	69 lakhs.

TABLE VII.

War Finance and Taxes.

	Percentage of		
	Total revenue to total expenditure in 1942-43.	Direct tax revenue to total tax revenue.	
		Pre-war.	1942-43.
India	55	24	61
U.K.	50	56	64
U.S.A.	26	50	73
Canada	50	37	64

CHAPTER XXXII.

Indian Income-tax System.

THE importance of income-tax in the present order of society cannot be exaggerated. In the taxation system of the country where most of the taxes are levied on commodities, this form of taxation on incomes is very essential. Taxation on commodities is regressive in character as the amount of tax mostly falls on lower grades of income due to proportionately less consumption of commodities by the rich. Hence to make the burden fall equally, in other words to go with the canon of equity, certain progressive taxes are essential, and income-tax is one which enables us to maintain the balance. Income-tax in the beginning was looked upon as a temporary expedient to tide over a passing emergency at the beginning of the present century. It was the war which gave a universal importance to this method of finance, and it is since then that it is regarded as "a great engine of revenue."

The present Indian Income-tax Act was enacted in 1922 and was amended in 1930, 1932 and 1939. In India it made first its appearance in 1860. Since then the income-tax system has been constantly changing according to financial requirements of the Government. The system was withdrawn in the year 1873 and five years later in 1878 direct taxation in the form of License taxes was levied and lasted till the year 1885-86. It was in the year 1886 that income-tax was finally adopted. In the year 1917 the Act was amended and many changes of far-reaching importance were introduced. A definite effect was given to the principle of graduation. Rules regarding the submission of returns were made more strict and a system of super tax was introduced. In 1919, due to war the minimum taxable limit was raised to Rs. 2,000 and an excess profit duty was levied on incomes above Rs. 30,000 during the year with a few exceptions such as agriculture, salaried employments or the income depending on the personal income of the earner. But it was met with severe criticism and was abolished. Whenever a need for reforms was felt enquiry committees were set up to suggest reforms. In 1939, an Amendment Act was passed which brought about changes of far-reaching importance into the system. Various measures of steepening the progression and making the collection more efficient and increasing the revenue and taxation on slab system were adopted.

Once more in 1939 the world was faced with a war and India could not be left free from its effects. A need for more and more taxation was felt to meet the huge war expenditure. Thus an increase in surcharge was made and taxation on slab system was adopted. In the year 1943 the minimum taxable limit was lowered to Rs. 1,500 and incomes for taxation purposes were divided in two groups, *viz.*,

Incomes from 1,500 to 2,000 and incomes above 2,000. Incomes in the former group paid tax at the rate of six pies in the rupee while incomes in the latter group were to be taxed at a graduated scale on the slab system. By the Finance Act passed in March 1944 the minimum taxable limit has been raised again to Rs. 2,000 and certain increase has been made in the rates of surcharge.

Under the present Act 'Accrual basis of taxation' as opposed to 'Remittance basis' has been adopted. Before the passing of this Act, income earned abroad but not brought into British India was not liable to tax. This had an adverse effect on the supply of capital in the country and consequently acted as a check to the investment of resources into our industries. As whenever a person residing in India earned an income abroad, he was tempted not to bring that income into India and was naturally anxious to invest it outside India with a view to evading the tax.

A special feature of this year's taxation proposals is the adoption of pay-as-you-go arrangement, where a provision has been made for advance payments of tax on incomes from which tax is not deducted at source, for instance income from property, business, profession, etc., and applies to income exceeding Rs. 6,000. Such payments are to be made every quarter, and the assessee has the option in doing so of estimating the tax due by him on the basis of either his last assessed income or his own estimate of current earnings. On all such advance payments until the tax is finally assessed and adjusted, an interest of 2 per cent is allowed. If an assessee adopts the second alternative and deposits on the basis of his estimates of current earnings, and if his estimates fall short of 80 per cent of the tax determined on regular assessment, he is liable to pay a penalty by way of interest at 6 per cent per annum from the first day of January in the financial year in which the tax was paid up to the date of the regular assessment upon the amount by which the tax so paid falls short of the said 80 per cent.

Slab system vs. Step system and incidence of taxation.

Slab system means the application of progressive rates to successive slices of income. Under the old system all incomes up to Rs. 2,000 were exempted, whilst incomes between 2,000 to 5,000 paid tax at 6 pies in the rupee, incomes between 5,000 and 10,000 paid at 9 pies in the rupee, and so on. This is described as 'Step' system because the percentage of income taken away by income-tax steps up sharply from one figure to another from 0 to 3·1 per cent, from 3·1 per cent to 4·7 and so on. Under the 'Slab' system the percentage moves up not in jumps but smoothly, each extra rupee of income pushing up the percentage very slightly, which is clearly more

equitable. Thus 'Slab' system possesses one great advantage that it provides effective rates of tax that steadily increase without sudden jumps as total income increases. If we compare the amount of tax payable under the Step system and the new Slab system, we note that all incomes up to Rs. 8,000 would pay less, while of the income from 8,000 to 30,000 some would pay less and some would pay more, and incomes above Rs. 30,000 all would pay less. Under this scale roughly 5/6 of the assesseees would pay less and 1/6 would pay more. But if we compare the burden of taxation with other countries, it is significant to note that the rate of tax is still far below than that for corresponding incomes in United Kingdom, as is evident from the following table where United Kingdom figures have been worked out on the basis that the taxpayer is a married man with two children.

Annual Income	Income Tax.	
	India Per cent	United Kingdom Per cent
16,800	9	13
19,200	9.6	14.4
25,200	11.0	17.4
38,400	15.2	22.7
48,000	17.8	25.75

Slab system leaves the question of incidence as it was under the Step system. In India a great majority of income-tax payers belong to the middle classes whose incomes are below Rs. 25,000 or so, and they pay at a rate which is not progressive. On the other hand a great anomaly is reached after an income of Rs. 30,000. The percentage of income paid by way of tax not only is lower as compared to Step system, but it goes on diminishing in certain cases though the income is higher, for instance, the percentage taken by way of tax on an income of Rs. 50,000 is 16.1 while on 74,000 it is 15.4. As a matter of fact with every increase in income, the ability to pay increases and as such richer section of the people should pay taxation at a higher rate and in their case the 'income-tax curve' should further rise.

This year there has been an increase in the rates of surcharge on incomes beyond Rs. 10,000. It is done with a view to tax those persons and bodies who have been benefitted due to a rise in prices brought about by the war. But at the same time no relief has been afforded to people having lower grades of income. Such people are not benefitted by the war and are perhaps the worst sufferers on

account of higher prices and higher indirect taxes including those which have been levied since April this year. It is therefore proposed that the exemption limit should be raised to Rs. 4,000 and rates of income-tax up to Rs. 6,000 be lowered. This year's increase in the rates of surcharge has made the taxation system more progressive as incomes below Rs. 10,000 are required to pay tax at the old rates and no increase has been made. This has no doubt made the taxation system more progressive but at the same time the question of affording relief to the small man has been left unsolved.

Defects remaining.

Though the present Act embodies certain important provisions to stop evasion, yet certain anomalies have been left untackled. A great leakage of revenue occurs due to the exemption of agricultural income. Not only is agricultural income exempt from taxation but what is more important, it is not taken into account in determining the rate of tax on the non-agricultural income. In Western countries, not merely the land is taxed, but in addition, it pays income tax, death duties and local rates. Our landlords, beyond land revenue pay no direct tax to the State and their total contribution as compared with their total incomes on the one hand and the contribution of other classes on the other is disproportionately small. In view of the fact that India is mainly an agricultural country it is urgently needed that agricultural income should be brought under the purview of the Act. This will not only remove the glaring inequality in our system but will enable the Government to give greater relief to the poorer classes by a more equitable burden. It is a satisfaction to note that agricultural income-tax has been introduced in a few provinces since the inauguration of the provincial autonomy.

Then again, under the Indian Law, legacies and other capital gains are exempted from income tax and super tax. In Western countries this exemption may be justified as there exist death duties to cover them. We have no such taxation in India and legacies and capital gains escape taxation in India. There is no reason why capital gains, which increase a person's ability to pay should be exempted from taxation. This year it has been proposed to introduce the imposition of death duties but we have to watch the details before we can pronounce our judgment.

The exemption allowance for life insurance, deferred annuities and provident fund, which at present is $\frac{1}{6}$ of the total income is too low. It should be raised to at least one-fourth so as to encourage more strongly the habit of thrift in India. People in our country have not been able to develop their telescopic faculty due to regular invasion and disorders to which they have been subject under the Moghal administration and this has partly been responsible for the poor growth of capital and backward state of industrial development in India. Habit of thrift should be properly encouraged and

an increase in the exemption allowance for life insurance, etc., would achieve our object. On the other hand this year a further restriction has been imposed by which the allowance for insurance premium cannot exceed 10 per cent of the sum assured. No doubt this restriction is devised to meet the tax evasion device provided by the single premium policies but the maximum limit of Rs. 6,000 which can be claimed as allowance for insurance premium and provident fund becomes ineffective. Further personal incomes of women specially from *stridhan* should either be exempted altogether or the exemption should be put fairly high in their case. This will lead to their social and economic advancement and would go a long way in relieving them from so many social and legal disabilities with which they suffer in our country. It is also suggested that family circumstances should also be taken into consideration when determining the liability to taxation.

TABLE VL.

Statement showing the tax payable as a percentage of income taken away by income-tax in selected cases.

Income.	Old scale Step system.		Slab system.		Slab system.	
	Tax.	Percentage.	Tax.	Percentage.	Tax.	Percentage.
	(including 1/12 for surcharge).		(including 1/12 for surcharge).		(including 2/3 for surcharge).	
2,000	....	....	...	....	....	....
2,150	73	3.4	33	1.5	50	2.3
2,500	85	"	51	2.0	79	3.16
2,700	91	"	61	2.4	94	3.48
3,000	102	"	76	2.5	116	3.86
3,250	110	"	89	2.7	136	4.18
3,500	118	"	102	2.9	156	4.45
3,750	127	"	115	3.0	176	4.69
4,000	135	"	128	3.2	196	4.9
4,500	152	"	153	3.4	235	5.2

TABLE VL.—(Contd.)

Income.	Old scale Step system.		Slab system.		Slab system.	
	Tax.	Percentage.	Tax.	Percentage.	Tax.	Percentage.
	(including 1/12 for surcharge).		(including 1/12 for surcharge.)		(including 2/3 for surcharge).	
5,000	170	3·4	178	3·5	273	5·46
5,333	271	5·1	206	3·8	317	5·9
5,700	289	„	239	4·1	365	6·4
6,000	305	„	252	4·2	405	6·8
6,667	339	„	318	4·4	490	7·3
8,000	409	„	431	5·3	683	8·5
9,000	457	„	517	5·6	795	8·8
10,000	509	„	601	6·0	925	9·2
10,600	718	6·8	682	6·4	1,050	9·6
12,000	813	„	872	7·2	1,342	11·2
13,500	914	„	1,085	8·0	1,653	12·2
15,000	1,017	„	1,278	8·5	1,967	13·1
16,700	1,568	„	1,565	8·7	2,408	14·4
20,000	1,806	„	2,124	10·6	3,268	16·3
21,000	2,251	10·7	2,293	10·9	3,528	16·8
25,000	2,680	„	2,970	11·4	4,570	18·3
26,500	2,841	„	3,326	12·5	5,117	19·3
30,000	3,217	„	3,817	12·7	5,872	19·6
33,000	4,434	13·5	4,326	13·0	6,655	20·2

TABLE VL.—(Concl.)

Income.	Old scale Step system.		Slab system.		Slab system.	
	Tax.	Percentage.	Tax.	Percentage.	Tax.	Percentage.
	(including 1/12 for surcharge).		(including 1/12 for surcharge).		(including 2/3 for surcharge.)	
35,000	4,796	13·7	4,685	13·3	7,175	20·5
40,000	5,700	14·2	5,510	13·7	8,476	21·2
44,000	6,919	15·7	6,187	14·0	9,518	21·6
45,000	7,109	15·8	6,356	14·1	9,778	21·7
50,000	8,069	16·1	8,050	16·1	11,080	22·2
55,000	9,197	16·7	8,894	16·1	12,385	22·5
60,000	10,325	17·2	9,742	16·2	13,683	22·8
65,000	11,454	17·6	10,081	15·4	14,988	23·0
67,000	11,905	17·8	10,387	15·5	15,510	23·2
70,000	12,582	18·0	11,264	16·0	16,288	23·3
74,000	13,485	18·2	11,433	15·4	17,330	23·4
75,000	13,710	18·3	12,281	16·3	17,590	23·5
80,000	14,840	18·6	13,126	16·4	18,893	23·6

TABLE IVL.

Income-tax and Super-tax ruling rates on 'Slab' system.

~~Income-tax and Surcharge:—~~

1. In the case of every individual, Hindu Undivided Family, Unregistered Firm and other Association of Persons not being a case to which paragraph 2 of this part applies:—

	Income-tax.	Surcharge.
On the first Rs. 1,500 of total income.	Nil.	Nil.
On the next Rs. 3,500 of total income.	Nine pies in the rupee.	Six pies in the rupee.

Provided that—

(i) No income-tax shall be payable on a total income which does not exceed Rs. 2,000.

(ii) The income-tax payable shall in no case exceed half the amount by which the total income exceeds Rs. 2,000.

On the next Rs. 5,000 of total income.	One anna and three pies in the rupee.	Ten pies in the rupee.
On the next Rs. 5,000 of total income.	Two annas in the rupee.	One anna and six pies in the rupee.
On the balance of total income.	Two annas and six pies in the rupee.	Two annas in the rupee.

2. In the case of every Company, Local Authority and Non-Resident:—

On the whole of total income.	Two annas and six pies in the rupee.	Two annas in the rupee.
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Super-tax and Surcharge:—

1. In the case of every Individual, Hindu Undivided Family, Unregistered Firm and other Association of Persons to which paragraphs 2 and 3 of this part applies.

On the first Rs. 25,000 of total income.	Nil.	Nil.
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		Super tax.	Surcharge.
On the next	Rs. 10,000 of total income.	One anna in the rupee.	One anna in the rupee.
On the next	Rs. 20,000 of total income.	Two annas in the rupee.	Two annas in the rupee.
On the next	Rs. 70,000 of total income.	Three annas in the rupee.	Two annas and six pies in the rupee.
On the next	Rs. 75,000 of total income.	Four annas in the rupee.	Three annas in the rupee.
On the next	Rs. 1,50,000 of total income.	Five annas in the rupee.	Three annas in the rupee.
On the next	Rs. 1,50,000 of total income.	Six annas in the rupee.	Three annas in the rupee.
On the balance.	of total income	Seven annas in the rupee.	Three annas and six pies in the rupee.

2. In the case of every Local Authority:—

On the whole of total income.	One anna in the rupee.	One anna in the rupee.
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3. In the case of every Co-operative Society:—

On the first	Rs. 25,000 of total income.	Nil.	Nil.
On the balance.	of total income	One anna in the rupee.	One anna in the rupee.

4. In the case of every Company:—

On the whole of total income. *Three annas in the rupee.

5. Income-tax and Super-tax on Life Assurance Companies:

On the whole of total income. †Five annas and three pies in the rupee.

*Rebate of one anna in the rupee will be given on so much of a Company's total income as is not distributed in shape of dividends other than dividends payable at a fixed rate, on preference shares.

†This rate will have retrospective effect from the assessment year 1943-44.

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