

ECONOMIC CONDITIONS
IN
MAHARASHTRA AND KARNATAK

BY
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TILAK SWARAJYA SANGH,
POONA.

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PRÉFACE

I wrote this essay in 1932 for a competitive prize which was offered by the Tilak Swarajya Sangh, Poona. It should have been published long back but I wanted to make changes in the original writing which I could not do till the beginning of this year because of my preoccupation with other work of a more pressing character. In spite of the delay however, I have, not been able to recast the essay as I had desired.

The changes that have now been made are therefore of a minor nature so far as the plan of the essay is concerned. But from the point of view of information, I might say with very little of exaggeration that most of the chapters have been practically rewritten. The title of the essay has been changed from the Economic Future of Maharashtra and Karnatak to the Economic Conditions in Maharashtra and Karnatak as being the more appropriate. Maharashtra includes the Marathi speaking districts of the Bombay Presidency and the Central Provinces and Berar and Karnatak the districts of Belgaum, Dharwar, Bijapur and Kanara.

I cannot express adequately my gratitude to the Trustees of the Tilak Swarajya Sangh for meeting the expenses of this publication and for the patience with which they have borne the delay.

Bombay:
May 1, 1936.

Y. S. PANDIT.

CONTENTS

	PAGE.
I. Economic Geography	1
II. Agricultural Development	22
III. Agricultural Crops	43
IV. Industries Subsidiary to Agriculture	70
V. Large-scale Industries	85
VI. Small-scale Industries	110
VII. Trade and Transport	139
VIII. Finance and Banking	163
IX. Conclusion	181
 Appendices:	
I Rapidity of Sub-division of Holdings	205
II Handloom Weaving in Maharashtra and Karnatak	207
III Profit and Loss Accounts of Cultivation in Maharashtra and Karnatak	209
IV Population of Maharashtra and Karnatak	211

FOREWORD

This essay on "The Economic Conditions of Maharashtra and Karnatak" by Mr. Y. S. Pandit, M.A., is being published on behalf of the Lokamanya Tilak Memorial Trust. At the meeting of the Trustees held on the 2nd of August, 1931, it was decided to set aside a sum of Rs. 1,000/- (Rs. One Thousand only) for awarding a prize of the like amount to the best essay on a subject connected with the economic interests of Maharashtra and Karnatak. Among the conditions for the essay it was laid down (1) that it should be written from a nationalist point of view, (2) that the treatment of its subject matter should be scientific and (3) that the writer of the essay should hail from Maharashtra or Karnatak.

By notification in the "KESARI" of the 2nd September, 1931 essays were invited so as to reach the Secretary of the Trust not later than 30th June, 1932. Three essays were received and they were examined by a Board consisting of Prof. V. G. Kale, M.A. of the Fergusson College, Principal D. R. Gadgil, M.A., M.Litt. of the Gokhale Institute of Politics and Economics, and Mr. A. R. Bhat, M. Com., of the Kesari-Mahratta Office. The examiners unanimously opined that of the three essays Mr. Pandit's was the best. On the basis of that opinion the Trustees at their meeting held on 25th August, 1932 awarded the prize of Rs. 1000/- to Mr. Pandit, and further decided that the essay should be issued as its own publication by the Lokamanya Tilak Memorial Trust. At the meeting of the Trust held on 30th June, 1935* a sum of Rs. 1000/- only was sanctioned towards the publication of the essay, and the work of getting it printed was entrusted to Mr. Pandit himself. All rights regarding the publication, translation etc., have been reserved by the Trust.

* The reasons for the delay in printing and publishing the essay are stated by Mr. Pandit in his preface.

Mr. Pandit, the writer of the essay, is a reputed research scholar in Economics. After passing the B.A. Examination with II Class (Hons.) in Economics in 1930 he joined the University School of Economics and Sociology, Bombay, as a post-Graduate student and was awarded a Research Fellowship. He took his M.A. Degree in I Class with a thesis on "India's Balance of Indebtedness, 1896 to 1913". In 1931, he was awarded the Sir Daniel Hamilton Prize of the Bombay University for his essay on "The Co-operative Movement in India". He was appointed by the Indian Salt Association to investigate into the condition of the Salt Market in Bengal in June, 1933. In March, 1934, he was taken up by the Government of Bombay for the Wage Cut Enquiry conducted by the Labour Department. In September, 1934, he had the privilege of working with the Delegation of the United States Treasury Department on the condition of Silver and Gold Market in India. In March 1935, he was awarded a Research Grant by the Bombay University for conducting a survey of the Marketing of Myrobolams in the Bombay Presidency. Recently he has been selected by the Nagpur University to deliver a course of Lectures on "Industries Subsidiary to Agriculture."

It is not for me here to say anything about Mr. Pandit's monograph. The Board of Examiners to whom it was referred have, already testified to its quality. So far there was no single book in which data relating to the economic life of Maharashtra and Karnatak were available, and all those interested in the economic development of these Provinces were much handicapped. I hope and trust that Mr. Pandit's essay will in some measure meet that long-felt necessity.

Devgad,
30th April, 1936.

N. C. KELKAR,
Hony. Secretary,
Lok. Tilak Memorial Trust.

CHAPTER I.

Economic Geography.

The economic conditions of a country are determined by its natural and human resources - the gifts of nature and the capacity of the individuals inhabiting it. In the last resort man is dependent on nature for what he is. If nature is bounteous the elementary needs of life - for food, clothing and shelter - are easily satisfied and there is a large scope for an advancement in the standard of living, which is the ultimate object of all economic activity. On the contrary, if nature is niggardly in its gifts even the highest ingenuity of man will not secure him more than a bare subsistence. It is true that with the aid of science man is assuming mastery over nature and that every new discovery means a challenge to the tyranny of environment. But he can never totally annihilate its influence as a factor in production and will have to depend on it for his basic requirements.

The natural environment of Maharashtra and Karnatak is the sum total of all those external factors that affect economic life and development and may be assessed under the following heads:—

- I. Geographic position and natural divisions.
- II. Geology.
- III. River System.
- IV. Climate.
- V. Rainfall.
- VI. Forests.

Geographic position and natural divisions: —Overlooking the fertile low-lands of the north, which are watered by

the Indus and the Ganges, there lies a triangular high-land mass to the south of the Vindhya known as the Deccan Plateau. It is bounded on the north by the Satpuras and their continuations, the Mahadeo and Maikal ranges. The Western and the Eastern Ghats start from the two ends of this northern boundary and run southward with a gradual ascent to reach their climax in the Nilgiris where they meet each other. The Major portion of this high-land is comprised of the province of Maharashtra and Karnatak which will be considered throughout this study as an economic unit by itself. Besides the land on the Plateau, the province of Maharashtra and Karnatak includes the narrow strip of land, sandwiched between the Western Ghats and the Arabian Sea, known as the Konkan.

On the north, this united province of Maharashtra and Karnatak is separated from the Indo-Gangetic plain by the Satpuras and the Mahadeo hills. The Chattisgarh division of the Central Provinces lies to the east of the Khandesh-Berar strip, the Nizam's dominions covering its south and the east of the Deccan Karnatak division. The western flank is washed by the waters of the Arabian Sea from Daman to South Kanara and the rich fertile land, the 'Gold of Gujrat', extends over the north-west. Within these limits are contained tracts of country varying greatly in climatic and physical features. The Nagpur division, the Kandesh-Berar tract, the Deccan, the Konkan and the Karnatak are the most important of them.

The Nagpur division consists of the five districts of Nagpur, Chanda, Bhandara, Balaghat and Wardha. The major part of this land lies in the Wainganga Valley, the famous rice zone of the Central Provinces. The rainfall in this division is much heavier than in Berar and the soil and the climatic conditions favour the cultivation of rice in the kharif season.

The Khandesh-Berar tract is the richest cotton-growing province of India, extending from the Khandesh districts to Wardha. It includes the districts of Khandesh, Buldhana, Amaraoti, Akola and Yeotmal. The river Tapti flows on the northern outskirts of the Khandesh territory making the rich black-cotton soil on its banks richer still. The portion of land which lies between Khandesh on the west and Wardha on the east was under the Nizam's dominions prior to 1903 and was known as the 'Hyderabad Assigned Districts of Berar'. In 1903 it was transferred to the Government of India and since then has taken great strides in economic progress.¹ The deep black, cotton soil of the whole of this tract and a moderate rainfall has made it the cotton-emporium of India.

The rest of the Maharashtra and Karnatak is divided into high and low-level lands, by the Western Ghats or the Sahyadris, running parallel to the coast-line on the west. "Behind them lie the scantily watered tracts of the Deccan, for the most part an almost treeless plain, sloping from the rock-bound Ghat edge towards the level fields of Berar and Hyderabad. The hills arrest the progress of the south-west monsoon and the land thus left unwatered yields to much labour a bare measure of subsistence."² This hilly region is the source of the great rivers Godavari, Bhima and Krishna, the valleys of which yield an abundant harvest of sugarcane, the chief money-crop of the farmer. The districts of Nasik, Ahmednagar, Poona, Satara and Sholapur and the States of Kolhapur, Jath and Phaltan lie within this division. Ahmednagar, Satara, Sholapur and the eastern portions of Poona and Nasik have a very scanty rainfall and the spectre of famine is never too far off. The western part of the Deccan known as the Ghat, Matha or Maval is a region of heavy rainfall and rice is grown in terraced

1 Report of the Provincial Banking Enquiry Committee, C.P. p. 26.

2 Statistical Atlas of the Bombay Presidency, p. 1.

fields all over it. In the famine-stricken land, bajri and jowar are the main crops. Much of the Deccan is an uncultivated rugged plateau pierced by the rocky spurs of the Sahydris running in the easterly direction.

The Konkan is a low-lying tract between the Western Ghats and the Arabian Sea, and is made of the districts of Thana, Kolaba, Ratnagiri and North-Kanara. It receives a heavy rainfall from the south-west monsoons which are obstructed by the high mountain ranges of the Sahyadris and is eminently suitable for the cultivation of rice as a kharif crop. The strip being extremely narrow the innumerable rivulets running down the Ghats across it, flow with a heavy current, carrying with them a huge amount of soil every year. For the four months of the torrential outpour of rain they are in floods but dry up as soon as the monsoon is over. They are a serious hindrance to the development of roads and communications in the tract. "However though useful neither for navigation nor for irrigation these rivers serve an important function as the potential sources of hydro-electric power." ¹ The unbroken Sahyadris isolate Konkan from the Deccan and except near Belgaum where they vanish all of a sudden for over 14 miles, there is no other convenient outlet. This fact has a very detrimental effect on its economic development and life here has become practically stagnant. The coast line is much indented and there are a few excellent harbours such as Karwar, Vijayadurg, Jaygad and Marmagoa, once flourishing centres of commerce. In the estuaries of the rivers and near the coast line fishing is a paying occupation.

To the south of Deccan is Karnatak. It includes the districts of Belgaum, Dharwar Bijapur and South Kanara. The part of Karnatak lying in the Bombay Presidency is

1 Report of the Provincial Banking Enquiry Committee, Bombay.
p. 8.

a transition zone between the Deccan and the plains of the south. The opening in the hills near Belgaum establishes contact between the mainland and the coast line and the port of Goa. The rainfall, except in parts of Bijapur, is more certain here than in the Deccan and a network of wells and storage tanks in Dharwar, enables the cultivation of irrigated crops on a large-scale. Thus the whole of Karnatak, excepting Bijapur is well watered in the west, growing rice beneath the storms of the Ghat rainfall and wheat, cotton and jowar in the east where it is much less heavier.

Geology:—A geological survey of this united province of Maharashtra and Karnatak would include the description of its mineral wealth and the analysis of its soils as well as the subsoils of which they are formed. Maharashtra and Karnatak do not possess *mineral* wealth in any considerable quantities. The only deposits we can boast of are the manganese deposits of Bhandara, Balaghat and Nagpur. The manganese ore found in these districts is of the highest grade and its annual output is 87 per cent of the total Indian production. Similarly there are deposits of coal in Chanda but they are insignificant as compared with our demand and hence we are required to import large quantities of coal annually from Bengal. Near Kolhapur there are deposits of aluminium ore but they have not yet been worked up. It is said that the cost of working them up is prohibitive. Deposits of clay suitable for fine artistic pottery are found near Belgaum and Nagpur, and they are being largely utilized by Kushagars, for the purpose of manufacturing glazed pottery. On the whole however, the area is very poor in mineral wealth.

The *subsoils* can be conveniently divided into three categories the Matamorphic or the Archaen rocks, the Paleozoic rocks and, the Deccan trap. The whole of Maharashtra and Karanatak is very simple geologically being composed primarily of old metamorphic schists. " These comprise the whole of

the Plateau south of the Krishna and the eastern part of the Central Provinces ; they are characterized by rugged rolling country with isolated bare hill masses and extensively covered with forest or jungle where not cultivated." ¹ In this way the Archaen rocks which emerged during the cooling process of the earth lie concealed beneath Wain-ganga Valley. The Paleozoic rocks are derived from the old Archaen rocks which are also termed as primary or mother rocks. They overlie the Archaen rocks of the Karnatak in a small area extending westwards from the confluence of Krishna and Ghataprabha. For the most part they are situated up the course of the Krishna and pass underneath the trap of the Western Ghats.

The Deccan trap consists of the horizontal sheets and basaltic rocks, extending from the Bombay Coast as far south as Malvan, to central Hyderabad in the east and the Malva to the North. In fact its northern boundary is indefinite. The whole of Maharashtra even to the east of Nagpur is situated on these rocks which are associated with the regur or black soil of the Peninsula. The formation of these rocks is said to be due to the floods of Lava in late Cretaceous and early Tertiary times.² The rivers Godavari and Krishna and their tributaries have carved out valleys on this table-land which look like mountains when viewed from a distance. The western Ghats are mountains of this kind. By the weathering process the rocks of the table-land have been slowly washed away and edges which proved impervious to this process developed into the Western and Eastern Ghats.³ The Deccan trap with its barren scenic effect presents a contrast with the rugged rolling wooded country of the Metamorphic rocks.

1 E. Simkins, "Agricultural Geography of the Deccan Plateau of India," p. 18.

2 Vide Wadia, Geology of India, 1921.

3 C. Morrison, "Our World", p. 171.

On the caps of the Sahyadris is found an altogether different kind of rock known as the Laterite. It is a porous clayey rock composed essentially of a mixture of the hydrated oxides of iron and aluminium. Geologists attribute its formation to the action of sub-aerial weathering agencies on the underlying rocks which are either basalts or gneisses.¹ These rocks occur in regions of heavy rainfall and warm humid climate. They are deficient in 'silicates of the alkalis and the alkaline earths' which are essential for the growth of plants and vegetation.

The soils which are more or less the loosened particles of the underlying rocks or the surrounding cliffs differ in depth, texture and fertility according to their respective geological origins. But when classifying them according to their economic value their texture, capillarity and chemical composition will have to be given due consideration in addition to their subterranean rocks and topography.

From this point of view the soils of Maharashtra and Karnatak may be classified under five main categories:—

- I. The black soils or the *regur* - deep black, medium black and poor black.
- II. Red Loams - deep dark brown, medium and poor.
- III. Dry, porous, laterite soils.
- IV. Laterite or ferruginous red, loamy, forest soils.
- V. Alluvial soils.

The *regur* is agriculturally the most valuable of all the Deccan soils and though it occurs in close relationship with many geological formations and varies in colour and working properties in different areas, it possesses many common characteristics.² It is a highly argillaceous, finely grained

1 Report of the Royal Commission on Agriculture in India, p. 73 and Oldham, 'Manual of Geology of India.'

2 Harrison and Sivan, Department of Agriculture, India, Chemical Series, bulletin no. 5.

black soil, containing carbonates of calcium and magnesium in high proportion.¹ Its importance in the Deccan lies in its retentivity and capillarity. It stores up the monsoon water in large quantities for use in dry season and thus permits two croppings, one in the kharif season and the other in the rabi season. But in the Tapti Valley where the soil is heavy and the subsoil made up of yellow clay, this quality becomes a handicap as the soil is waterlogged during heavy rains and can be cultivated only in the dry season. It is a typical rabi land. During the hot dry season due to excessive heat the soil cracks and these cracks are so deep that even big trees succumb to them. The absence of trees in the Deccan may be ascribed to this fact. This cracking however, helps in a great degree to maintain the productivity of the soil. Every year, the exhausted surface soil is carried deep down these cracks and a new layer possessing ingredients necessary for a healthy plant growth is brought up to the surface. The chemical composition of the soil however, is not in keeping with its high fertility. The black colour of the soil, often ascribed in the past to the presence of humus is now considered to be due to a black mineral titaniferous magnetite.²

The three classes of this soil differ in productivity and maturity. The deep black heavy soil is the most mature and fertile, the medium black and poor black come next in the order stated. The deep black soil is to be found mostly along the Tapti Valley and is at its best near the river where it reaches a depth of 20 feet. It also covers the sloping valleys of the Purna and Wardha rivers in Berar and the banks of Krishna, Godavari and Bhima in the Deccan. Thus we find that it is generally associated with the river valleys of the Deccan trap.

¹ Report of the Royal Commission on Agriculture in India, p. 72.

² Annet, *Memoirs*, Department of Agriculture, India, Chemical Series, bulletin no. 9.

The medium black soil extends over the major portion of the Deccan trap, its continuity being broken by the spurs of Sahyadris running from south-west to north-east, which are covered with red soil. This soil is much shallower than the deep black soil and is found on the gentle slopes of the Deccan and Karnatak trap. In western Dharwar it covers the Archaen rocks. It possesses only to a moderate extent all the characteristics of the deep black soil, and is superior even to the Tapti Valley soil in that it never gets water-logged and yields two crops a year. Jowar, cotton, bajri and pulses are a few of the crops that are profitably cultivated on this soil.

The poor black and the red sandy soil lies extensively on the rugged hills where the topography prevents the accumulation of finer dust in layers. It is essentially an immature soil and covers the eastern slope of the Western Ghats, the Satpuras and the spurs of the Sahyadris. It is extremely deficient in agricultural properties, loose in texture and unretentive of moisture. It yields inferior crops like the millet or pulses and is the typical soil for kharif crops. A light frequent shower suits it well as it is washed away by heavy downpours.

After regur, the second important and extensive class of soils we find in Maharashtra and Karnatak is that of the red soils. They overlie the metamorphic rocks of the southern Maharashtra and Karnatak and the Wainganga Valley and are characterized by Leather as 'sandy clays coloured red by iron peroxide'.¹ These red loams differ greatly from the regur in physical composition and in many other respects. They are neither clayey nor firm in texture nor retentive. They are therefore essentially dry kharif lands or wet rabi lands cultivable by means of irrigation. Rice is the staple crop of this soil. In chemical constituents also the red loam

¹ Leather, 'Report to Government of India on Soils', 1897.

soils are inferior to regur. We can very well say that red loams are an intermediate zone between the regur and the laterite. For, the regur occurs in the level regions where the climate is hot and the rainfall is under 50" and where the climate is hot but the the rainfall is over 50" the soil formation is laterite. In the intermediate stage where the rainfall is slightly more or less than 50" and the country is rugged and sloping, the soil is an immature red loam, immature in proportion to the ruggedness of the country. "An ideal sequence then is a high level laterite capping, red loams on the slope increasing in maturity as the land becomes more level, till at the foot on the level land it is replaced by mature regur soil."¹

The red soil also can be divided into three grades according to its productive capacity. The dark brown soils or the red and yellow loams of the Wainganga Valley, the most productive variety of red soils, are the richest rice lands of Maharashtra. They are found everywhere in the valleys of the rivers flowing over the Metamorphic rocks. Thus we come across them along the courses of Malaprabha, and Ghataprabha and their innumerable tributaries. Even outside the zone of Metamorphic rocks this kind of soil is found, having been carried down by rivers or washed down the mountain slopes.

The area covered by the second class of soil, the medium red loams, is almost co-extensive with the area occupied by the metamorphic rocks. It occurs above these rocks on the hillside slopes wherever the land is more level, while the loose, immature, and unproductive, gravelly red soil, is found on the steep and rugged highlands of Nagpur. Inferior millets are the only crops that thrive on this soil but the medium red soil with the help of

¹ Simkins, 'Ibid' p.12.

irrigation and manures can produce smiling crops of rice ragi and sugarcane.

The laterite soils are formed out of the laterite rocks, which cap the rugged hills of the Western Ghats. They are also found overlying rocks of other kinds, gneiss, trap and granite.¹ They are very porous, dry and hungry, but if manured and irrigated are the best garden lands. As a general rule all the laterite soils are deficient in potash, phosphoric acid and lime but they contain a larger percentage of humus than any other soil.² In Maharashtra and Karnatak the laterite soils follow the region of high temperature and heavy rainfall to the south of Poona. They exist at a level of about 2000 to 5000 feet on the Western Ghats and are deposited by wind and water on level plains and in river valleys. The laterite soils can be classified according to productive capacity as forest and dry porous soils.

The forest soils spread along the slopes of the Western Ghats. They are either red or brown and are very fertile due to the admixture of forest humus that they receive during rains. The dry porous soils are found on the flat tops of the Western Ghats. They are dry and unrententive, exceedingly thin and gravelly, but when adequately watered, develop into the best garden soils.

The alluvial soils are made up of the silt brought down by the rivers from the regions through which they flow. The silt being a very fine substance, deposits itself in layers along the mouths of the rivers, where their currents are slow and beds very wide. The alluvial soils are either deep regur

1 According to Fox all the rocks are potential sources of laterite provided they are not of 'impossible chemical composition'.
Vide Memoirs, 'Geological Survey of India', 1923

2 Report of the Royal Commission on Agriculture in India, p. 74.

or deep red loams according to the soils of the regions through which the rivers wind their ways. The coastal strip of Maharashtra and Karanatak, lying between the Western Ghats and the Arabian Sea, is covered with these soils. But as the country is hilly and rugged they are found at their best only in the river valleys, the lighter layers elsewhere are economically not very important. If well irrigated and manured good crops of rice and sugarcane can be easily secured from these soils.

River System :—The river system of Maharashtra and Karnatak is considerably less important than the river system of the Indo-Gangetic plain and does not play a very great part in the economic life of the people. This is probably because the rainfall in former regions is comparatively heavy and because the rivers originating in the Sahyadris are very narrow and flow through deep gorges. More-over, their water supply is not constant. During the rains they are in torrential flood and carry away the fine layer of silt overlying their banks, to enrich the lands at their mouths, while in summer, when the rains are totally absent and water is badly needed for cultivation, they dwindle and become dry. They are therefore of little value either for irrigation or communication and it will be seen that there is no town of any size or importance on any of the Deccan rivers.¹ In the coastal strip of Konkan, the innumerable small rivers rushing across the land, make small creeks in the coast where they join the Arabian Sea and are navigable for short distance by small country boats. Fishing provides a good occupation to the people residing near their mouths. On the whole, the river system of Maharashtra and Karnatak does not add much to its natural resources.

The Wainganga river however, is an exception to this general description. It flows through Bhandara, Balaghat

1. V. G. Kale, 'Indian Economics', Vol. I, p. 83.

and Chanda and its valley is one of the important rice zones of India. The water supply of the river makes it possible to have two crops in a year. A similar exception can be made, though to a less extent, in the case of Purna and Wardha which run through Berar. Both these rivers have fertile valleys of deep black regur which yield abundant crops of wheat and cotton. The rivers Wainganga and Penganga are navigable during the monsoon.

The Western Ghats are the source of the great rivers of the Deccan Plateau, Godavari and Krishna and their tributaries, running towards the east. But as we have said above, none of these rivers or their tributaries are of any great help to the economic life of the people in Maharashtra or Karnatak. The river Godavari arises near Tryambakeshwar in the Nasik District and through Ahmednagar enters the Nizam's Dominions. The Godavari Canals and the Pravara Canals, which supply adequate water for the cultivation of sugarcane during the dry season, are the two important irrigation works that are fed by this river system. The river Bhima flows through Poona and Sholapur and meets Krishna in the Nizam's Dominions. The river Nira, a tributary of the Bhima which flows through the same districts has also an important canal system attached to it. The river Krishna rises near Mahabaleshwar, the hill-station of Bombay, and in its eastern course passes through the districts of Satara, Belgaum and Bijapur.

On the Konkan coast almost all the rivers which rush down the steep western slope of the Sahyadris are very small and narrow due to the short distances they traverse before meeting the Arabian Sea. Hence they are practically useless for navigation. Similarly, they cannot be of any use for irrigation as they solely depend upon the south-west monsoons for their water supply and shrink up in the summer. However, the sea-waters rush up their mouths to a

very long distance during high tides, when country boats can ply for fishing as well as navigation. The estuaries of Dativra and Bassein in the Thana District, Panvel and Roha in the Kolaba District and Bankot and Anjanvel in the Ratnagiri District are very famous in this respect.

The coast line of Maharashtra and Karnatak is very much indented and there are a number of harbours having great commercial importance.¹ They are open throughout summer and winter but during the stormy monsoon weather, all, excepting Karwar, Vijaydurg, Jaygad and Marma Goa, are insufficiently protected. The deficiency of a well-developed road system on the western coast due to the unfavourable topography of the region, prevents these ports from being important centres of foreign trade, which tends to concentrate at the port of Bombay. Nevertheless, they have a considerable amount of coastal trade with one another and with Bombay.

Climate :—In describing the climatic conditions of the united province of Maharashtra and Karanatak the chief factors to be considered are its latitude, its nearness to sea, its altitude, the winds that blow over it, the direction of its mountain ranges and the nature of its soil. Each of these factors modifies or adds to the effect of the heat transmitted by the Sun. As the whole of the Peninsular India lies in the tropics, it is under the full blaze of the Sun for about four months. But being surrounded by sea on both the sides, it has an equable climate and the extremes of temperature in summer and winter which are found in the north, are absent here. The mountain ranges of the Plateau modify the heat of the Sun and the sea-winds check the intensity of the winter, which is practically non-existent in the south, the climatic change being felt, in the slight mitigation of the normal heat. The average

¹ Report of the Provincial Banking Enquiry Committee, Bombay, p. 20.

temperature varies between 78° F. to 85° F. The importance of climate in the economic life of the Deccan Plateau can be easily ascertained from the following words of Miss Simkins. "Perhaps in no other region of the world does the climatic regime enter so much into every aspect of life as in the Indian Peninsula, this from the fact that life here is based on agriculture which is dependent for its very existence on the rainfall, in its turn almost wholly dependent on the south west monsoon."¹ It therefore becomes clear enough that the winds blowing over the Peninsula are the predominant factor influencing its climate. Hence the climatic year can be divided into two seasons according to the prevailing monsoons. The south-west monsoons comprise the season of general rains from mid June to mid September and the season of retreating monsoons from mid September to December. The north-east monsoons include the winter months of January and February and the summer months from March to mid June.

Rainfall :—Rainfall in Maharashtra and Karnatak has a definite periodicity, the variations synchronizing with the reversal of winds which carry the rainbearing clouds. The south-west monsoons are responsible for 85% of the yearly rainfall in the Deccan Plateau². The distribution of this rainfall is not uniform over the whole region under consideration which can be divided into three divisions, each with its own characteristic supply of the rains. They are:—

- I. The Konkan and the coastal strip extending up to South Kanara, with a sub-region in the basins of Wardha, Wainganga and Penganga.
- II. The Maval or mallad tract, with a sub-region in the Khandesh and Berar territories.
- III. The Desh or the Eastern Bombay Deccan.

1 E. Simkins, 'Ibid' . p.13.

2 "If there were no such monsoon winds India would be a riverless desert like Persia or Arabia." C. Morrison, 'Our World', p. 87.

The Konkan is a region of heavy rainfall. The whole of this tract including a strip of about 20 miles on the crest of the Ghats receives 80" or more of rain every year, actually on the top of the Ghats the usual record being 200" to 250". The south-west monsoons first touch the district of South Kanara and then take the direction of Gujerat. As they travel north the amount of rain that they deposit decreases. "Thus Bhatkal at the extreme south on the coast of Kanara receives an annual rainfall of 150"; Ratnagiri about two hundred miles north receives 96"; while Umbergaon in the north of the Thana District receives only 62".¹ The high ranges of the Western Ghats, in as much as they arrest the surcharged clouds receive more rainfall than the coastline. The rainy season in this tract lasts from June to October. The maximum rainfall occurs in June which is about 32" and then there is a gradual and continuous drop till September. The South Kanara District gets a slight shower in May but the regular season begins from June. The north-east monsoons run empty over the tract and hence there is no rain after October.

A sub-region of this tract is marked by the basins of Wardha, Wainganga and Penganga. The rainfall graph of the Bhandara District is typical of this region. The showers which begin in June become heavier and heavier till the maximum is reached in July. From then the graph shows a gradual fall in the monthly average which does not rise again as in other rainfall regions. The maximum in July is well over 15" as in Chanda and though there is a continual decline after July, the average rainfall in this area, which is over 50", is higher than in any other region except Konkan. The eastern part of the Wainganga basin is besieged by cyclones during January, February and March, which are often accompanied by showers of hail storms and do considerable damage to spring crops.

¹ Statistical Atlas of the Bombay Presidency, p. 4.

The Maval tract comprises the leeward slope of the Western Ghats, extending 30 to 60 miles to the east of Poona and stretching from the Satpuras in the North to the rim of the Mysore Plateau in the south. It is just below the crest of the Sahyadris and therefore does not come under the rain shadow. The moisture bearing clouds which come across the Ghats have already deposited much of their contents, naturally, the annual rainfall in this tract does not exceed 50". The annual rainfall graph of Poona gives an exact idea of the peculiarity of rainfall in this area. Generally, this area receives rain from June to October, but south of Belgaum it gets appreciable showers in May also. It has a major maximum of 6" to 10" in July and a minor maximum in September.¹ To the south of Kolhapur the minor maximum occurs in October. The two or three inches of rain in May that is received by the country lying to the south of Belgaum is due to the rain bearing clouds which rush through the Palghat gap, the only opening in the Sahyadris to the table-land of Deccan.

The Khandesh-Berar territory is a sub-region of this division so far as rainfall is concerned. The south-west monsoons which rush up the Tapti Valley are responsible for much of the rain deposited in the Khandesh territory, while the whole of Berar and a part of Khandesh receive rain from the winds that blow across the Sahyadris. This sub-region though more akin to the Maval tract has some rainfall features in common even with the Wainganga tract. Like the Maval tract its annual rainfall comes to about 35" but it has only a single maximum in July like the Wainganga tract. In a way therefore, it can be considered as a transitional region between these two areas.

¹ Major maximum means the highest amount of monthly rainfall and minor maximum means the second maximum with a drop between the two.

The strip of land adjacent to Maval and lying parallel to it, is the third rainfall division. It includes the eastern portions of the districts of Nasik, Poona, Satara, Belgaum and Dharwar and the whole of Ahmednagar and Bijapur. The monsoon winds that blow over this tract are dry and the rainfall is very poor, ranging from 20" to 30". The whole of the area, particularly the eastern portion, is "chronically liable to drought", and the spectre of famine looms large on the horizon of the agriculturist. The deficiency of rainfall has been partly removed in certain areas by the construction of irrigation works - canals, tanks and wells - but the thirst of the fields is still unsatisfied. The rainy season here, is the same as in the Maval the southern portion receiving showers in May. The major maximum of rainfall occurs in July and the minor maximum in September.

The one point that is brought out by a study of these rainfall regions is that, while the quantity of rain in Maharashtra and Karnatak is not small, its distribution is uneven. During monsoon, the average rainfall per day is usually remarkably heavy in a large part of the area. Mr. Blandford writes about Indian rainfall in general: "In consequence of the character of Indian rainfall it is less penetrating in proportion to quantity, than in countries where much of it falls in a state of fine division allowing time for its absorption by the ground; instead of feeding perennial springs and nourishing an absorbent cushion of green herbage, the greater part of it flows off the surface and fills the dry beds of drains and water-courses with temporary torrents. ... A rainfall which if husbanded by nature and art would suffice for the agricultural and domestic requirements of the population, is thrown into the *nullahs* and rivers and not only is wasted and lost for any useful purpose but by the production of floods, becomes

an agent of destruction.”¹ How much more true is this of Maharashtra and Karnatak !

Forests:—Forests are a handmaid to agriculture. They supply the poor peasant with fuel, manure and timber and indirectly play an important role in the economic life of a country. They modify the extremes of climate, increase the humidity of air, reduce evaporation and attract rains. “It has been found that if the forests of a country are allowed to be burned and cut down, the soil can no longer sustain the moisture given to it by rain and dew”. The forests also increase the fertility of soil, by sending huge quantities of humus to the surrounding regions during rains, and supply grazing to agricultural live-stock. They also yield commercial products like timber and bamboos and an infinite variety of medicinal herbs. The character of forests in a country is largely governed by the amount of rainfall and the elevation of the land. Where the rainfall is heavy, the evergreen forests of bamboos, palmtrees, rubber trees and sundry other creepers are a common feature of the mountain ranges. In those parts of the tropics, where the rain does not fall all the year round but falls heavily during a part of it, we have ‘monsoon forests’ of this kind. In Maharashtra and Karnatak they hedge round the Western Ghats and the Satpuras, and their minor spurs, and occupy about 16% of the total area

The rapid destruction of forests which characterized the early days of British rule in India was stopped in the regime of Lord Dalhousie. He realized the necessity of conserving the forest wealth of the country, if it was to be saved from developing into the arid plains of Arabia and Persia. In 1864 a department under an Inspector-General of Forests was

1. H. F. Blandford, “The Climates and Weather of India, Burma and Ceylon.”

established and since then a definite policy has been followed with regard to their conservation. The following table will show the area under forests in Maharashtra and Karnatak in 1931-32.

AREA UNDER FORESTS IN 1931-32.¹

(1000 Acres.)

Nagpur division	...	...	4,306
Berar	...	...	2,136
Khandesh	...	...	1,481
Bombay Deccan	...	...	2,263
Konkan	...	...	3,149
Karnatak	...	...	1,384

Thus, nature does not seem to have been so unkind to us as one would infer from the economic development of the province. In the production of utilities which satisfy our material needs there must be a close adjustment between our efforts and the resources of nature. Nature as we see, though not so bounteous as to smother her pet children with kindness, has been sufficiently generous to make us capable of obtaining a decent standard of living. Because of our geographical position we have immense possibilities of developing a large inland trade in India and even a good deal of foreign trade if our ports on the Konkan and Malbar coasts are connected with the hinterland of Deccan by means of roads and railways. Our soils are sufficiently rich and varied so as to produce almost every crop we need and to produce it abundantly if well cultivated. Similarly, our river systems though useless for navigation and not very useful for irrigation, provide in the Ghats, veritable store-houses of electricity, which can very well make up for our deficiency of coal in motive

1. Agricultural Statistics of India, 1931-32, Vol. I.

power. Rainfall is precarious in certain tracts and on the whole is not well-distributed throughout the year. This makes our agriculture essentially a matter of dry cultivation and raises the serious problem of supplying some work to the agriculturist during the off season. The difficulty can be tackled to a certain extent by means of tank irrigation, but its fundamental nature will remain the same. As regards climate we are rather unfavourably placed, but the intensity of tropical heat is much diminished by the altitude of the country and in the coastal tract, extremes of temperature are made impossible by its nearness to the sea. Our forests, especially on the Malbar coast are rich in timber and provide abundant grazing to the cattle along the Ghats.

If therefore, in spite of these gifts of nature we are dragging a weary existence, the blame lies with our own selves for having failed to utilize them. It may be, that we were not provided with sufficient facilities by the State to get the best out of nature, but the fact remains that directly or indirectly it is the human factor which is responsible for our present economic backwardness.

CHAPTER II.

Agricultural Development.

It has been the commonplace of India's economic history that the Industrial Revolution which brought prosperity to England brought poverty to India. Prior to it, in Maharashtra and Karnatak as in other provinces, every village was self-sufficient so far as its economic needs were concerned. It had its own industries, its own shops, its own fields and its small population was well distributed in these various avocations. There were no well developed means of communication between them. The large industries were situated in the seats of Indian princes, places of pilgrimage and cities on the main trunk roads. The handicrafts in these centres produced fine luxury articles such as could be purchased only by wealthy persons. The *dhoties* and *dopattas* of Nagpur, Umrer and Paoni and the *paithanies* of Yeola were a few of the famous fabrics of Maharashtra at the time. Besides the weavers, workers in bell-metal and saltpetre, bangle-makers, glass-workers and paper-makers also swarmed these centres. But with the disappearance of the native Indian courts and the establishment of an alien rule, there came about a change in the taste of the people and the demand for the products of Indian handicrafts began to diminish.¹ In the latter half of the 19th Century this tendency was accentuated by the influx of cheap foreign articles which flooded the province and the destruction of Indian handicrafts was complete by the end of the Century. This was the result of the Industrial Revolution in England which made it possible for Lancashire to produce cotton goods on large scale, at a very low cost. As a consequence of the decay of urban handicrafts a majority of the

¹ D. R. Gadgil, "Industrial Evolution of India", p. 40.

urban population who were supported by these crafts moved to villages and fell back on agriculture as the chief source of income.

By this time the railways, had traversed the length and breadth of India and had connected the big cities of the interior with the important ports of Karachi, Calcutta and Bombay. Other means of communication like Posts and Telegraphs had also been introduced into the provinces. The lines of communication were generally laid out in such a way as to facilitate the export of agricultural produce, especially cotton, which was greatly in demand at Lancashire because of the stoppage of American imports due to the Civil War. Before 1870 railway lines from Bombay had connected Nagpur with the Khandesh-Berar cotton tract and Sholapur with the adjacent Karnatak cotton tract. Important centres like Belgaum, Dharwar and Hubli within the Karnatak tract were, however, left out till the late eighties. Besides protection from famines, other motives had influenced the manner in which railroads were developed all over India including Maharashtra and Karnatak. Prevention of famines, development of internal and external trade, growth of more remunerative crops in tracts reached by railways and improvement of the economic condition of the people were a few of them mentioned by an early Committee on railway construction.¹ The immediate result of the development of railways in particular and of means of communication in general, was the destruction of the self-sufficient village economy that prevailed in the province.² As railways gave impetus to the export of agricultural produce, their prices increased and more and more people turned to the land. This was the main factor which gave a predominantly agricultural bias to the economic life of this province, which after the destruction of our handicrafts, developed into a

1 "Report of the Committee on Railways in India", 1884.

2 B. G. Sapse, "Economics of Agricultural progress", p. 11.

serious problem. Those who were ousted from their industrial occupations also joined in the scramble for land, until agriculture became the mainstay of 70 per cent. of our population.

It was again the influence of foreign trade which changed the character of our husbandry. The era of high prices for certain agricultural crops which it heralded led to specialization in their cultivation. Large areas came under the cultivation of cotton and wheat, as they were the chief crops which had a great foreign demand, and later on, a variety of important crops like maize, tobacco, groundnuts and potatoes were introduced in the province for the same reason. Prices of these crops were increasing so fast that in spite of the large share of profit intercepted by middlemen, the farmer could secure a decent price for himself. Referring to the tendency towards specialization in cultivation, the Indian Industrial Commission remarks: "Cotton is now no longer planted in almost every village where conditions are not absolutely prohibitive, but is concentrated in areas which are specially adapted to its various types. The dry plains of Central and Western India are admirably suited to a short-stapled but prolific kind. Sugarcane is disappearing from tracts not specially suited for it. A visible sign of this movement may be seen in the abandoned stone cane mills lying near villages in the arid plains of Central India, which now prefer to keep their scanty stores of water for other crops and pay for their sugar by the sale of their cotton."¹ It now dawned upon the agriculturist that, it would be better for him if he confines himself to the best crop he can grow on his land and buy his food stuffs with the price he would realize for his produce, instead of trying to be self-sufficient by cultivating food crops on a small patch and reserving only the rest of his land for money crops. This has led to better exploitation of land and its natural qualities.

¹ Report, "Indian Industrial Commission" p. 3.

The Government also showed from the very beginning great enthusiasm in the cultivation of commercial crops. Specially were they interested in the cultivation of cotton, perhaps because they were wide awake to the interests of Lancashire. The short-stapled Berar cotton, however, is not used by the Lancashire mills and hence great efforts were made to improve the indigenous plant and to introduce exotic varieties. But the cultivator did not take very favourably to the cultivation of foreign varieties whose yield per acre was much less than that of the indigenous plant and which not a ways fetched him a better price. In 1889 Dr. J. A. Voelcker who was deputed by Government to make a study of Indian agricultural conditions, expressed the belief that Indian agriculture was neither backward nor primitive, and that, where agriculture was manifestly inferior, it was more generally the result of absence of facilities than of inherently bad systems of cultivation. That, improvement was possible was clear from the differences in agricultural conditions and practices existing in different parts of the country.¹ The provincial departments of agriculture had so long kept themselves busy with the preparation of Land Records. They were however roused to activity in the regime of Lord Curzon who evinced a keen interest in the agricultural development of India. He realised the absurdity of preaching Indian agriculturist the use of steam ploughs and ammoniac manures.² Since his time the agricultural departments have been carrying on a good deal of research work in the introduction of new seeds, manures and implements suitable local to conditions.

1 Report on the improvement of Indian Agriculture, Chapter II.

2 "In connection with Agriculture we must be careful of two things. First we must not ostentatiously tell native husbandmen to do things which they have been doing for centuries. Second we must not tell them to do things which they cannot do and have no means of doing" Lord Curzon. Quoted by P. P. Pillai. "Economic Conditions in India," p. 82.

So far we have seen that the development of agriculture in India in general and in Maharashtra and Karnatak in particular has meant only the development of commercial crops like cotton, wheat, sugarcane and groundnuts.¹ No serious attention has been given either by the Government or by the people to the improvement of food crops, and the development of orchards on the laterite soils of Maharashtra has been completely ignored. Similarly, while the influences of foreign trade have profoundly modified some aspects of our husbandry, they have not been able in any sensible degree to affect its internal economy. Fifty years of high prices have increased neither the standard of living nor that of farming and the present fall in prices of agricultural produce has spelt distress to the cultivators of Maharashtra and Karnatak. The cultivators of commercial crops have suffered most.

As we have said before, despite strong external influences, there has been no change in the internal economy of agriculture in India. This internal economy means the methods of cultivation adopted by the farmer and the economic relations of the different classes of agriculturists with one another. It is the primitive internal economy of Maharashtra and Karnatak that is responsible for the comparatively low yield per acre of our agricultural produce. The importance of increasing the productive capacity of the land can never be over emphasized in this province as it is the only direction in which progress is possible, much of the arable land being already under cultivation. In short, our future efforts must be directed towards intensive cultivation because extensive cultivation has almost reached its limit.

The question of improved cultivation in Maharashtra and Karnatak firstly resolves itself into a question of water, manure and cattle. An adequate supply of water is the first necessity of

1. G. Keatinge. "Agricultural Progress in Western India."

agriculture. In such tracts of Maharashtra and Karnatak where rainfall is heavy, and soil retentive, agriculture does not suffer from want of adequate moisture. But where rainfall is scanty and soil unretentive as in the famine tracts of the eastern Bombay Deccan, the problem of water supply is very serious and hence the special importance of irrigation in this region. Irrigation here is both necessary as well as possible. It is necessary for the obvious reason that the rainfall in this tract is scanty and erratic. Irrigation is also possible as the heavy rains on the Western Ghats yield a large quantity of water which can be stored in big reservoirs and supplied to different districts when required. The Famine Commission of 1880 strongly advocated the construction of irrigation works as a preventive measure against famines in the Deccan. The Famine Commission of 1901 went much further and actually suggested a plan of irrigation works to be carried out within twenty years. Most of the schemes prepared by it have been completed by now, still it is considered that there is ample scope for the development of the tank system of irrigation in the Deccan¹. The following table will show where irrigation is necessary for preventing famines.

AREA, AVERAGE RAINFALL AND THE NUMBER OF DRY YEARS AND YEARS OF SEVERE DROUGHT THAT MAY BE EXPECTED IN 50 YEARS.²

Area	Average rainfall (in inches).	Dry years.	Years of severe drought.
Wainganga Valley ...	47	7	2
Satara, Belgaum, Dharwar ...	42	4	1
Berar ...	35	10	3
Sholapur, Bijapur, Ahmednagar ...	26	11	7

1. G. K. Devdhar, "Royal Commission on Agriculture," Evidence Volume II, p. 228.

2. "Report of the Irrigation Commission," 1901.

The irrigation works in Maharashtra and Karnatak may be divided into three main classes: 'canals' under which are classed all works for diverting the waters of streams or rivers to the land; 'tanks' which includes all works for the storage of water and all the natural depressions the water from which is used for irrigation and 'wells' which comprises all works giving access to the subterranean supply of water. Canals are essentially the work for the Government, in as much as, they require a large outlay and do not bring quick returns on the capital invested. They are fed by river-waters but the topography of the Deccan prevents them from watering large area. The Godavari Canals, the Pravara Canals, and the Nira Canals are the chief canal systems of this province. Tanks are very popular in the Deccan where canals cannot be constructed; while wells are the typical source of irrigation on the black cotton soil. The cost of boring wells is prohibitive in the Deccan,¹ and there is no certainty of the existence of underground water. The following table will show the area under irrigation from these various sources in Maharashtra and Karnatak.

AREA UNDER IRRIGATION IN 1931-32. ²
(1000 ACRES)

Division.	Govt. Canals.	Private Canals.	Tanks.	Wells.	Other sources.	Total.
Nagpur	...	422	...	29	11	461
Berar	...	...	...	31	..	31
Khandesh	14	1	...	43	1	61
Bombay Dn.	130	66	5	394	3	599
Karnatak	14	2	101	67	30	215
Konkan	...	8	17	15	14	56

1. H. Mann, "Land & Labour in a Deccan Village." Study no. 2
"The cost of boring a well in the Deccan comes to Rs. 200 to 400."

2. Agricultural Statistics of India 1931-32, vol. I

There are many complaints against the Irrigation Department of Bombay about its policy of supplying canal water to the cultivators. "In the actual distribution of water the cultivators are exposed to a great deal of inconvenience, delay, and even harassment and the sum-total of this 'cost' is often far greater than can be guessed from official reports."¹ Apart from the most commonplace grievance that the water-rates are very high, it has been brought to the notice of the Government several times, that the canal authorities cut short the water-supply exactly when it is badly needed by the cultivator. It clearly defeats the very object for which canal irrigation has been introduced in this province. Mr. Walchand Hirachand has suggested that the Irrigation Department should be under the control of the Agricultural Department which is in a better position to understand the needs and difficulties of the cultivator.²

Insufficiency of manure has been mentioned as one of the causes of the backwardness of our cultivation. Dr. Voelcker pointed out that it was not the ignorance of the ryots which prevented them from utilizing natural farm-yard manure to fertilize fields, but it was their poverty which compelled them to use it for other purposes.³ Cattle-droppings are used as fuel because the Forest Department has become unnecessarily stringent in conserving the forest wealth of the country. Similarly the everlasting money-famine compels the agriculturist to export his oil seeds, and thus a very valuable source of high-quality manures is lost to him. Night-soil, bone manures and fish manures are rarely used by the small cultivator because of his inherent prejudice against them, while the value of green manures is yet to be realized by him. The use

1. B. G. Sapre, 'Ibid' p. 138.

2. Walchand Hirachand, "Royal Commission on Agriculture in India," Evidence Vol. II, p. 511.

3. J. A. Voelcker, "Ibid" p. 93-96.

Next to inadequate supply of water, manure and cattle the constitution of our rural society, is the second important factor responsible for the low yield of our agriculture. The landlord, the cultivator and the agricultural labourer do not make any concerted effort to improve cultivation, believing that their interests are antagonistic and thus fail to get all that the soil is capable of yielding. Wherever possible, the landlord tries to squeeze out as much as he can from his tenant and never realizes his responsibility as the leader of society. He never takes any interest in the improvement of his fields and is quite content to receive his rent from the cultivator. More often than not he is tired of rural atmosphere and migrates to the city nearby to enjoy the pleasures of urban life. Even the cultivator who is directly concerned with the cultivation of land does not seem to realize that the outturn of his field is in direct proportion to his efforts. This may be partly explained by the fact that agriculture in Maharashtra and Karnatak, as all over India, is far too much a matter of seasons and monsoons. This excessive dependence on Nature makes him a fatalist and he is happy if only he can secure a bare-subsistence from his land. As Keatinge writes, "in those parts of the country where the fear of famine is little felt, the cultivator is found to be unceasingly industrious but where a season of good and well-distributed rainfall is the exception, he is invariably found to be slack and careless. The one has learnt that he will reap what he sows; the other has learnt by bitter experience that this is not necessarily the case."¹ The agricultural labourer belongs to the lower classes of rural society and is the most miserable creature on earth. The plot he cultivates is very tiny and is hardly sufficient to provide him with food for two months of the year. He has to supplement his earnings by selling his labour

1. G. Keatinge, "Rural Economy in the Bombay Decan," p. 58.

and has hardly any interest in the improvement of the industry which directly does not support him. Temperamentally he is a greater fatalist than the cultivating owner and has no ambition whatsoever to improve his material condition.¹

All the land in Maharashtra and Karnatak except in the Nagpur division is held by cultivators on the Ryotwari system.² Their revenue payments are fixed by the Government after careful measurement and classification of the land in their possession and so long as they pay the revenue they have every right to dispose it of in any way they like. But under the Khoti and Malguzari tenures which prevail in the Konkan and the Nagpur divisions respectively, lands held by the tenants are not transferable without the consent of the landlord.³ As we have already said these landlords do not evince any interest in their cultivating tenants nor in the cultivation of their lands and hence have become a burden to the community. As regards the other two classes, the agricultural labourers and the cultivating tenants, their number is fast diminishing. This is due to the fact that many of the agricultural labourers have joined the ranks of the industrial

1 The proportion of these three classes of agricultural society is as follows:—

3½ per cent of the agricultural population are landlords-Malguzars in C. P. and Khots in Konkan.

Number of cultivators for every 100 rent receivers in Maharashtra and Karnatak.

Province.	1911.	1921.
Bombay ...	1,913	1,625
C. P. Berar ...	6,125	3,808

Number of farm servants and field labourers per 100 cultivators in Maharashtra and Karnatak.

Province.	1911	1921,
Bombay ...	67	41
C. P. Berar ..	86	82

2. Report, "Bombay Banking Enquiry Committee."

3. Report, "C P. and Berar Banking Enquiry Committee."

labour and the consequent rise in the wages of those who still stuck to their old profession has drawn out many of the cultivating tenants from their lands. The rise in agricultural wages in the Bombay Maharashtra and Karnatak can be seen from the following table.

INDEX NUMBERS OF REAL WAGES OF AGRICULTURAL WORKERS.¹
1900 to 1922, (1900 = 100).

Year.	Field labour.		Ordinary labour.		Skilled labour	
	Urban areas.	Rural areas	Urban areas.	Rural areas.	Urban areas.	Rural areas.
1914 ...	143	154	126	156	114	114
1921 ...	145	138	139	132	118	111
1922 ..	150	145	141	142	125	117

The increase in prices especially from 1905, the decrease in the supply of labour as compared with the demand owing to plague during 1902 to 1907 and influenza in 1918, the increased mobility of labour consequent on an increase of communications, and the general expansion of commerce and industry, mainly account for this leap upwards in wages in this province during the first two decades of the present century.²

The rate of wages determines to a great extent the availability of labour and its efficiency.³ The increasing wages in Maharashtra and Karnatak during the 20th century ought to have attracted to the fields a large number of labourers. But on the contrary we find that the agricultural labour is becoming more and more scarce. At the same time the census report indicates a rise in the population supported by

1. G. F. Shirras, "Report of an Enquiry into agricultural wages in the Bombay Presidency."

2. P. Pillai, 'Ibid,' p. 112.

3. G. Keatinge, "Agricultural Progress in Western India," pp. 145-46.

agriculture. Evidently the argument that labour is drifting towards industries cannot be the full explanation of its scarcity in agriculture. We must seek it in the improved condition of the agriculturist himself. Many a people who formerly supported himself on his holding during part of the year and were glad to work for a wage in the off-season, now find that they can get on without the latter source of income and keep out of the labour market altogether unless exceptionally high wages in the neighbourhood of their homes tempt them to forego their hot weather holiday. But the rate of wages is rarely so high as to induce them to forego their leisure and hence the widespread cry of the inadequacy of agricultural labour. As regards the effect of high wages on the efficiency of labour we can say that it is quite imperceptible. Our labour now is as efficient or inefficient as it was before the rise in wages. It seems therefore, that high wages alone are not sufficient to improve the efficiency of labour which will have to be better equipped in addition.

Two other factors besides those directly connected with the internal economy of our agriculture seriously affect its efficiency. They are the money-lender and the middleman. The cultivator is always in need of credit for current agricultural operations but as all his capital is invested in land and live stock, he has to incur debts. If the landlord realizes his responsibilities he should give accommodation to his tenant and make things easy for him. But a benevolent landlord of this type is an exception in Maharashtra and Karnatak and in those tracts of Ryotwari tenure where there is no landlord at all, the money-lender is the only resort of the cultivator. In spite of his usurious practices, it is mainly to him that the rural population looks for funds to satisfy their personal needs and to raise and move their crops. Before the advent of British rule in India, even the money-lender was not easily

available. Capital was scarce, security was absent, and the money-lender could not enforce his claims with the help of law. But with the introduction of permanent tenure, the recognition of rights of transfer in land and the establishment of peace and order in the country, the credit of the individual cultivator has increased and the risks of money-lending reduced.¹ During the period of rising agricultural prices in the 19th century it was highly profitable for money-lenders to give loans to cultivators at usurious rates and to secure their lands in liquidation. Such transfers of land became so prominent and harassing in the Deccan in the late seventies that they led to serious riots. The Government had to institute an enquiry into the causes of the riots and to pass the 'Deccan Agriculturists' Relief Act.' In supporting the measure Sir Thomas Hope remarked: "The money lenders do obtain bonds on false pretences; enter in them sums larger than agreed upon; deduct extortionate premiums; give no receipts for payments and then deny them; credit produce at fraudulent prices; retain liquidated bonds and then sue on them; use threats and warrants of imprisonment to extort fresh bonds for sums not advanced; charge interest unstipulated for, over-calculated or in contravention of Hindu Law and commit a score of other rogueries."² In order to check these malicious practices the Government passed the 'Usurious Loans Act.' But this measure along with the 'Insolvency Act' made matters worse for the cultivator. As the difficulties and risks of the money-lender increased, he became less willing to supply money at easy rates of interest, and on feeble security. The Government tried its best to supply the needs of the cultivator by giving Taccavi Loans and by passing the 'Land Improvement Loans Act' and the 'Agriculturists' Loans Act.' But till the introduction of co-operative credit in the

1. Report, "C. P. & Berar Banking Enquiry Committee," p. 86.

2. M. L. Darling, "Punjab peasant in prosperity and debt."

20th century the money lender was the only source of help to the cultivator. Even now he continues to play an important part in financing agriculture.

Among the various causes responsible for the indebtedness of the agriculturist, his general economic conditions and his improvident habits are the chief. His small and scattered holdings which do not give him occupation throughout the year and the lack of subsidiary industries which might be expected to supplement his income, often compel him to borrow, to make both ends meet. The difficulties are enhanced by the vagaries of the monsoon which hits him hard, especially in tracts liable to famine, where on an average only one out of three years is good.¹ His improvident habits are almost proverbial. In the absence of convenient investment facilities the profits of the good harvest are extravagantly spent, while a marriage or a funeral in his family sends him to the door of the money-lender. In the C. P. and Berar 45 per cent of the cultivators are free from debt and the percentage is so high because the land in the C. P. is not transferable without the consent of the Malguzar. The average debt per family works out at Rs. 227. In Konkan only 29 per cent of the cultivators are free from debt and the average debt per family is Rs. 324. The agriculturist all over the world is indebted, but his debt for the most part is incurred for productive purposes, while in our provinces it is mostly incurred for consumption and for ceremonials.

Just as the cultivator depends on the money-lender for the supply of credit he also needs him as a middleman to dispose of his produce. In the self-sufficient village economy he was not so indispensable, but with the development of exchange economy, the cultivator has become dependent on the

1. Report, "Bombay Banking Enquiry Committee," p. 47.

profits of his marketed commodities for the supply of his necessities and comforts and has to rely upon the money lender to secure him those profits. Here, the money-lender in his usual capacity as a grain merchant enjoys a peculiar advantage. Many a time he makes it a condition precedent to his loans, that the cultivator should sell his produce through him. In that case the cultivator suffers a double loss. He pays a high rate of interest to the money-lender on the money borrowed from him and sells his produce at a price which is much below the fair price. This state of affairs has continued even after the introduction of railways and the development of communications. The big exporter finds it more convenient to gather the produce through the village bania or money-lender instead of dealing with each and every cultivator and the bania thus establishes himself as the only possible purchaser in the village, in a position to dictate his own terms. "The existing commercial organization for the sale of agricultural produce was thus forced on the ryot by the middleman seeking his own profit, and it is no wonder that only an infinitesimal part of the profits reached the actual producer".¹

Before concluding this chapter we shall deal in brief with the evils of subdivision and fragmentation of holdings, which if allowed to grow any further may well nigh mar the prospects of agricultural development in Maharashtra and Karnataka.² Subdivision is the result of the Hindu Law of partition according to which property is inherited, while fragmentation is the result of the actual manner in which the law of subdivision is enforced. The problem, however, has much less to do with the laws of inheritance than with the growth of population. This will be clear from the fact that in Nagpur and Berar Divisions where the density of population is much less than in

1 P. Pillai, 'ibid' p. 125.

2 Radha Kamal Mukerjee, 'Indian Journal of Economics' Vol. VII 1926-27, p. 445.

Konkan and Bombay Deccan, the evils of subdivision and fragmentation are not seriously felt. It is not necessary to explain how agricultural improvement is impossible, when the cultivator has his small holding divided into tiny fragments, lying in the four corners of the village. The evils of fragmentation, however, are less fundamental than that of subdivision and can be more easily remedied by means of co-operation.¹ The extent of subdivision in the Bombay Maharashtra and Karnatak is represented by the following table.²

**DISTRIBUTION OF HOLDINGS IN BOMBAY MAHARASHTRA
AND KARNATAK**

Details of holdings.	Number or holders	Area held.	Percentage of groups of holdings to total holdings.	Percentage of area held by different groups to total area.
Up to 5 acres	10,13,465	22,62,484	47.4	8.84
5 to 15 acres	6,24,270	55,95,138	29.2	20.96
15 to 25 ..	2,48,790	48,47,182	11.6	18.15
25 to 100 ..	2,30,563	95,40,119	10.8	35.73
100 to 500 ..	20,876	34,27,980	0.96	12.82
Over 500 acres	918	9,43,547	0.04	3.5

The average holding per cultivator's family is 21 acres in C.P. Berar, 14.5 acres in Deccan, 15.3 acres in Karnatak and 7.95 acres in Konkan. We can classify the districts of Bombay Maharashtra and Karnatak where the evil of subdivision is prominent, into three groups, according to the extent of sub-division. The first group consists of the Districts of Nasik and West Khandesh which have not been affected to any substantial degree by the evils of sub-division. In the second group fall the districts of Thana and

1 D. R. Gadgil, 'Ibid', p. 250.

2 Report, "Bombay Banking Enquiry Committee," p. 13.

Belgaum where the evil is serious, and the third group includes Kolaba, Ratnagiri and Satara where the number of holdings is increasing very fast, resulting in a rapid diminution of the average size of a holding. The influence of subdivision as a whole has been particularly rapid during the period 1903 to 1921. In most cases the rate at which subdivision took place during this period was much more rapid than that during the period 1886 to 1903. Another feature which may be observed in this connection, is that, while subdivision of holdings has been particularly intense in tracts under paddy cultivation, in areas under cotton it exists in a very mild form.¹

The Government tried to find out a remedy to the growing evil of subdivision and fragmentation by the "Bombay small Holdings Bill" of 1927. The bill provided certain machinery for the determination of the minimum holding that could be profitably cultivated as a separate plot, and aimed at preventing further division of old fragments and creating new ones on a profitable basis. For this, it proposed to give holders of adjacent fragments the rights of pre-emption and to prohibit the cultivation of new fragments except in conjunction with the neighbouring plots. But the bill was thrown out by the Legislative Council on the grounds, that it involved a certain amount of compulsion on the agriculturists and expropriation of many of them.

To sum up the chapter, firstly we can say that whatever development there has been in our agriculture has been due to the influence of our foreign trade. But it has cost us heavily. The introduction of railways destroyed our ancient village economy and led to an influx of cheap finished goods which ruined our village industries. If the Government had not at the outset put too much

1 V. G. Mohile. "Subdivision & Fragmentation of holdings in India" (unpublished thesis, Bombay University) p. 210.

faith in the now defunct policy of laissez-faire, they could have reorganized the economic system of Maharashtra and Karnatak by launching a scheme of industrial development, on the very eve of the destruction of our ancient handicrafts. But this they completely neglected and set upon a policy of making us 'hewers of wood and drawers of water' for the Empire. The development of foreign trade, as we have already seen, gave an impetus to the export of our agricultural produce like wheat, cotton and rice and brought temporary prosperity to those engaged in their cultivation. But soon their prosperity, attracted the disbanded army of industrial labour from the urban centres and many others engaged in the cultivation of crops which had no foreign market. For a time there followed a scramble for land which raised its price and led many persons to borrow from the money-lender to purchase land that was to bring to them opulence and prosperity. Here we find the genesis of our rural indebtedness. The high prices of commercial crops led to the displacement of food crops, till the ravages of famines which visited this province in the second half of the 19th century, proved an eye-opener to the agriculturists and checked the tendency. But the glitter of high prices had by then attracted a majority of the population to agriculture and made them dependent on the uncertain monsoon and on the vagaries of demand in external markets. This over-crowding of agriculture which has continued to the present day has been detrimental to those engaged in it as well as to the whole economy of the province. It has made our economic life extremely unbalanced and rendered improvement in agriculture itself well nigh impossible. However, we must recognize, that the development of commercial crops, largely under the influence of our foreign trade, and mainly in the interests of the foreigners, has equipped this province with a large supply of raw-

materials for its own industries and what had originally been done for the benefit of others may now be turned to use by ourselves.

Secondly, the preceding cursory review of agricultural development in Maharashtra and Karnatak brings out, that foreign trade which brought about some important changes in our agricultural position, has left the internal economy of our agriculture—methods of cultivation and the relations the different classes of agricultural society with one another—almost unaffected.

The different classes of agricultural society must realize that their interests are not antagonistic to one another and that in the improvement of agriculture lies the only hope of bettering their economic conditions. If they understand this of their own accord well and good, but if they fail compulsion may not be out of place. It is the lack of co-operation between these classes, more than anything else which is responsible for the backwardness of our farming, and the sooner it ends the better for all concerned. The problem presented by the relation of the money-lender and the middleman to farming industry is not very easy. Both of them in spite of the denunciations of economic historians render immense service to the agricultural society and are absolutely indispensable. The solution, however, may be found in the improvement of their business methods under a system of 'licences' and by the establishment of co-operative credit and sale societies. The main problem of our agriculture, viz. its overcrowding will still remain and the only effective solution of it will lie in the establishment of Industries.

CHAPTER III

Agricultural Crops

The total area of Maharashtra and Karnatak is about 70,559 thousand acres. According to the Agricultural Statistics of India, 21 per cent of this area is under forests, 61 per cent is devoted to agriculture and the remaining 17 per cent is not available for cultivation. These per centage figures bear out the statement made in the preceeding pages, that extensive agriculture has almost reached its limit in Maharashtra and Karnatak. The principal crops, which occupy about 90 per cent of the cultivated area in these provinces, may be considered under the following three groups.

- I. Food crops, such as Jowar, Rice, Ragi, Bajri, and pulses which are mainly grown for consumption in the country.
- II. Commercial crops, which include Wheat, Cotton and oil-seeds and which are grown mainly for sale and export.
- III. Garden crops, which comprise of an infinite variety of vegetables, fruits, drugs and spices and which so far have not received any serious attention from the agriculturists.

Food Crops :—Though the ancient self-sufficient village economy has largely disappeared from Maharashtra and Karnatak, self-sufficiency in food supply has still remained the best ideal of the farmer. He has submitted himself to the tenets of the exchange economy for the satisfaction of all his needs besides that of food, for which he does not like to trust even his neighbour. This attitude of the farmer is primarily responsible for the predominance of food crops in the agricultural economy of these provinces, where they occupy more

than 50 per cent of the total cultivated area. Jowar and rice are the main crops of this group and their cultivation is well distributed over the whole region.

Jowar is the main food crop of the people on the heavy regur soil, where the rainfall does not exceed 40 inches. It is principally a kharif crop and though it could as well be grown in the rabi season, the cultivation of many other crops which bring in more profit and which do not grow in the kharif season is preferred. Its main province lies along the valleys of Tapti, Purna and Wardha and though extensively grown in the eastern Deccan, there is a great difference in its yield. In the north it is 600 to 800 lbs. per acre while in the south it varies between 400 and 600 lbs. The area under jowar in Maharashtra and Karnatak in 1931-32 is given in the following table.

AREA UNDER JOWAR IN 1931-32.¹

(1,000 Acres)

Nagpur Division	...	1,052
Berar	...	2,135
Khandesh	...	524
Bombay Deccan	...	4,004
Karnatak	...	2,215

Though jowar is a dry and unirrigated crop throughout the region, yet on lighter soils it can be cultivated with the aid of irrigation. Its cultivation as a kharif or rabi crop depends on the condition of rainfall. If the early rains are good it is cultivated as a kharif crop, but if the showers are heavy in September, rabi season is more favourable for its cultivation. The factor of rainfall can make amends even for soil deficiency. In the Belgaum district for example where

¹ Agricultural Statistics of India 1931-32, Vol I.

the soil is red, but rainfall comparatively heavy, jowar is successfully cultivated. Its extensive cultivation in the eastern Bombay Deccan, where the soil is lighter and rainfall precarious, is due to the hardness which it has attained by the passage of time. Foreign varieties of jowar will not thrive in this region. Even the Indian variety which takes about $3\frac{1}{2}$ to 5 months to grow will fail here, if rains stop before it is ripe. But it is the only faithful crop which will never betray the agriculturist, unless under exceptionally dire circumstances and hence is widely grown in the famine zone. In the western districts of the Bombay Deccan it is grown as an irrigated fodder crop because it gives a higher yield of stalk and leaf than that of kharif jowar, and moreover, becomes ready for cropping much earlier.¹ As a food crop it is even better than rice because it contains more proteids and less starch.

Bairi is a food crop supplementary to jowar and is grown extensively where jowar cannot be grown due to limitations of soil and rainfall. It is inferior to jowar both as a food crop as well as fodder. It thrives well when the climate is moderately dry and 'monsoon comes in light showers with plenty of sunshine between them.' Being cultivated in light unretentive soils it is entirely a kharif crop. It is never grown under irrigation where better and more profitable crops can be substituted. The eastward spurs of the Ghats to the south of the Tapti valley and the whole of the Bombay Deccan where the rainfall is not over 50", are the regions where it predominates. The cultivation is most intense especially in the western part of "Desh." Where the rainfall is over 50" the cultivation is that of rice.

1. "Statistical Atlas of the Bombay Presidency", p. 12; also H. Mann, "Fodder Crops of Western India," 1917.

The area under Bajri in Maharashtra and Karnatak in 1931-32 is represented in the following table.

AREA UNDER BAJRI IN 1931-32.¹

(1,000 Acres)

Berar	...	...	90
Khandesh	...	...	563
Bombay Deccan	...	...	2,718
Karnatak	...	...	606

Bajri is never grown as a single crop except in parts of Khandesh, but is always sown as a mixed crop along with pulses. When in the heavy regur soils early rains are deficient, it is substituted in the place of jowar which never yields a good harvest under stringy rains. Its normal out-turn per acre is about 400 lbs.

Rice is the second important food crop of the region and is grown under conditions which are detrimental to other crops. It is essentially a crop of the red soil but is also grown on the laterite fields. The heavy soil and lack of irrigation excludes it completely from the regur zone. Even were the topography suited to irrigation, uncertain rainfall in the regur region would militate against its successful cultivation.² If the rainfall is not sufficiently heavy even in the warm region, the home of rice, it has to be supplemented by irrigation. In the Wainganga valley where the land is level, rainfall is over 50", and the soil is fertile red loams, cultivation of rice is very dense. The valley is provided with irrigation facilities also. The next zone of cultivation extends along the Konkan and the maval tracts, where the soils are laterite and much superior to the lighter red soils

1 Agricultural Statistics of India 1931-32, Vol. I.

2 E. Simkins. 'Ibid', p.

under Bajri, adjacent to them. The following table represents the area under rice in Maharashtra and Karnatak in 1931-32.

AREA UNDER RICE IN 1931-32.¹

(1,000 Acres)

Nagpur Division	...	...	1,225
Berar	...	...	24
Khandesh	...	...	53
Bombay Deccan	...	...	238
Konkan	...	...	1,048
Karnatak	...	...	869

The system of rice cultivation is peculiar. Before sowing the grain the land is treated by a process called 'rab'. It consists in burning the surface-soil with cattle droppings, leaves, twigs and other refuse and is peculiar to the Bombay Presidency. However, as the ash that is left on the field and which forms a very good manure, is insoluble in the soil under light rains, rainfall is a limiting factor to the system of rab cultivation. On this parched land seedlings are grown in seed-beds and then transplanted. Rice quickly responds to manuring but hardly receives any on the maval tract. The fields in Konkan are, however, constantly manured. There are innumerable varieties of rice, ripening between 90 to 180 days, but the earlier varieties which occupy the unrententive upland soils have a coarser grain. As a food crop, rice is inferior both to jowar and bajri since it is deficient in proteids and contains a larger percentage of starch. It is even less important as fodder.

Ragi is a supplementary crop in the rice zone as is bajri in the jowar zone. It is grown on light red soils where rice

1 Agricultural Statistics of India 1931-32, Vol. I.

does not thrive. It can be grown even on the heavier soils, though they are mainly devoted to rice under favourable rainfall conditions. Ragi is an inferior food grain, nevertheless the area under its cultivation, which is predominant in the uplands of Konkan, is larger than that under rice. This is so because the superior kind of soil required by rice is very limited and ragi has thus come to be the staple food crop of the poor who cultivate the extensive lighter soils under a well distributed rainfall of 30 to 35 inches. A still heavier rainfall suits it admirably. The area under Ragi in Maharashtra and Karnatak in 1931-32 is shown by the following figures:

AREA UNDER RAGI IN 1931-32.¹

(1,000 Acres)

Khandesh	...	...	15
Bombay Deccan	...	...	207
Konkan	...	...	261
Karnatak	...	...	64

Ragi is especially valuable as a famine crop, as it takes only four months to mature and does not require a large amount of water. Its average outturn varies from 800 lbs. to 1,500 lbs. per acre. As a fodder crop it is of a very poor nutritive value but it will keep good for a long time, if stored in underground pits. Ragi is always grown in rotation with other crops.

Besides the chief millets and cereals considered above there are many other inferior varieties grown for consumption by the cultivator in Maharashtra and Karnatak, according as they suit the different types of soil and rainfall. They are scattered all over the provinces and form the food of the poorest in the land.

¹ Agricultural Statistics of India 1931-32, Vol. I.

Pulses are extensively grown both in the regur and the red soils. They are sown as mixed or rotation crops. From the agricultural point of view they are important because they are leguminous crops, and as such by the action of the nitric bacteria on their roots, supply nitrogen to the soil. This is valuable particularly to the soils of the Deccan which are notorious for their deficiency in nitrogen.¹ Pulses and cereals, though sown together at one and the same time do not hamper the growth of either. The former being deep rooted crops suck 'their nutrients' from the lower layer of the soil where the roots of the cereals do not penetrate. Besides, they mature after a long time and hence can draw their nourishment after the cereal crops are removed. They do not require any particular soil or quantity of rainfall for their successful growth. There are innumerable varieties of them, such as gram, tur, beans etc. garnered every year by the farmer for his own use; but the first two are largely cultivated.

Gram or Chick Pea is peculiarly a 'rich soil' pulse though many of its varieties are grown on poorer soils. It thrives well during cold weather and is at its best along the heavy regur soil of the Tapti valley, where it is grown as a rabi crop in rotation with wheat and linseed. On the red loam soil it is grown immediately after rice, as a dry crop or as an irrigated crop, liberally manured and regularly watered.' In the United Provinces of Maharashtra and Karnatak it is grown everywhere except in Konkan but Karnatak is its favourite area. Gram also serves as good manure if ploughed into the field after the pods have been removed. There are four main varieties of it—black, red, yellow and white. The yellow gram, if true to its pure strain, commands a good price in the local market. In many places gram plant is used as a green vegetable. Its average yield per acre varies from 500 to 600 lbs.

¹ "Agricultural Journal of India", Vol. XX, p. 8.

Tur is extensively grown in the Bombay Deccan and Karnatak and is a favourite crop of the agriculturists, particularly because of its importance as a restorative rotation crop. It resists drought in a remarkable way but succumbs to cold and cloudy weather. Generally, tur is cultivated as a mixed crop along with rice and jowar and yields about 100 to 150 lbs. per acre on an average. But at times, when it is grown as a single crop on the best variety of soil, the yield goes up to 2000 lbs. per acre and brings to the cultivator a large amount of profit. Like all other pulse crops tur is usually sown in June or July and becomes ready for harvest in March after eight or nine months. The stalks of the plant are extensively used for making baskets and thatching sides of bullock carts.

II. Commercial crops :—The policy of self-sufficiency generally adopted by the agriculturist of Maharashtra and Karnatak in regard to food, one of the primary needs of life, cannot be adopted for the satisfaction of his other needs. He can meet them only with the help of exchange economy, where money—the medium of exchange—is an essential factor. The agriculturist will not be able to secure this medium of exchange by cultivating food crops alone, which have neither a local market nor a foreign one. Therefore, he takes resort to the cultivation of a few crops which can be easily sold in the market and fetch him the money he requires. This does not mean that he cannot consume the crops meant to be sold but he does not consume them because they fetch him a good price and because there are other crops which have no demand in the market and which he can consume. The other distinguishing feature of these money crops is that they are the favourites of the Agricultural Department and their production and sale is on a somewhat organized basis. The Agricultural Department has so far taken very little interest in the development of food crops while all the resources at its disposal have been freely lavished on experiments to

improve the cultivation and yield of commercial crops. Cotton, wheat and oilseeds are the principal crops of this group and they occupy about 32 per cent of the total cultivated area in Maharashtra and Karnatak.

Cotton is by far the most important commercial crop of Maharashtra and Karnatak. It is the crop of regur soils par excellence, but the most determining factor in its growth is climate. "No chemical composition or mechanical state of the soil will compensate for unsuitability of climate."¹ Cotton plant grows best in the deep medium soil if the climate is equable and rainfall well-distributed. In Egypt and America cotton requires a long period for its growth, but in Maharashtra and Karnatak as all over India, the limitations of climate and rainfall compel it to be cultivated within five months and this short period of growth partly explains the shortness of the staple. Vagaries of Indian climate and rainfall do considerable harm to the crop. Heavy rains in the flowering season as well as an excessive drought in the later stage are equally destructive to the final harvest. What the crop requires most is a retentive soil.

In Maharashtra, cotton is extensively grown in the valleys of Tapti, Purna and Wardha which possess the best variety of regur and which have a well-distributed rainfall. It is grown in this area as a kharif crop, because the tract has only a single maximum of rainfall in July and then a gradual retreat. The varieties cultivated here are all short stapled, $\frac{3}{8}$ of an inch to $\frac{5}{8}$ of an inch, which are generally known as 'Oomras' and which have a definite local demand. The 'Roseum', which gives a longer staple, has not found favour with the agriculturists, due to its comparatively poor yield and to the lack of surety that it

¹ Department of Agriculture, Bombay, Bulletin No. 29, 'Cotton in Bombay Presidency', 1906.

will fetch a better price. The next cotton zone of Maharashtra extends along the Godavari valley. In richness of soil as well as in the amount of rainfall, this valley is inferior to the Khandesh-Berar tract and this inferiority is reflected in the productive capacity of the area. While the yield of cotton per acre is 110 lbs. in Khandesh it is only 90 lbs. in Ahmednagar. The third cotton belt lies to the south of the Godavari valley and includes the districts of Sholapur, Bijapur and Dharwar. The cultivation of cotton is much thinner here than in the preceding two zones, due to the inferiority of soils and uncertainty of rains. But, even here, the cultivation becomes comparatively intense as one approaches the southern portion of the belt. The explanation is to be found in the better conditions of rainfall and the better facilities of irrigation available there. The sandy red loams of Dharwar are quite suitable for the cultivation of foreign varieties of cotton and the 'Dharwar American' has already become famous in this tract. The acreage under cotton in Maharashtra and Karnatak in 1931-32 can be seen in the following table.

AREA UNDER COTTON IN 1931-32.¹

(1000 Acres)

Nagpur Division	...	...	895
Berar	...	...	3,162
Khandesh	...	...	1,091
Bombay Deccan	...	...	526
Karnatak	...	...	1,640

The Department of Agriculture is carrying on research work in order to improve the yield and the staple of the indigenous cotton and to introduce new foreign varieties. The Indian Central Cotton Committee, developed from the

original Touring Committee appointed in 1917, has been entrusted with the development of cotton-growing in India and its sale. It is an advisory body which carries on research in all the aspects of cotton cultivation in India and makes suggestions to the Department of Agriculture for its improvement. In its report on the possibilities of improving the staple of Indian cotton with a view to meet the demand of Lancashire it remarks that, for at least ten years India cannot grow cotton in any commercial quantity, of a staple longer than $1\frac{1}{4}$ inches.¹ However, India can aid its own industries by selecting pure and good varieties for cultivation from the already existing indigenous strains.

Wheat is grown in this region both for consumption and export. It is essentially a winter crop of the temperate zone and is grown in India during the rabi season. It requires a heavy retentive soil which will provide it with sufficient moisture during the growing period, though, paradoxical as it may seem, rains during that period are harmful. The crop is totally unsuited to warm, wet, kharif season, nor can it be grown under irrigation. Generally, it requires about nine months to mature but under the peculiar conditions obtaining in Maharashtra and Karnatak, to which the crop has completely acclimated itself, the period is restricted to four months. As soon as the September rains are over wheat is sown, sometimes alone, sometimes mixed with linseed and gram. It grows during the cold season and is cropped before the intense heat of the summer spoils the grain.

In Maharashtra, the main wheat-growing zone coincides with the cotton zone of Berar and Khandesh with the addition of Wainganga valley. On the heavy regur soil it is perhaps the only crop of the year, for during the kharif season the land being water-logged is uncultivable. In this tract it

1 "Report of the Indian Central Cotton Committee", 1919.

is grown in rotation with linseed. In the Wainganga valley the soil is not heavy but the deficiency has been made up by a heavy rainfall in the kharif season. So also the facilities of tank-irrigation in this area favour its cultivation, though normally wheat is an unirrigated crop. In the eastern Bombay Deccan, due to the moderate depth of the soil and uncertain rainfall, cultivation of wheat is very sparse except along the Godavari valley and parts of Belgaum, Dharwar and Bijapur while on the red soil it is totally absent. The area under wheat in Maharashtra and Karnatak in 1931-32 can be seen from the following table.

AREA UNDER WHEAT IN 1931-32.¹

(1,000 acres)

Nagpur Division	...	...	601
Berar	...	...	413
Khandesh	...	...	198
Bombay Deccan	...	...	653
Karnatak	...	...	632

The character of soil and rainfall has a great effect on the quality of wheat. The crop grown on heavy soils yields a soft variety of grain, while the grain produced on light unretentive soils is hard and has a large percentage of nitrogenous contents. The main factor that determines these qualities is the scarcity or other-wise of water, for it has been found out that the 'hard variety', if irrigated, becomes soft. The hard variety is very popular in the Deccan and has a very good future as an export crop. The normal outturn of wheat in this region is 575 lbs. per acre and in the opinion of Dr. Howard "in spite of her short growing season, India *in general* is well adapted for the growth of wheat of the finest quality".²

1 Agricultural Statistics of India 1931-32, Vol I.

2 Howard, "Wheat in India".

Oilseeds are grown in this region as food crops as well as money crops. As food crops their value lies in the large amount of protein they contain. Their importance as good manures and cattle-food is, however, not realized by the agriculturist and that is one of the reasons why they bulk large in Indian exports. For commercial purposes the seeds are valued according to their oil contents, and because foreign varieties are more paying in this respect their cultivation is being greatly increased.

Groundnut is the most important oilseed of the Deccan and Karnatak. It is grown almost on every soil provided it is sufficiently soft to allow the roots of the crop to penetrate easily. This factor excludes its cultivation on soils which are too heavy. Where the rainfall is over 70" groundnut can be cultivated as a dry crop but if it is under 40" irrigation will be necessary. The area under its cultivation in Maharashtra and Karnatak in 1931-32 is given below.

AREA UNDER GROUDNUT IN 1931-32.¹

(1,000 Acres)

Berar	...	...	112
Khandesh	...	...	432
Bombay Deccan	...	...	346
Karnatak	...	...	142

Though groundnut is an important commercial crop of Maharashtra its cultivation is very expensive because of the high labour cost it involves, which is almost prohibitive on heavy soils. It is this factor of heavy labour cost which has kept down its cultivation in this province as may be seen from the figures of acreage its occupies, given above. Great care has to be taken in the selection of sowing time for this crop, lest rainfall, after the crop is ripe may do an infinite amount

1. Agricultural Statistics of India, 1931-32, Vol. I.

of harm to the nuts. Foreign varieties which mature in about 4 months and contain a large percentage of oil are cultivated by the farmer for export while for his own consumption he prefers the indigenous variety.¹ But as Sampson says "scarcity of labour is one of the serious drawbacks to the present system of groundnut cultivation, and will always be so, especially in the dry red soil tracts which will not support a large population."²

Sesamum or *Til* is a very important export crop of Maharashtra. It can be grown on the poorer soils where groundnut will not thrive and requires less intensive cultivation. The crop does not stand very heavy rains when young and hence is extensively grown in all the districts of Bombay Deccan except Satara. It is sown both in the kharif as well as in the rabi season and its normal yield per acre is about 300 to 500 lbs.

Linseed is grown in Maharashtra as a rabi crop in rotation with wheat and is typically the crop of the heavier soils as groundnut is of the red loams. Here, it is valued mainly for its seed and not so much for its fibre which is equally useful. Heavy rains immediately after the crop is sown and a cloudy weather when it is flowering are most injurious to the linseed crop. Its cultivation coincides with that of wheat along the Tapti Valley, the plains of Berar and the Wainganga valley, and a second belt extends along the Godavari and the Bijapur districts. The yield of a good crop of linseed in

1 Department of Agriculture, Bombay, Bulletin No. 4'. "Groundnuts in Bombay Deccan," 1911.

100 lbs. Spanish Peanut contains	47.73 lbs. oil
.. .. Japanese	45.83
.. .. Mauritius	45.09
.. .. Indigenous	42.8

2 Sampson, "Cultivation of groundnuts in Madras," 1899.

deep retentive soil is about 500 lbs per acre. The area devoted to its cultivation in Maharashtra and Karnatak in 1931-32 is represented by the following figures.

AREA UNDER LINSEED IN 1931-32.¹
(1000 ACRES)

Nagpur Division	...	...	332
Berar	...	...	39
Khandesh	...	...	7
Bombay Deccan	...	...	63
Karnatak	...	...	65

Many other oilseeds like safflower, niger-seed, castor-seed and rape are grown in Maharashtra and Karnatak but the three described above are the most important and they show a remarkably complementary distribution. Linseed is the crop of the heavy black and brown soils, groundnut the crop of the light black and the loamy red soils, while til is the crop of the poorer red and black soils. A composite map of these three oil seeds would show that every part of the Deccan Plateau has its oil-seed crop.

III. Garden Crops :—Cultivation of the different kinds of plants, vegetables and fruits falling in this class is the most neglected side of agricultural activities in Maharashtra and Karnatak, and hardly 13 per cent of the total cultivated area is occupied by it. Except sugar-cane no other crop in this class has been extensively grown on an organized basis. There is an infinite variety of vegetables like potatoes, surans, brinjals, tomatoes, onions, cabbages and other leaf and bulb species which if grown in small gardens on a systematic basis would fetch good prices to the needy cultivator at any moment, the demand for them being constant. The same can be said about fruits and with a stronger emphasis. Mango 'the fruit per excellence of India' is slowly

coming out of its age-long obscurity and there is no reason why other fruits like santras, guavas, oranges, pomegranates, grapes, figs, chickoos, papayas, bananas and cocoanuts equally fascinating, should not receive the attention they deserve. ¹ Spices which were the great attraction of foreigners in the past have fallen into oblivion and the various kinds of drugs and narcotics like tobacco and cinchona are now allowed to grow in a spasmodic fashion.

Sugar-Cane is essentially a garden crop which brings more money to the cultivator than any of the commercial crops grown in Maharashtra and Karnatak. A rich soil and a hot wet climate are necessary for its successful growth. It matures in about twelve months and during the period of growth must be constantly watered and manured. Thus, assured water-supply being the first requisite for the cultivation of sugar cane, it is found closely in association with the irrigation works in the Deccan and Karnatak and there is no trace of its existence on the regur soil. In the rugged lands of Nasik, Ahmednagar, Poona, Satara and Belgaum where the irrigation is perennial, cultivation of this plant is very intense and in spite of the heavy charges of canal water and labour, the agriculturist makes a good profit on it. The intense nature of its cultivation may be gathered from the following brief account of cultivation in the Poona district. Here, the cane is planted in heavily manured beds in January and requires watering every four days during the hot season. In the monsoon the crop is watered only if there are long breaks in the rains but after the monsoon it requires water every eight days till maturity. The total rainfall of the year in Poona is about 30 inches and in addition to this the cane gets irrigation water equal to 75 or 80 inches of rain. The expenses of irrigation are very high but it is estimated that in the Poona district it yields a profit of

1. Department of Agriculture, Bombay, bulletin no 153, "Economic Value of fruit farming in Western India," 1928.

Rs. 150 per acre and pays a large part of the irrigation revenue on canals. However, "Cane can be produced more cheaply under wells than under canals, presumably owing to the better economic balance of the holding managed by the owner himself with his own bullocks."¹ The sugar-cane planters of Maharashtra seem to have fully realized this because we find that about 50 per cent of the total area under cane at present is irrigated by wells. Besides Bombay Deccan, Wainganga Valley is the only place in Maharashtra where plantations of cane are grown to any appreciable extent. The total area under sugar-cane cultivation in Maharashtra and Karnatak in 1931-32 is given in the following table.

AREA UNDER SUGAR-CANE IN 1931-32.²

(Acres)			
Nagpur	...	...	6,000
Khandesh	...	...	2,000
Bombay Deccan	...	...	41,000
Karnatak	...	...	20,000

Most of the sugar-cane is consumed in the region of its production in the form of gur and lately also in the form of sugar. Gur, is also exported to other provinces. The normal yield of gur is 7000 to 15000 lbs. per acre which is higher than that in Upper India where the acreage under cane is very large but as compared with Java and Hawaii it is extremely low and there is much scope for development.

The cultivation of vegetables in Maharashtra and Karnatak is still being carried on more or less on a basis of self-sufficiency. An infinite variety of them is grown in the

1 Report of the Deccan Canals Financial Improvement Committee, 1932, p. 9

2 Agricultural Statistics of India 1931-32, Vol I.

different parts of the country, but it is mainly for domestic and local consumption. With the growth of urban centres and with the realization of the value of bulb and leaf vegetables in the dietics of the people the demand for them is bound to increase. Cities like Bombay and Nagpur are already suffering from a shortage of local supplies of vegetables and their imports from foreign countries like Japan and Africa are slowly on the increase. It is therefore necessary that the cultivation of vegetables should have a far greater importance in the agricultural economy of Maharashtra and Karnatak than what it has received so far. Supply of information regarding the demand for vegetables in the urban centres and adequate facilities for their marketing would be of great help to the cultivator in this direction.

The fruit gardens in Maharashtra and Karnatak are also a potential source of income to the cultivator and their cultivation a good occupation to break the monotony of the cycle of agricultural operations. But at present they are suffering from want of adequate attention and care on his part, mostly because of his ignorance. He does not know that the shining yellow *Santras* which hang uncared for in his compound, fascinate the eye of the visitor in the Crawford Market or in the Rey Market. It will be a surprise to him if he knows that the Papaya, chequered with patches yellow and green, which he feeds to his cattle, goes for a silver coin in the city nearby. He will not believe that the mangoes which run to waste in thousands at his door have become the craze of the world. Because of this ignorance of the demand for fruits which prevails in rural areas and because of the lack of facilities for marketing them, the cultivation of fruit gardens on a profitable and scientific basis has not been undertaken in the region eminently suited for it. The area occupied by fruit-gardens in Maharashtra and Karnatak in 1931-32 is shown below.

AREA UNDER FRUIT GARDENS IN 1931-32.¹

(1000 Acres.)

Nagpur Division	...	...	23
Berar	...	...	13
Khandesh	...	...	36
Bombay Deccan	...	...	83
Konkan	...	...	25
Karnatak	...	...	60

Considering the acreage under fruit trees it is really difficult to understand, why the development in their cultivation and marketing has been so slow as to be almost imperceptible. The only cause that can be reasonably assigned to this state of affairs is the apathy and ignorance of the cultivator and the indifferent attitude of the Agricultural Department.

Mango is the fruit par excellence of India and the mangoes of Konkan are unrivalled in any other part of the the country. Full seven years before the Horticulturist to the Government of Bombay could bring home to the people the niceties of this king of fruits, Dr. Mann had sung its eulogies in very high terms. The people as well as the Government had no idea at the time that the fruit which was running to waste in thousands under the huge mango trees, spread on the rocky red loams of Konkan, would some day become the craze of the world. Now, it has dawned upon them both, that mango is the only hope of Konkan, economically the most backward part of Maharashtra.

The fruit is indigenuse to Konkan. The Portugese when they landed at the west coast of India found this plant growing wild in the country and realising its value started the selection of best varieties. It was they who first began the cultivation of *Hapus* and *Pairce* also known

1. Agricultural Statistics of India 1931-32, Vol. I.

as Alfanso and Parera, respectively. For a healthy growth the mango plant does not require any special type of soil or climate, only a certain amount of water is necessary during the first four years of its growth. It is essentially because of this absence of any particular requirements of soil and climate that the hilly tracts of Konkan have taken favourably to mango cultivation. In certain areas mango gardens have even displaced the cultivation of crops subordinate to rice. Besides Konkan, mango trees are grown in Khandesh, Bombay Deccan and Karnatak but on a limited scale. The acreage devoted to mango gardens in Maharashtra and Karnatak in 1932-33 is given in the following table.

AREA UNDER MANGO TREES IN 1932-33.¹

	(Acres)		
Khandesh	271
Bombay Deccan	1,380
Konkan	8,582
Karnatak	2,305

This table takes into consideration both, the grafted varieties of mango trees, the fruits of which have a large trade demand as well as the *Raiwal* trees which are scattered everywhere in the tract, and the fruits of which are mainly consumed by the local inhabitants. On an average, Konkan exports mangoes worth Rs. 20 lakhs, out of which the district of Ratnagiri alone contributes about half and so far as this district is concerned mango is the chief agricultural product of export. The quantity consumed locally either in the form of ripe fruits or pickles is equally great and the quantity of *Raiwal* fruit going to waste is not inconsiderable. It is clear from this that the crop has a great economic importance in Maharashtra, particularly in Konkan.

1 Report of the Committee on the Improvement in the Marketing of Fruit and Vegetables in the Town of Bombay, 1934, p. 98.

Citrus fruit is only next to mango in importance to Maharashtra and Karnatak. Citrus trees are grown anywhere from a heavy deep black soil to an extremely shallow open soil having very little fertility. However, where the soils are deficient in nitrogen as all our soils generally are, they require some manure. Of the different varieties of citrus trees grown in Maharashtra, *Santra* plantations are largely concentrated in Nagpur, from which 30,000 cart loads of the fruit are exported to various parts of India every year. *Santras* and *Mosambies* are also planted with considerable success in certain parts of Poona and Ahmednagar districts where the soil is very deep and sticky and in certain parts of Dharwar where the soil is shallow and stony. Pomelos abound in the Thana district though Konkan is generally unfavourable for the cultivation of citrus trees. The citrus trees in Maharashtra and Karnatak are at present suffering heavily from a disease called the 'Dre-baek' which kills them outright and which is seriously engaging the attention of the Agricultural Department. The area under citrus trees in Maharashtra and Karnatak is represented in the following table.

AREA UNDER CITRUS TREES IN 1930-31.

(Acres)

Nagpur Division	...	...	3,968
Berar	...	...	1,239
Khandesh	...	...	685
Bombay Deccan	...	...	7,079
Konkan	...	...	12
Karnatak	...	...	167

Citrus fruits have a good local market and the *Santras* of Nagpur are very famous in India. Provided better facilities are obtained for transporting the fruits by railway, and diffi-

culties in the way of marketing them are removed, the fruit have a good future.

Papaya, though an exotic plant, has come to occupy a prominent position among the fruit trees of the Bombay Deccan. It is a purely tropical plant and requires a warm climate and good retentive soil for its successful growth. It also grows in poor soils with heavy manuring and watering. The acreage under this plant has been steadily increasing in recent years. The area devoted to it in 1932-33 is given in the following table.

AREA UNDER PAPAYA PLANTATIONS IN 1932-33. 1

(Acres)

Poona District	...	...	205
Ahmednagar	...	...	476
Nasik	...	...	196
W. Khandesh	...	...	133
E. Khandesh	...	...	101
Sholapur	...	...	27

The popularity of this fruit is increasing day by day and it is one of the most paying crops in the market at present. Its gradual extension is due to the fact that it is very easy to cultivate, can adapt itself to any soil and climate and is usually not subject to any disease or pest. Once the garden is planted, no special skill is required on the part of the cultivator for its maintenance. The quantity of water required by it is small as compared with the other crops such as the banana. Low-growing vegetables may be profitably grown with it as inter crop till its plantation covers the whole space.

1 Report of the Committee on the Improvement in the marketing of fruit and vegetables in the Town of Bombay, 1934. p. 99.

Papaya itself may also be used as an inter-crop in young mango and other plantations without harm to the main crop. ¹ The chief limitation to the rapid extension of its cultivation is the lack of irrigation facilities. There is, however, great scope for its cultivation in the canal zones. The Baramati tract is ideally suited for papaya plantations provided convenient arrangements are made for its careful handling and transport.

There are many other fruits like grape in Nasik, fig and pomegranate in Poona, and banana in Thana, which also may be economically cultivated in the Bombay Deccan and the plantation of which may well be considered as a profitable subsidiary occupation to the agriculturist. The main difficulty, however, which stands in the way of planting fruit gardens, is the marketing of fruits, a problem which has only recently attracted the attention of the Government.

A careful survey of the foregoing crops and plants prominently brings out that they are grown in certain well-marked associations. Some plants are grown together because they require similar soils and climatic conditions, while others, though their requirements are quite dissimilar, are grown in associations because they are supplementary to one another. Since these requirements depend for their fulfilment on the region in which the crops and plants grow, the associations are necessarily dependent on the physical factors operating in the region. These production associations interpret the soil and climatic factors in the region and on this interpretation is based the life of the land. The combination of the human factors with the production associations gives the real basis of Deccan life—its rural economy. The two main production associations of the region,

1. Department of Agriculture, Bombay, Bulletin No. 30, "Field, Garden and Orchard Crops of Bombay Presidency," 1908.

centre round its staple food crops, jowar and rice, which are supplementary to each other. "The significance of this basic division is that it truly reflects the main function of cultivation on the Deccan, the feeding of its native population"¹ The minor associations within the two main production zones are also equally significant.

The Jowar-cotton-wheat linseed-pulse association occupies the richest land in the region, which extends along the valleys of Tapti, Purna, Wardha and Godavari and a slightly inferior soil of the southern districts of Bombay Deccan. Jowar and cotton are grown in rotation in the kharif season and as the heavy soil retains moisture for a long time wheat and linseed are grown in rotation in the rabi season. Gram is a mixed crop cultivated in both the seasons. The region of the southern districts of Bombay Deccan does not represent this association as perfectly as does the northern zone—a fact which is due to the inferior soil and uncertain rainfall of the southern districts.

On the regur land where the soil is not good enough for the cultivation of rabi wheat and linseed and the rainfall does not compensate for this deficiency, the production association is that of *Jowar-cotton-bajri-oilseed and pulse*. This zone lies between the Godavari and Tapti valleys along southern Khandesh and Berar and along the tract between Godavari and Dhima. It occupies the medium black soil. Jowar and cotton are grown in this zone both as kharif and rabi crops for they, like wheat, do not require much moisture. Bajri is essentially a kharif crop grown generally on the poorer soils but is also a substitute for Jowar on the heavy soils, when rainfall is not satisfactory. Oilseeds and pulses form the mixed crops of this tract as elsewhere.

1. E. Simkins, 'Ibid,' p. 61.

The Bajri-pulse-sugarcane-groundnut-garden Zone is found in many parts of the Jowar zone. It occupies the region where the soil is not sufficiently heavy for the cultivation of Jowar and the rainfall is insufficient for the cultivation of rice. The *Bajri-pulse zone* which is a sub-region of this association marks the poorest soils on the east-west spurs of the Western Ghats and the tracts of most uncertain rainfall. The main association extends along the leeward slope of the Western Ghats from Khandesh to Belgaum. It is a tract where irrigation has developed most and is "the region of garden cultivation par-excellence. Gardens are found in the rich valleys and under heavy irrigation and manuring, produce large crops of vegetables, groundnuts and fruits." The cultivation here is intensive for the most part.

In the rice zone which is typical of the red soil under heavy rainfall, the *Rice-Sugarcane-wheat-linseed* association occupies the richest brown and yellow loams of the Wainganga valley. Rice and sugarcane are grown as wet crops and the cultivation of rice is very intensive due to the development of the tank irrigation in the region. Two or three crops in a year is a very common feature provided the water supply is sufficient. Wheat and linseed are grown as rabi crops along the banks of the river and though the soil is brown, heavy rainfall redeems the deficiency.

From a comparison of these two main production regions of Maharashtra and Karnatak, represented by Jowar and rice, it can be seen that the land under jowar is more level than that under rice, which is grown on the rugged hill-tops of the Sahyadris and their spurs. This has made large-scale farming a peculiar feature of the jowar-zone. But the existence of small fields in the red soil region and the density of population have led to the development of intensive agriculture in the rice zone. Similarly, the regur is typically the soil of dry

cultivation while irrigation has developed most on the rice land. One other feature that is brought out by the comparison is that, in the Jowar zone most of the crops are grown for commercial purposes while the main purpose of production in the rice zone is consumption.

The next thing that is brought to the notice of the observer by the preceding survey, is the infinite variety of crops and plants that smile in the region. The diversity of soils, climates and rainfall has compelled the cultivator in Maharashtra and Karnatak to grow those crops alone which suit his own typical conditions. Many a time, he also cultivates more crops than one so as to secure himself against the proverbial uncertainty of agriculture in his land. If one crop fails he may have the other to feed him and his family. It is this inherent tendency of the cultivator to secure himself against the possible calamities of famine and the diversity of physical and climatic conditions that has rendered our province, as it were, into a museum of agricultural crops. But the infinite variety of crops is not a great comfort when one realizes that their yield per acre in this province as compared with that in foreign countries is frightfully poor. This low yield of agricultural crops is due not so much to the ignorance and the inherent inefficiency of the farmer as to his improper equipment. If he is given a better plough and a sturdy pair of oxen to drive, if he is provided with adequate credit facilities to satisfy the current needs of farming and to procure manures and if the difficulties of regular water-supply are removed, with very little instruction, he too is capable of producing as much per acre as his confrere abroad.

It is said that the problem of food-supplies is to be one of the most acute problems of the immediate future and that it is only on the basis of a secure and reasonably cheap supply of staple food and raw materials that improvement in

the standard of life and in the production and organization of industries can be effected. From the preceding survey of the crops and production associations of Maharashtra and Karnatak, it becomes abundantly clear that even at present, with the use of primitive implements, with a most lamentable dearth of capital, with the lowest yield per acre of almost every variety of crop, with inferior seeds and no manure, the province is able to produce nearly everything that it needs in the shape of food-stuffs and raw materials.

CHAPTER IV

Industries Subsidiary to Agriculture

The character of agriculture all over the world is determined in the last resort by the conditions of rainfall. Where rainfall is heavy and comes in periodical showers, the land is strewn with patches of crops, chequered yellow and green and the agriculturist is busy throughout the year. As soon as he reaps one crop the time arrives for sowing another and no time is wasted in idleness. Where rainfall itself is not equitably distributed over the twelve months of the year, facilities of irrigation make up the deficiency. But in Maharashtra and Karnatak both the conditions are absent. The south-west monsoons on which we depend for our rain blow only for about four months and the showers we get are extremely heavy in one part and scant in the other. Similarly the topography of our province as well as the indifference of the Government have so far prevented us from launching any huge schemes of irrigation which could have made it possible to raise more than one crop in a year. Naturally, the situation at present is that, agriculture on which the majority of population depends for its living, does not employ labour all the year round. There are large portions of the province in which the kharif crop, which is reaped at the end of the rains, is the only crop of importance, and when this crop is gathered there is a scarcity of employment till the break of the next monsoon.

This period of idleness during which the cultivator has no agricultural operations to perform occurs at intervals and varies, in different parts of the province, with the conditions of soil, climate and rainfall and the methods of cultivation.

If the rain is scanty and soil unretentive only one crop can be grown and the farmer is without any work for about eight months of the year. Where rainfall is heavy and soil retentive, two crops can be grown and this period of idleness is reduced to five or six months. So also, a farmer who follows the methods of cultivation, honoured and highly spoken of by his revered ancestors of the bygone age, manages to employ himself and his oxen in his small field for full twelve months, while the same field will hardly give employment to a modern agriculturist for four months. In Berar the number of days which an average cultivator, holding say, 20 acres—the average holding in the province—spends on his rabi and knarif crops is somewhere near 240 days as shown overleaf :—

1. R. S. Dadu Dwarkanath Singh, "Royal Commission on Agriculture in India", Evidence Vol. VI, p. 500.

Month.	Total working days.	Work.
June	... 28	I. Ploughing of the field, 15 days. II. Fencing of <i>beras</i> with horns, 10 days. III. Taking grain to the market, 3 days.
July	... 20	I. Ploughing, 15 days. II. Sowing of kharif crops (jowar etc.) 5 days.
August & September.	30	I. Occasional ploughing when there is no rain, 10 days. II. Weeding etc. 10 days. III. Collection of grass, 10 days.
October	25	I. Preparation of the field for rabi sowing, 15 days. II. Harvesting of kharif crops, 5 days. III. Collection of grass, 5 days.
November	25	I. Sowing of rabi crop, 15 days. II. Threshing of kharif crop, 5 days. III. Collection of grass, 5 days.
December, January and February	40	I. Collection of grass, 15 days. II. Bringing of fuel, 15 days. III. Miscellaneous, 10 days.
March, April & May	72	I. Harvesting, 15 days. II. Threshing, winnowing and carrying crops, 42 days. III. Miscellaneous, 15 days.

Total 240

This is the state of affairs in Berar, where rainfall is higher than that in the eastern Bombay Deccan and soil more retentive. The cultivator of this tract is more busy than his colleague in other parts, because he cultivates two crops in a year, one in the kharif season and the other in the rabi season, and yet for nearly four months of the year he is without any occupation. Moreover, this period of idleness is not continuous but occurs at intervals. In the absence of a suitable occupation, the cultivator generally spends these intervals of enforced idleness in useless pursuits which are highly demoralizing in their effects.

A similar situation exists in the districts of the Wainganga valley, in spite of its better conditions of rainfall and better facilities of irrigation. Here also, an average cultivator in the rice zone, cannot spend more than eight months on his holding in a normal season. During the intervals of leisure the cultivator of this zone either makes himself happy in the company of his tobacco-pipe or runs to factories like Tata Iron Works, only to sacrifice his life for a meagre wage. When he returns home, he is full of diseases, which in course of time capture village after village in the vicinity in the form of epidemics, and destroy the health of the rural society.¹ However, the number of such farmers running to factories for employment during the off-season is very small, because the off-season is constituted of intervals of leisure spread over the whole year and as such it cannot be utilized for securing employment in a factory. In spite of this handicap, the farmers who manage to keep themselves away from their fields continuously for three to four months in a year, to join some factory for supplementing their income, do so by entrusting the minor agricultural operations of the season to their wives or other relatives.

I. Purushottam Prasad Pandey, "Royal Commission on Agriculture in India," Evidence Vol. VI, p. 127.

In Bombay Maharashtra and Karnatak this problem of the off-season in agriculture is still worse. In the dry tracts of this part where facilities of irrigation do not exist, a farmer with a holding of 20 acres, which is much above the present average, has work only for about six months in a year and even during that time he is not continuously engaged on his farm.¹ If his actual days of work in the field are counted they would not probably exceed four months. Here are the results of an attempt in that direction.

**A ROUGH PROGRAMME OF THE AGRICULTURIST IN THE DRY TRACT,
CULTIVATING AN AVERAGE HOLDING OF TWENTY ACRES.²**

	Days of actual work.	Days of Interval.	Remarks.
1. One harrowing after the first rains.	6		
2. Sowing.	5		
3. Interval.		30	
4. Hoeing.	6		
5. Interval.		40	
6. Watching.	50		
7. Reaping.	10		
8. Threshing.	10		
9. Ploughing for the next season.	15		One acre is ploughed in 3 days. ³
10. Interval.		90	End of agriculture season.
11. First harrowing.	8		
12. Interval.		30	
13. Second harrowing.	5		
14. Sundry work.	5		
15. Interval till next rains.		55	
Total	120	245	

1. G. Keatinge. "Agricultural Progress in Western India."

2. "Royal Commission on Agriculture in India", Evidence Vol. II, Part II.

3. Generally, the whole land is ploughed once in every four years—so he ploughs one quarter of the area every year.

This programme of work bears out the guess, that the agriculturist in those tracts of Maharashtra and Karnatak where only one crop is grown, though kept on his farm for about six months in a year, actually does not work for more than four months. In any case it must be admitted that he gets at least six months leisure every year. During this interval the farm needs one or two harrowings but they are given either by grown-up boys or by old members of the family who are not regularly engaged in agricultural operations. Therefore, when the crop is harvested the agriculturist runs away to some industrial centre like Bombay or Sholapur to work in a factory or takes up some transport work near his village. It is possible for him to do this because his intervals of idleness are much longer than that of his colleague in Berar and there is a great demand for his labour in the cotton mills of Bombay and Sholapur. In the Maval tract and in tracts which, owing to seasonal conditions can grow two crops in a year, the agricultural season extends to about nine months. In the Maval tract the working season commences from the beginning of May and continues till the end of January while in dry tracts growing two crops, the season lasts from June to the end of February. During three months of idleness the farmers ply carts between places of weekly bazars.¹

Considering the conditions of agricultural employment prevailing in the different parts of Maharashtra and Karnatak as described above, we can safely conclude that on an average our agriculturist remains without any work for about six months of the year. And this is so, when he is in possession of a holding of average size. However since about 40% of the total holdings in Maharashtra and Karnatak are below the average size, our conclusion acquires greater significance.

1. V. L. Mehta, "Royal Commission on Agriculture in India." Evidence Vol. II, p. 11.

How to avoid this annual waste of labour has therefore become one of the major problems of agriculture in Maharashtra and Karnatak. The only solution of this problem which immediately suggests itself is to provide the agriculturist with some subsidiary occupation that would engage him during the off-season and supplement his income. This subsidiary occupation must be such as will neither require his continuous attention for more than a fortnight at a stretch nor compel him to leave his village. It will be pertinent in this connection to quote the words of Mr. Edye, who was in charge of the Census of the United Provinces in 1921. In his report, while analysing the problem of agricultural employment in that province, he remarks: "The bulk of the population is agricultural, and agriculture here, means ordinarily the growing, harvesting and disposal of two crops in the year, and not the mixed farming familiar in England. Agriculture of this kind involves very hard work for certain short periods—generally two sowings, two harvests, an occasional weeding in the rains, and three waterings in the cold weather—and almost complete inactivity for the rest of the year. In precarious tracts inactivity may be unavoidable for a whole season, or even for a whole year. These periods of inactivity are in the majority of cases, spent in idleness. Where the cultivator pursues some craft which will employ himself and his family at times when they are not required in the fields—a craft in which continuity of employment is not essential—the proceeds of that craft are a saving from waste and therefore a clear gain."¹

This problem of the off-season has been in existence in Maharashtra and Karnatak ever since our ancestors began to plough the field, dry farming being the nature of our agriculture. But the ancient village economy as long as it predominated in our economic life, had an easy solution for it.

1. *Census of India*, 1921 Vol. I, Chap. XII, p. 271.

Under its regime, the agriculturist could utilize his off-season for manufacturing a number of articles required for local consumption. But with the disappearance of village economy and the conquest of rural markets by cheap imported goods, the agriculturist lost his time-honoured subsidiary occupations and no attempt has yet been made to find out new ones to take their place. The task is not very difficult provided it is pursued on a systematic basis. There are a good many subsidiary occupations closely connected with cultivation, which the cultivator can easily take up in his spare time if he is properly instructed and supplied with adequate facilities.¹

At present there is no special industry worth the mention which is taken up by the farmer of Maharashtra and Karnatak mainly as a set-off against his enforced idleness. Many of the industries which some enlightened cultivators have introduced into their cottages are essentially full-time occupations followed by some special castes, the survivors of the ancient village economy. Hand weaving, knitting, dyeing, soap making, carpentry, smithy, etc., are a few of the industries of this kind. But besides these there are others like Dairy farming, Bidi making, Rope making, Basket weaving, Hand spinning etc. which are predominantly followed by agriculturists though on a very small scale and hence can be called as subsidiary to agriculture.

Dairy farming is essentially an occupation allied to agriculture. It thrives very well because there is always a good local and urban demand for milk and milk-products which increases with every increase in population and every rise in the standard of life². Plough cattle are a necessity to the cultivator and hence he keeps quite a large number of them

1. Rao Bahadur Tundilal Powar, "Royal Commission on Agriculture in India." Evidence Vol. VI, p. 92.

2. Report "C. P. and Berar Banking Enquiry Committee." p.78.

in his possession. But along with the plough cattle he also keeps some milch cattle, which bring him a constant monthly- or if need be even daily-income in the form of ready money and which do not require much extra expense on his part for their grazing and accommodation. The proportion of plough cattle to milch cattle in Maharashtra and Karnatak will be clear from the following table.

PLOUGH CATTLE AND MILCH CATTLE IN 1931-32 ².

(Figures in thousands.)

Area.	He		Cow	She Buffaloes.
	Bullocks	Buffaloes		
Nagpur Division	927	76	732	156
Berar	714	26	636	231
Khandesh	394	6	200	128
Bombay Deccan	843	39	759	328
Konkan	543	119	433	143
Karnatak	629	187	420	281

A cursory glance at these figures is sufficient to bring out that the number of milch cattle in Maharashtra and Karnatak is almost equal to the number of plough cattle, and that among the milch cattle cow is more popular than its rival. The popularity of the cow is due not so much to the sanctity attached to it by the Hindu religion as to the small expenses required for its maintenance. However, since the milk giving capacity of the cow is also proportionately less, its prominence in Maharashtra and Karnatak as shown by its number, betrays an amount of short-sightedness on the part of our agriculturist. As a result of this short-sighted policy, the she-buffalo, our chief dairy animal, is being entirely neglected. It must at the same time be remembered that our

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1. Report, "the Bombay Banking Enquiry Committee", p. 185.
 2. Agricultural Statistics of India 1931-32, Vol. I.

number of milch cattle of both the categories though yet very small in proportion to the population has continuously increased during the present century.¹

To get an idea about the income derived by the cultivator from his milch cattle, it is necessary to consider the main products of dairy-farming and the nature of demand for them. In the provinces under consideration, the important products of dairy-farming are milk, butter and ghee. In Maharashtra and Karnatak a she-buffalow produces about 1500 lbs of milk per year on an average while the yield of a cow for the same period is 800 lbs. approximately. Compared with the yield of milch cattle in Denmark and Switzerland this yield is very poor. The reason lies in the inferiority of our breed and its low nourishment. This is common knowledge both to the ignorant farmer and to the enlightened Government and yet no serious attempt has so far been made to bring about an increase in the milk giving capacity of the cattle by improving their breed and nourishment. Generally, the urban centres in the provinces are the only markets of milk for the dairies in their vicinity. The Gavli—as the farmer who keeps a dairy is usually called—sends his milk for sale to the nearest town, either with a small boy or an old woman, who are not fit to undertake any work in connection with the cultivation of his fields or look after and graze the cattle. If the milk is unadulterated he realizes three to four annas for every pound of it sold in the town and his monthly income from this trade is fairly handsome. The surplus of milk which remains after satisfying the local demand, is usually turned into butter or ghee, according to the nature of the market the farmer has in view. If the daily yield of these products is very small it is accumulated for about a week and then sent to the city nearby or even to far off towns for disposal. The farmer realizes on an average about twelve

1. Report 'C. P. and Berar Banking Enquiry Committee,' p. 78.

annas for a pound of butter and about a rupee for a pound of ghee. Besides these products, the dairy animals of the farmer provide him with manure and calves which also serve as additional sources of income.

Thus, dairy farming appears to be just the subsidiary occupation for our agriculturists. Yet, a very few of them have taken to it and with disappointing results. They are generally in debts on account of the dairy and hence lose a large slice of their income from milk and other dairy products by way of interest, which is very high. Difficulties of grazing the cattle and of marketing the dairy products, also create serious obstacles to the development of this industry. Co-operative organizations can play a very important part in solving these problems of dairy farming and in this field Nagpur has already led the way with creditable achievements.

Bidi making is another subsidiary industry of importance in Maharashtra and Karnatak. It is a very simple process and can be easily learnt by the illiterate cultivators. Besides, as it does not involve any physical strain it becomes a very convenient occupation for men and women, too old to do any active work in the fields. Nagpur division is the main centre of this industry in Maharashtra. It commands in its forests an abundant supply of *tendur* leaves which are used as wrappers in bidies, while the tobacco is imported from Bombay. In Karnatak, where also bidi making is an important subsidiary occupation, both the *tendur* leaves as well as tobacco are of local produce. The collection of *tendur* leaves which is done in the hot season, is itself an off-time occupation to a large number of farmers. It is so important in the Central Provinces that "in the scarcity of 1928-29 the rapid rise in number upon famine relief works was checked as soon as the *tendur* leaves became ready for

picking".¹ An ordinary bidi maker gets about seven annas for preparing a thousand bidies and a daily remuneration of twelve annas at this rate is not uncommon. There is a number of large bidi establishments scattered over the Nagpur and Karnatak divisions, owned generally by Gujaraties or Marwaries. They provide the farmers in their vicinity with the quantity of tobacco and *tendur* leaves necessary for preparing bidies and pay them according to the output. In the Bhandara district this occupation is mainly in the hands of the Harijans but in other districts it has received a fairly wide attention.

The manufacture of ropes from hemp is an ancient spare-time occupation of our farmer, but with the appearance of the cheap machine made rope on the market, it has dwindled almost to extinction. Still even now, the female workers who are generally employed for weeding grass in the rainy season and for picking cotton and cutting jowar in the harvest do take to rope making in the slack season when they do not get their usual work. In the coastal districts of Konkan, fibres of cocoanut bark serve as a substitute for hemp in rope making and the coir industry of this tract is a bread giver to many poor families. We think that, though rope making is no longer a very remunerative occupation from the point of view of securing an extra income, it will mean a lot of saving to the agriculturist if carried on in every cottage as it easily could be. He requires a large quantity of rope annually for drawing water, for thatching house and for many other sundry purposes, and he has to incur some expenses on that account. These expenses will be saved if he takes himself to rope making during the off-season and manufactures rope just enough to meet his requirements.

1. Report, "The Central Provinces Banking Enquiry Committee", p. 223.

The case of basket and box weaving industry in Maharashtra and Karnatak is similar to that of the rope industry. It was quite in a flourishing condition before the influx of steel trunks in our province. Even Government used to purchase big *Petaras* woven from bamboo or cane for keeping their official records. Now the *Petara* industry is extinct for all practical purposes but still there is a good market for baskets and brooms woven from bamboo shreds. Baskets of different designs for collecting flowers and vegetables have a great demand in rural areas and an excellent workmanship is highly prized even in cities and big towns. As bamboo is grown abundantly in regions around the Sahyadris, the industry is very popular all over Bombay Maharashtra and Karnatak, but is restricted to certain castes who consider it as their hereditary occupation.

Hand spinning in Maharashtra and Karnatak, as in many other provinces of India, had been in vogue since time immemorial. It was the main subsidiary occupation of the rural population in times of village economy. But with its break down and with the introduction of cheap foreign yarn and the establishment of spinning mill in Maharashtra, spinning as a cottage industry subsidiary to agriculture received a heavy blow. But after a lull of about three quarters of a century, the *charaka* movement has again given some impetus to this industry and though now it does not help the farmer to supplement his income, it saves him the expenses of clothing his family. Speaking about the necessity of introducing spinning as a subsidiary industry and the possibilities of its success Mahatma Gandhi remarks: "We know that it was at one time the universal supplementary industry of India. Millions have not yet forgotten the art, and tens of thousands have even now spinning wheels in their homes. Hand-spinning is therefore capable of immediate and limitless extension. And as it has been found that ten spinners supply one weaver

against nine million weavers ninety million spinners would be able to add to their earnings what to them will be a material and welcome addition i. e., at least 25 per cent of their income. I have assumed the very high figure of 40 rupees per year per head to be the average income. Unlike weaving, spinning may be intercepted any moment and therefore it can be done during all odd moments. Spinning is learnt easily and the spinner begins to draw some thread from the very commencement".¹ The All India Spinners Association, established in the last decade of this century has made the realization of these possibilities its primary object and its efforts in that direction are slowly but steadily becoming fruitful. In Maharashtra and Karnatak as well the popularity of the spinning wheel amongst the cultivators is gradually increasing.

There are many other industries, besides the ones we have discussed above, which give a kind of supplementary income to the cultivator in his off-season. But none of them has been developed by the cultivator to any very great extent so as to yield him a handsome supplementary income. Poultry-keeping has become popular in some villages where the rainfall is not very heavy, fishing has been largely taken up in the coastal districts, sheep grazing and *kambli* weaving give some employment to the *kurbars* in Bijapur while carting is a favourite job of the Berar and Nagpur cultivators.

To sum up: the agriculturist in our province is idle for about 6 months of the year and no attempt has so far been made either by the people themselves or by the Government to find out some industries which will occupy the off-season of the cultivator and still allow him to draw his maintenance mainly from agriculture. It is certain that this problem of supplying subsidiary industries suitable to the agriculturist

1 'Young India', 11th November, 1926.

will have to be tackled, even if industrialization removes the most glaring defect of our agriculture viz., its overcrowding and makes all the holdings capable of economic cultivation. Reorganization of the village on a co-operative basis, it is said, might go a long way in meeting this most urgent need of the agriculturist, by providing him with all the necessary facilities and instruction to take up the promising industries of fruit gardening, poultry keeping, Dairy farming, and bidi making on a scientific basis.

CHAPTER V

Large-scale Industries

In the early nineteenth century our main industries were confined to the seats of Indian Courts, places of pilgrimage and centres of international trade. They were organized on the principle of 'Guild System' and were essentially in the nature of handicrafts producing fine textiles and other luxury products for the aristocracy. Side by side with these organized industries there were others, carried on by the village artisans or village servants and spread over rural areas. They catered wholly to the needs of the village populace. The urban industries, as the types of manufacturing concerns falling in the first category were known, had reached a high water-mark of excellence and their products enjoyed an all India reputation.¹ The textile handicrafts were of course in the forefront. In the Central Provinces, Nagpur and Umrer were the centres of hand-woven silk-bordered cloth, which was prized all over India for its artistic skill and refined finish. Belgaum, Poona, Ilkal and Hubli were famous for their silk fabrics and the Paithani of Yeola had become the craze of every aristocratic woman. The bell-metal ware, a speciality of Nasik and Poona had a great demand in the Southern Maratha Country while the wood and ivory carvings of Kanara are famous even now.² All these industries had become 'localized' in Maharashtra and Karnatak and were even practising division of labour to a certain extent.

The main feature of these industries worthy of attention was that the demand for their products was generally

1. D. R. Gadgil, "Industrial Evolution in India". p. 35.

2. G. P. Fernandis, "Art Crafts of the Bombay Presidency."

confined to the place where they were established. There was not any large outside market for them even in India. This limitation on the extent of the market was the most serious restriction on their growth and it hindered the development of their internal organization. In spite of this, the urban industries that existed in the seventeenth century were quite in a prosperous condition. However, with the destruction of our native principalities and the introduction of machine made goods there set in a rapid decline both in the artistic excellence and the economic importance of these handicrafts, a decline which though in some cases it began as early as the end of the eighteenth century became very marked about the middle of the nineteenth century. It was not followed by the establishment of new industries of the modern type, as was the case with other countries of the world passing through the same phase of economic development. In England for example, the organization of industries in the eighteenth century was similar to that in Maharashtra and Karnatak. It was suddenly destroyed by the Industrial Revolution that swept over it. But the whole economic system ~~was~~ immediately adjusted to the new forces and the destruction of old handicrafts was succeeded by the erection of new industries. Therefore while the loss of royal patronage and the introduction of cheap machine made goods are responsible for the extinction of our ancient handicrafts, it is the lack of adjustment to the new conditions after it that is mainly responsible for the industrial backwardness of Maharashtra and Karnatak at the present time.

Private enterprise, without the encouragement and support of the political authority was not in a position to bring about this adjustment and the British Government wedded to a policy of *laissez-faire* at home, was not prepared to adopt quite the opposite course in their latest territorial

acquisition. But their faith in *laissez-faire* betrayed an amount of sincerity. While that noble principle would not allow them to encourage the establishment of new industries in Indian territories, directly or indirectly, it did not prevent them from discouraging it. The history of the cotton excise in this country is the most glaring illustration of this attitude. Thus, not only did the alien Government neglect the introduction of new types of industries in Maharashtra and Karnatak as all over India, but conspired, as it were to make us subservient to the industries of Great Britain.¹ It must be remembered that, in this policy, Government had the moral support of some of the economists of world fame, who soberly declared that, it was an unfortunate consequence of the English connection that Industrialism should present itself to Indians as the royal road to prosperity and to a dignified position among the nations. They were at great pains to convince the leaders of Indian opinion who were clamouring for industries that, in view of the climatic conditions of their country and the aptitudes and habits of their followers they would obtain more wealth by exchanging raw products for the finished goods of the west than by mobilizing themselves for their conversion into manufactures.²

It was surprising therefore that, inspite of the apathetic attitude of the Government and the discouraging advice of the economic experts, certain enterprising capitalists in India did come forward to give to their country a lead in industrial development. The establishment of Cotton Industry in India is wholly due to their daring enterprise. At first, Bombay was marked out as its most favourite centre but soon it spread to other places as well. Cotton Mills were erected at Nagpur in 1887 by the late Mr. J. N. Tata and at Sholapur by the late Mr. Morarji Gokuldas. Nagpur and

1. R. C. Dutt, "Economic History of India" Vol I, p. VII.

2. J. M. Keynes, "Economic Journal", 1911, p. 427.

Sholapur were particularly selected as the new centres of cotton mills because they commanded the cotton zones of Berar and Karnatak respectively. It was this migration of the cotton industry from Bombay to up-country towns that laid the foundation of industrial development in Maharashtra.

While these early attempts at industrializing the country were being made, the Government were also slowly awakening to their responsibilities in that field and were giving up their old attitude of indifference and discouragement. By the beginning of this century they had already commenced their efforts, inadequate and unsystematic as they were, in the direction of promoting new industries in India. They had by then realized that the public opinion which had so long been vociferously clamouring for industries and increased industries could not be utterly ignored. The 'Swadeshi' movement that followed the partition of Bengal gave them a fresh indication of the intensity of Indian demands in the matter. Still they did not pay any serious attention to it till the outbreak of the world war in 1914, which brought home to them the weakness inherent in an unbalanced economy like that of India. The Industrial Commission was appointed in 1916 to chalk out the lines of industrial development in the country and it was followed by the Fiscal Commission in 1922, which recommended a policy of discriminating protection. It has been accepted by the Government and as a result, the number of industries in India has considerably increased. This industrial policy of the Central Government has had its full effect on the development of industries in Maharashtra and Karnatak throughout the century.

An examination of the structure and organization of these industries reveals that they fall into two well marked, important categories. On the one hand there are some huge

concerns of a gigantic type, equipped with the latest machinery, employing a large number of persons, and producing goods on a mass scale. They are distinguished by the term 'large-scale industries'. On the other hand there are certain industries reminiscent of the ancient type which are housed in small cottages and which produce goods on a very limited scale. They are known as 'small-scale industries' or 'handicrafts' and their existence along with the large-scale industries is bewildering at the outset. But this phenomenon has been discovered in almost all the industrial countries of the world and is considered quite natural. In fact in the Industrial organization of a country, these two types of industries have their special spheres of production mutually exclusive and supplementary to each other.

In Maharashtra and Karnatak, as everywhere else, the field of large scale industries has been determined by one predominating factor, namely, the extent of standardised demand. In the production of the commodities which have a standardised market, large-scale industries with their inherent advantages of internal and external economies have completely ousted the ancient handicrafts. But these latter have successfully held their ground in those branches of production, where the likes and dislikes of the individual and the requirements of art have a predominating influence, where the machine has not been able to make any serious encroachments and where the geographical expanse of the country and the lack of proper means of communication and transport have rendered competition from large-scale industries quite ineffective. In this chapter we shall deal only with the large scale industries, the importance of which can be seen at a glance from the table overleaf.

LARGE-SCALE INDUSTRIES OF MAHARASHTRA AND KARNATAK AND
THE NUMBER OF PERSONS EMPLOYED IN THEM IN 1933-34.

Group	Factories	Number of persons employed
Textiles	40	49,752
Cotton gins etc.	874	53,499
Food, Drink and Tobacco	5	639
Gur factories	37	730
Engineering	37	5,863
Processes relating to wood		
stone and glass	51	3,673
Skins and Hides	2	68
Minerals and Metals	2	34
Chemicals etc.	64	3,499
Paper and Printing	30	2,159
Miscellaneous seasonal factories	64	1,037
Total	1,206	120,953

Cotton Textile Industry :—Of all the industries, cotton-textile industry, is the only industry, except the cotton ginning and pressing industry, which began its career in the nineteenth century. The remaining industries for the most part are of comparatively recent origin. There is also one other factor which gives to the cotton textile industry of Maharashtra and Karnatak a predominance over other industries. It has the largest amount of capital invested in it and it gives employment to about 50 thousand people. In its early days the cotton textile industry of India was mainly concentrated in the city of Bombay. The large trade in yarn with China which characterised the middle of the nineteenth century, made it the seat of the industry for the

first forty years of its growth. But with the gradual shrinking of the export trade in yarn, the industry took increasingly to weaving and began to migrate to up-country centres. The first cotton mills of Maharashtra were erected at Sholapur and Nagpur in 1876 and 1877 respectively. Once the beginnings were made, the industry gradually spread to other centres like Nagpur, Wardha, Amraoti, Jalgaon, Dhulia, Amalner, Barsi, Sholapur, Gadag, Hubli and Gokak.

The spread of the industry to mofussil centres was however, bound up with the spread of railways. For, in the absence of railway transport it was not possible to move the heavy textile machinery from the port to up-country centres in the cotton tract. Nor was it possible to move raw materials and finished products to these centres in large quantities. It was only because railways were late in connecting all the important cotton centres in Maharashtra and Karnatak that the cotton industry did not spread to this tract earlier in the second half of the nineteenth century. But later on, as railway communications gradually developed linking the different cotton zones with one another and traversing the interior, the industry was quick to capture one centre after another till it became widely diffused over the whole province. The selection of centres was determined by the availability of labour and raw material and the existence of a reliable market in the surrounding area. The vicinity of railway workshops which would come to the rescue of the mills if any thing went out of order was also an important factor in this connection. The following table gives a comprehensive idea about the cotton textile industry of Maharashtra and Karnatak in 1932-33.

THE COTTON TEXTILE INDUSTRY OF MAHARASHTRA AND
KARNATAK IN 1932-33.¹

Centre.	No. of Mills.	Paid-up capital. (Rs. 100,000)	No. of Spindles. (1000)	No. of Looms. (1000)	Cotton consumed. (candies 1000)	No. of persons employed. (1000)
Nagpur ...	2	192	153	3	28	9
Sholapur ...	6	67	291	6	51	17
Wardha ...	3	38	69	1	13	4
Barsi ...	3	28	29	-	6	1
Jalgaon ...	2	30	34	1	7	2
Other centres	9	154	249	4	48	14
Total ...	25	508	825	15	153	48

Practically the whole of this industry is carried on, as in other parts of India, under the 'managing agency system' but there are some important differences in the manner of its working from centre to centre. These differences relate to such matters as the period of the managing agency, the method of calculating the agents' commission, the relations between the agents and directors and the agents' right to assign his interest or duties under the agreement. The main functions of the managing agency system as it exists in the industrial economy of Maharashtra and Karnatak are to finance the industrial concerns in its charge and to look after their day to day management. Its performance of both these functions has lately been subjected to a severe criticism. The financial methods of the managing agents are criticised as

1. Year ending 31st August 1934.

unsound especially in so far as they are in the habit of financing fixed capital expenditure by short term funds. Similarly in the management of the industry the agents are said to be earning huge profits for themselves at the cost of the mill, while performing such subsidiary services as purchases of raw materials and machinery, sales of finished product and insurance. This abuse of the managing agency system occurs most when the Agents have a financial interest in these services also. The existence of this peculiar system of management, which at times makes the interests of the managing agents and of the concern they manage quite the opposite of each other, is considered as one of the chief causes of the inefficiency of cotton textile industry of India in general. And yet it is not possible at present to replace it by any other system.¹

The cotton textile industry of India has been brought within the orbit of protection since 1930 to save it from the onslaughts of the Japanese competition. The necessity of this protective tariff was felt chiefly by the cotton mills of Bombay, where the competition was most severe and destructive, but it also helped other centres like Ahmedabad, Sholapur and Nagpur. As a general tendency, it has been noticed in recent years that, while Bombay as a centre of the cotton textile industry is gradually languishing under the shadow of the world depression, Ahmedabad is flourishing, and Sholapur Nagpur and Wardha are maintaining their position. The stability of the cotton textile industry of Maharashtra and Karnatak is assured because of certain positive advantages it has over that of Bombay and Ahmedabad. The first and the chief advantage of this industry is that, it is spread over the whole province and thus each mill has been able to develop its own special market. Sholapur is to a certain extent an

1. Report of the Indian Tariff Board on the Cotton Textile Industry, p. 83.

exception to this rule but still it is comparatively less congested and commands a wide market in the southern Maratha country. And secondly, as compared with Bombay, the remoteness of the industrial centres of Maharashtra and Karnatak, from the ports of import, render them comparatively immune from the Japanese competition. However, it is an unfortunate feature of the textile mills of these provinces, with perhaps the solitary exception of the Empress Mills of Nagpur that they have been weaving inferior counts to a great extent and thus have encroached upon a field which should rightfully belong to the handloom industry. Sholapur has recently started using higher counts and has achieved considerable success in the production of superior coating and dhoties. Nagpur is already famous for its plain and fancy shirting. But the general products of the textile industry are coarse saris, dhoties and cloth for men's and women's wear.

Ginning and Pressing Industry:—This industry was largely the outcome of the growing export trade in raw cotton which marked the seventies of the last century. Cotton when ginned and cleaned loses about 80 per cent of its weight and when pressed into bales of convenient size occupies a much smaller space than what it would occupy if left unpressed. Both of these operations naturally contribute to the economy of transport. Introduction of ginning and pressing factories was therefore an essential factor in the development of our cotton trade and hence they were established in the cotton tracts of Khandesh, Berar and Karnatak even earlier than the cotton mills. Saw-gins have been used in the ginning sheds since 1830, while pressing is carried on by means of hydraulic and steam presses. These presses however, were not in much use before some enterprising Europeans established them in the Central Provinces and Berar in 1868, on the invitation of the cotton Commissioner. The distribution of ginning and

pressing factories in Maharashtra and Karnatak can be seen from the following table.

GINNING AND PRESSING FACTORIES OF MAHARASHTRA
AND KARNATAK IN 1933-34.

Division	No. of gins and presses.	No. of Persons employed.
Nagpur	109	6,651
Berar	343	19,737
Khandesh	188	14,414
Deccan	74	3,554
Karnatak	157	6,870
Total ...	871	51,226

These gins and presses which are spread all over the cotton zones of Maharashtra and Karnatak are owned either by large exporting firms or by local merchants dealing in cotton. They give seasonal employment to about 50 thousand persons and represent over three crores of capital. However, the employment they give fluctuates with the condition of the cotton crop. If rainfall is favourable and crop heavy, it means a full working season for the gins and presses and consequently increased employment for the workers, but if the conditions are reverse employment dwindles down to a very low figure. Sometimes, ginning is combined with seed crushing, rice milling, coffee pounding and occasionally one finds three or four trades carried on under the same roof in order to utilize more fully the small power plant that is employed.

1. Reports on the working of the Factory Act in Bombay and C. P. Berar, 1933-34.

As the ginning and pressing factories developed, they became the hot-beds of certain corrupt practices in the cotton trade. Mixing together of inferior cottons, sprinkling of water on cotton bales to increase their weight and admixture of dirt was very common in the first two decades of the 20th century.¹ These malpractices not only injured the interests of the cotton trade but also affected the agriculturist who could not secure the best price for his produce. Therefore, with the object of maintaining the quality and reputation of the cotton grown in certain areas, the Government passed the "Cotton Transport Act" in 1923. According to this Act, imports of Cotton in Dharwar and Bijapur are prohibited, except under a prescribed license. This restriction went a long way in suppressing the corrupt practices followed by the ginning and pressing factories in areas outlying the Karnatak zone, but it did not check the evils so common in the upcountry gins and presses beyond. Another Act, called the "Cotton Ginning and Pressing Factories Act" was therefore passed in 1925. It aims at strengthening the regulation of cotton gins and presses in these provinces, so as to improve the quality of the cotton and to regain its reputation. The combined operation of these Acts has led to a considerable improvement in the working of the ginning and pressing factories and has given a powerful stimulus to the cotton trade.

Sugar Industry :—Sugar industry of Maharashtra and Karnatak is of recent origin. The first sugar factory established in the year 1918 was for years together the only factory in this province manufacturing sugar directly from sugar cane. But the grant of protection to the Indian Sugar Industry in 1933, for a period of fifteen years, attracted a

1. Report of the Cotton Committee of 1919: "We were much impressed by the magnitude of these evils and the necessity of providing some remedy for them."

large amount of capital towards the manufacture of sugar and as a result seven new factories have sprung up in Maharashtra during the last three years. The total amount of capital invested in these factories comes to about 125 lakhs of rupees and they give seasonal employment to about four thousand workers. All of them are concentrated in the Deccan Canals area, where they control a sufficient acreage of land to grow their own cane. This increase in the cultivation of sugar cane, has meant an additional employment for about 11 thousand agricultural labourers all the year round.

The average annual production of the sugar factories in Maharashtra is estimated at 37,000 tons the value of which amounts to a crore of rupees. At the same time the total consumption of sugar in Maharashtra and Karnatak on the basis of an average per capita consumption of 5 lbs. works out at nearly 55,000 tons. At present therefore, our demand for sugar has partly to be satisfied by imports from the United Provinces and Bihar and Orissa. But there is still sufficient scope for the expansion of this industry in Maharashtra and it is possible to increase our production in the near future not only to meet our own demand but also to export large quantities of sugar to outside areas. The position of the sugar industry of Maharashtra vis-a-vis the other provinces of India can be seen from the table overleaf.

**ESTIMATED PRODUCTION OF SUGAR IN THE DIFFERENT
PROVINCES OF INDIA IN 1934-35.¹**

Province.	No. of factories.	Production of sugar tons.	Percentage of total Indian production.	Recovery percentage.
United Provinces.	65	294,800	50.8	8.8
Bihar & Orissa ...	35	190,800	32.9	9.3
Madras ...	10	19,000	3.3	9.1
Bombay ² ...	6	23,600	4.1	10.3
Other Provinces and States ...	22	51,800	8.9	...
Total ...	138	580,000	100	9.0

It becomes clearly evident from these comparative figures that, the sugar industry of Maharashtra is very small as compared to that of the United Provinces and Bihar and Orissa, though its recovery percentage is the highest. One of the chief reasons why the sugar industry in this province has remained so small is that our area under sugar cane is limited and though its yield per acre is higher than that of any other part of India, its cost is comparatively heavy. Irrigation charges and wages of agricultural labour form a large percentage of this cost. Apart from the heavy cost of their cane supplies, the sugar factories in the Deccan Canals area suffer a great deal for want of railway facilities. Moreover, being nearer to the port of import, they are liable to foreign competition to a greater degree than the factories of North India. However, the greatest obstacle in the development of these factories has been the unsympathetic attitude of the Bombay Government, particularly in the matter of fixing the water rates. "The assurances on which the factories came into the

1. M. P. Gandhi, "Indian Sugar Industry" (1935 Annual) p 6.

2. Excluding the Sugar Factories at Phaltan and Kolhapur.

existence have not been fulfilled and instead onesided agreements are being imposed on them."¹

Gur Industry:—In contrast to the sugar industry, gur industry is one of the ancient industries of Maharashtra. Prior to the establishment of the sugar factories the cultivation of sugarcane in the Deccan Canals area was carried on entirely for this industry. Gur is eaten by all the cultivating classes in the villages and by the bulk of the middle classes and the labouring classes in the towns. Its consumption has suffered only slightly, though sugar has come more and more into fashion. At present there are about 50 gur factories in Maharashtra and Karnatak and their average production comes to about three lakhs of tons. On the basis of a per capita consumption of 20 lbs. the average requirements of gur in these provinces can be said to be in the neighbourhood of two lakhs of tons. The surplus that remains over after meeting this demand for local consumption is usually exported to Hyderabad, Gujarat and the Southern Maratha Country. Since 1929 however, the gur industry of Maharashtra and Karnatak has been in the throes of a terrific depression. The extent of this depression can be realized from the behavior of gur prices in some of the important markets of the Deccan.

AVERAGE RATE OF GUR PER PALLA OF 240 LBS. EACH.

Year.	Poona.	Baramati.	Kopergaon.	Belapur
	Rs.	Rs.	Rs.	Rs.
1929-30	28.39	26.52	29.66	29.42
1930-31	22.04	19.68	22.10	21.92
1931-32	15.55	13.52	15.21	15.51

1. M. P. Gandhi, Op. Cit. p. 8.

Since 1933 there has been some improvement in these prices but it has not helped to lift up the depression in this industry to any considerable extent. The causes which have brought about this crisis are in the order of their importance: (1) the general economic and agrarian depression, (2) the competition of the Northern India gur, (3) the cultivation of cane in areas adjacent to Maharashtra and (4) the change in customs and tastes of the people.¹ Besides these, there are also other causes which have all along undermined the efficiency of this industry. The excessive water rates charged by the Irrigation Department increase the expenses of sugar cane cultivation in the Deccan Canals area and thus raise the cost of producing gur. This effect is still further enhanced by the primitive methods of gur manufacture in vogue on this side of India. They are extremely wasteful so far as the sugar contents of the cane are concerned. For example, the cane crusher which is most commonly in use in the Deccan is very weak in construction and gives a very low extraction of juice. Similarly, the furnances used for boiling the juice leave much room for improvement particularly in the shape and size of the pans and the construction of flues, and inversion from sucrose to glucose during the boiling process occurs to a large extent. Finally, the present system of gur making in the Deccan does not make any provision for the clarification of the juice. But for this important omission the quality of gur produced should have been much superior.

Engineering Industry:—There are at present 37 factories in Maharashtra giving employment to 6000 persons on an average, which can be placed in the category of engineering industry. But a majority of them are railway workshops

1. R. C. Shrivastava, "Report of the Deccan Canals Financial Improvement Committee," 1934, pp. 59-60.

engaged in all sorts of repairs in connection with railway waggons and machinery. The remaining factories, which are very few in number, manufacture agricultural implements and machinery and a number of household requirements. The Satara Industrial Works and the Kirloskar Brothers Ltd. are the two biggest concerns of this type. They have done a good deal of pioneering work in manufacturing agricultural implements like iron ploughs, sugarcane crushers, nut-crackers, and other sundry things like cots, shelves and chairs and in popularising them among the different classes of society. Some of the engineering factories in Maharashtra are also manufacturing weaving machinery, floor mills, rice-hulling plants, and similar kinds of machinery on a smaller scale.

The main difficulty with regard to the sale of agricultural implements, machinery and other products of the engineering industry in Maharashtra is the appalling poverty of the agriculturist and the illiteracy of the ryot. The protective duty on the import of continental steel and the heavy freight charges from Bombay to the various up-country centres of engineering workshops render the prices of their products beyond the reach of the average buyer. Besides, cultivation of tiny fragments being the nature of our agriculture there is very little scope for the use of expensive iron and steel implements on any extensive scales. All these factors which set very narrow limits to the use of iron and steel products in this province, also hold good of the outside markets in India.

Glass Industry:—There are in all five glass factories in this province, all of them the off-shoots of the present century. Amongst them they claim an investment of over 10 lakhs of rupees and provide employment for nearly a thousand workers. The production of these factories, which is valued at 8 lakhs

of rupees per annum, is confined to the manufacture of lamp ware and to a less extent of bottles and carboys. They are not yet able to turn out sheet and plate glass nor any kind of artistic glass-ware in commercial quantities. Ogles however, have recently extended their activities to the production of flower pots, lamp-shades and other varieties of artistic glass-ware as well as to the production of crucibles, and they have achieved a creditable success. All the glass factories of Maharashtra command their independent spheres of influence and their production is still well within the capacity of local markets.

However, this industry has been facing a very severe competition for the last five years from Germany and Japan, who have made deep inroads into the markets of Maharashtra and Karnatak, which were a close preserve of the local industry during the post-war period. With a view to secure protection against this competition during the period of its infancy, an application was made to the Central Government. The case was referred to the Tariff Board, who after an elaborate examination of the conditions laid down by the Fiscal Commission, recommended protection for the industry for a sufficiently long period. But, the Government have turned down this recommendation on the ground that the industry does not possess any natural advantages in India.

Besides foreign competition, the main difficulties in the development of glass industry in Maharashtra and Karnatak are about the supply of adequate fuel and efficient labour. The difficulties of fuel may be overcome by the use of cheap electric energy for working glass furnaces but the difficulties of labour are more serious. Glass industry even in its simple form is highly technical and can be efficiently conducted only by scientifically trained managers and expert workmen. It may be remarked in this connection that the "Paisa Fund

Glass works" of Talegaon has been training a number of glass blowers every year in its workshop and the expansion of glass industry in India during the world war was entirely due to them. The training given in this factory is however not quite up to the mark.

Tanning Industry:—The tanning factories of Maharashtra and Karnatak are situated at Ahmednagar, Sholapur, Belgaum and Poona. A large quantity of hides and skins produced in these factories is exported to foreign countries. They are tanned generally with vegetable tanning materials, by 'pit' or 'bag' process and Turward bark is generally the principal tanning agent. The methods of tanning adopted by the factories are far more refined and efficient than those of the cottage tanning industry. But, the quality of leather they turn out is determined mainly by the condition of raw hides they use and also to a certain extent by the quality of water available for tanning. The supply of hides in this province is not so great as that of skins and it depends on the mortality of cattle, presenting quite a unique phenomenon in that, when there is a famine in the land the income from hides and skins goes up. The village farmer is quite indifferent about the well-keeping of the cattle with an eye towards the value of the hides and their branding with hot iron, which is considered as a panacea against all sorts of cattle diseases in rural areas, spoils the texture of hides. As a result of this indifference there is only a very limited supply of good hides, which being largely in demand for the export trade are rarely obtained by the local tanneries.

The tannery situated at Ahmednagar is the biggest in this province, and it produces about 10,000 pieces of hides and skins per month. Mr. Gaitonde remarks: "I think I shall not do any injustice to other tanneries in the Presidency if I say that this is the only tannery in this presidency at

present, which produces both vegetable and chrome tanned leather of a fairly good quality"¹ The leather tanned in this factory is suitable for shoes, bags, straps and other well-finished leather articles which have a great demand in the province. The tanning factories at Poona, Sholapur and Belgaum are also in a fairly prosperous condition. However, of all these places Belgaum seems to possess a number of advantages over others as a possible centre of further development. It commands a fairly good supply of raw hides and skins from Dharwar, Goa and Konkan, has an adequate supply of labour though not well-trained and has the necessary quantity of water and tanning materials as well.

One of the most urgent needs of the tanning industry of Maharashtra at present is the supply of well-trained labour. All our tanneires, have had so far to import their tanners from Madras who keep their art a very closely guarded secret not to be revealed to anybody. The wages paid to them are exhorbitant and the consciousness of their monopoly often comes in the way of maintaining the discipline.

Shellac Industry :—Manufacture of shellac is one of the well organized industries of Maharashtra. The total annual output of this industry is estimated at 70,000 maunds and is worth 34 lakhs of rupees. The most important shellac factories of the province are situated at Gondia on the Bengal Nagpur Railway and are owned by big capitalists. The raw material of the Shellac factories—stick lac—is found in abundance in the forests of Bhandara and Balaghat. The various processes involved in the preparation of shellac are elaborately performed and there is very little to expect by way of improvement. Large quantities of shellac, manufactured in Maharashtra, are being annually exported to foreign

1. Y. R. Gaitonde, "Village Tanning Industry". p. 45,

countries where it is used in making paints, varnishes and gramophone plates.

Mining Industry:—The mineral wealth of Maharashtra and Karnatak is largely concentrated in the Nagpur Division where there are about 200 mines working at present. Manganese, coal, limestone and building stone are some of the important minerals extracted from these mines. The following table succinctly brings out their position.

MINERAL PRODUCTION OF MAHARASHTRA AND KARNATAK
IN 1934.¹

Mineral.	Chief centre of mining.	Quantity mined (tons)	Persons employed.
Manganese ...	Balaghat ...	186,025	5,005
Coal ...	Chanda ...	321,038	3,631
Limestone ...	Yeotmal ...	9,170	60
Building stone.	Thana ...	38,402	257

The manganese ores of the Central Provinces are of the highest quality and they contribute about 87 per cent of the total output of Indian manganese. A major portion of the annual production is however exported to foreign countries. In recent years, due to the trade depression the foreign demand for Indian manganese considerably diminished and this fall in the foreign demand had its repercussions on the volume of manganese production in the Central Provinces. The position showed only a slight improvement in 1934. The quality of coal mined in Chanda is inferior to that of Bengal but its low cost of production is a factor in its favour.

1. Annual Report of the Chief Inspector of Mines in India, 1934,

The recruitment of labour to work in these mines and the extraction of minerals is usually entrusted to contractors who attract and apparently retain their workers by a system of advances.¹ Their work is similar to ordinary earth excavation and calls for no special comment.

Oil mills, Paper mills, Rice mills, Bidi factories, Aluminium Works, Hydro-Electric Works and Motion-Picture companies are also some of the important large-scale industries of Maharashtra and Karnatak in addition to those mentioned in the preceding pages.

To turn to the conditions of labour prevailing in the industries described above, it is the general criticism of labour all over India that it is migratory in character, independent in its habits, reluctant to submit, inefficient and slack and that its quality can be improved by education and high wages. This holds true of the labour in Maharashtra and Karnatak as well.

The cotton mills at Sholapur and Nagpur, the most organized industrial centres of Maharashtra, generally work for 60 hours a week. All their labour supply comes from the surrounding districts and is less migratory than that of Bombay. In the seasonal factories like ginning, pressing and rice milling the labour supply is almost local. In the mining concerns however, this is not necessarily the case. The working conditions in the cotton mills of Maharashtra and Karnatak are much better than those in the Bombay mills and considerable attention is being given to the welfare of women workers. Creches are provided by almost all the mills. These however, show considerable variations from centre to centre in the provision made for children. Sholapur mill workers live in several different types of housing varying

1. Report of the Royal Commission on Labour in India, p. 107.

considerably in quality. Some of them build their own huts but they are much inferior to the houses provided by the mills. One mill has a large settlement comprising houses of different kinds and here the standard has steadily advanced with each new type constructed. It seems to be the practice of these mill-chawls, to charge a rent somewhat lower than the economic rent¹. In some mills of the Southern Maratha Country "the workers are housed by the mills, there is a provident fund; there are schools and hospitals all provided by the company. And we believe these amenities were not without their reflection in the efficiency of the operatives."² A general idea about the material condition of the labour in Maharashtra and Karnatak can be had from the following table:—

AVERAGE MONTHLY EARNINGS OF COTTON MILL WORKERS
AT SHOLAPUR AND NAGPUR IN 1926.

Centre	Class of labour.	Average monthly earnings per head.
Sholapur	... Men	... Rs. 23 15 6
Nagpur	... Average	... .. 22 9 0
Sholapur	... Women	... .. 9 15 7
..	... Children	... .. 5 10 4

The average monthly expenditure of a family of 4.57 persons at Sholapur has been calculated at Rs. 37-13-11 in the same year for which the wages data has been given. A comparison of these figures brings out that even if both the husband and the wife work in a mill they have to run to a money lender to maintain themselves and their children with a decent standard of life. However, these figures of monthly

1. M. C. Matheson. *Op. cit.* p. 189.

2. *Wages and unemployment in the Bombay Cotton Textile Industry*, p. 92,

earnings and expenditure have suffered a great change in the interval up to date. The slump in world prices has brought down the cost of living to an incredible figure and most of the mill owners have applied severe cuts to the wages of their workers.¹ But the fall in the cost of living has been much greater than the cut in the wages and thus the economic depression strangely enough seems to have improved the lot of the labour. This can be easily seen from the following index number of real wages.

Sholapur	...	100 (July 1927)	130 (Dec. 1933)
Nagpur	...	100 (Jan. 1927)	147 (..)

The earnings of the workers in ginning and pressing factories are even lower than those in the cotton mills. But they are mostly in the nature of supplementary earnings. In the mining industry on the other hand the wages are extremely poor, being only a little above the agricultural wages in the surrounding areas. The remaining industries give adequate remuneration to their workers and as far as possible, try to keep them contented. But on the whole, the material condition of the industrial labour in Maharashtra and Karnatak is far from satisfactory.

From a consideration of the large number of large-scale industries in our province a stranger may reasonably doubt the truth of our statement that we are industrially backward. It is true that if considered in abstract, the number of large-scale industries in Maharashtra and Karnatak is not small. But when we compare the number of people engaged in industries with the number of people engaged in agriculture it throws a clear light on the fact that our economic life is

1. Cost of Living Indices:—

Centre.		July 1927.	Dec. 1933.
Sholapur	...	100	71
Nagpur	...	100 (Jan)	58
Khandesh	...	100	62
Jalgaon	...	100	67

one-sided. And this is what we mean by the remark that we are industrially backward. It is well expressed by the familiar remark of the Fiscal Commission that the development of Indian Industries has not been commensurate with the size of the country, its population and natural resources.

The largest organized industry of Maharashtra and Karnatak is the cotton industry. Its distribution is limited to the cotton tracts of Berar and Karnatak and as compared with the mill centres of Bombay, Ahmedabad and Calcutta, there is less congestion at Sholapur, Nagpur and Wardha. Labour conditions also are much more encouraging. A large number of these mills in our province are owned by non-provincials who have become settled in Maharashtra for the last generation or two and as we have remarked they have a good future before them. But this will depend upon the general condition of cotton industry in the whole of India which is far from hopeful at present. Amongst the rest, the sugar and gur industry the engineering industry, the oil industry, the leather industry, the glass industry and mining industry have also great prospects of development. But in the future development of our industries the most beneficial policy for us to follow will be to encourage the development of industries on small-scale as far as possible, where it is compatible with economic production.

A minor point which strikes the observer in our present industrial system is the concentration of industries in certain parts of the province and their total absence in others. As for instance, the Bombay Deccan claims almost all the organized large-scale industries of the province while Konkan and Karnatak have not a single large-scale factory to boast of. But this is the inherent defect of large-scale industries against which we must guard ourselves in future and redress the balance by an equitable distribution of small-scale factories.

CHAPTER VI

Small-Scale Industries

In the industrial organization of Maharashtra and Karnatak small-scale industries have as much importance as the large-scale industries considered in the preceding pages. That they have survived in the face of competition from large scale industries is evidence enough of the vitality they possess. The Industrial Commission held a similar view and recommended the creation of a Department of Industries for each province mainly to reorganize these industries on proper lines. In this respect the Departments were enjoined with the four distinct functions of financial help, technical improvement, commercial assistance, and industrial training. According to this recommendation Departments of Industries were established for the Bombay Presidency and the Central Provinces and Berar in the last decade of this century. The small-scale industries and handicrafts in Maharashtra and Karnatak have been under the influence of these two departments for the last fifteen years but it is absolutely discouraging to note that they have belied the worst fears of the pessimist.¹ In all the four important functions towards handicrafts with which they were specially entrusted, they have acquitted themselves very miserably even as compared with the Department in other provinces of India.

1. N. M. Joshi, "Some Urban Handicrafts of the Bombay Decan," (unpublished thesis of the Gokhale Institute of Politics and Economics, Poona). p. 287. "A general conclusion with regard to state policy towards handicrafts in the Bombay Presidency becomes irresistible; namely, the whole policy is indifferent in attitude, insufficient in extent, inefficient in working, utterly misdirected and anachronio in many respects."

In the matter of financial assistance, while the provincial Governments of the Punjab, Madras, C. P. and Bihar and Orissa have passed the "State Aid to Industries Act" and made it possible for the Departments of Industries to give loans to handicrafts, the Government of Bombay have remained conspicuously silent to this day. Similarly in the sphere of technical improvement, provinces like Bengal and U. P. have carried on research in improved processes and appliances suitable to different handicrafts and helped the artizans to instal new machinery by furnishing technical data and advice. But the Departments of Industries in Bombay and the Central Provinces and Berar have not gone beyond running a few demonstrations for popularising the fly-shuttle and the sizing machine. Here also, while the results achieved in the Central provinces and Berar, where nearly 25,000 fly-shuttle looms have been introduced between 1915 and 1929, are encouraging, those achieved in Bombay are very negligible. Regarding the function of commercial assistance to handicrafts the Departments of Industries ruling over Maharashtra and Karnatak reveal the same state of affairs. They have not made any efforts beyond participating in the "Annual British Industries Fair", to develop a market for the products of the handicrafts in their provinces. So far as industrial training is concerned, in the year 1929-30 Bombay and the Central Provinces and Berar had 23 and 10 industrial schools respectively, receiving Government grants, while Bengal claimed 120, U. P. 101 and Madras 79. If we take into consideration the annual expenditure of the respective Provincial Governments on these schools, we find that though the number of industrial schools in the Central Provinces and Berar is much less than that in Bombay, it spends on them considerably in excess over the latter. However, the position of these two Provinces as compared with others is much the same as that revealed by the number of schools.

It must be admitted, that Departments of Industries themselves cannot be held responsible for the negligible assistance rendered by them to the small-scale industries in Bombay and the Central Provinces and Berar. They could not have done anything more within the meagre funds at their disposal. Therefore, the whole blame for the inadequate attention received by our small industries and handicrafts, lies on the Provincial Governments concerned, who failed to provide the Departments of Industries with sufficient funds, to enable them to perform their special functions towards them.¹ We shall now take these industries one by one for a detailed consideration.

Handloom Weaving:—In the minds of those who are not in touch with the weavers and their trade, prevails an impression that inspite of the increasing amount of propaganda that is being carried on for *khaddar*, the handloom is passing away. But the fact is that it is still holding its own in the throes of a great struggle.² In 1924–25 the total consumption of piece-goods in India was reckoned at 4,930 million yards, of which 36.5 per cent came from Indian mills, 35.5 per cent from imports, and 28 per cent from handlooms.

1. We can have some idea of the starvation to which these departments have been subjected from the following table:

Expenditure on the Departments of Industries in different Provinces in 1933–34.

Province.				Expenditure. (Rs.)
Bombay	...	...	...	3,53,368
Central Provinces and Berar	...	...	...	.....
Bengal	...	...	...	7,10,600
Bihar and Orissa	...	...	...	7,59,939
Madras	...	...	...	9,13,206
Punjab	...	...	...	11,58,733
United Provinces	...	...	...	11,35,166

2. R. D. Bell, "Notes on the Indian Textile Industry with special reference to hand-weaving", 1926.

This 28 per cent meant 1,380 million yards. The most important centres of handloom weaving in Maharashtra and Karnatak are Sholapur, Malegaon, Nagar, Sangamner, Poona, Nasik, Khandesh, Nagpur, Bhandara, Chanda, Belgaum, Dharwar and Bijapur.

The Koshties, the Salies, the Kories and the Momins are some of the chief castes engaged in handloom weaving. According to the economic condition, handloom weavers in Maharashtra and Karnatak can be classified as Karkhandars, independent weavers and dependent weavers.¹ The Karkhandars, who form only 5 per cent of the total number of handloom weavers combine the role of the producers with that of the middlemen. They keep 10 to 50 looms with them and engage weavers to work under their supervision. This class of Karkhandars is quite well off so far as their monetary position is concerned. The weavers in the second class who work at home on their own looms are not so well off in their industrial resources and their financial condition is not sound. They are indeed poor but they still have the good luck of being able to spare a small sum of money to purchase yarn and silk according to their requirements and possess their own looms to work on. These form 20 per cent of the total number of handloom weavers. The weavers in the third class are, from the financial point of view, in a very depressed condition, continuing their work with difficulty and contracting debts from leading yarn and cloth merchants in order to furnish themselves with the preliminary and other requirements of the industry. They form the majority of the weaving class. Occasionally they weave for merchants, at the quarters provided by them, and pledge their looms and property if any, earning a bare living wage till their debts are paid off.

1. Report of the Bombay Banking Enquiry Committee, p. 129.

The weavers generally use mill-made yarn but there are also some who utilize hand-spun yarn in weaving. This yarn has to pass through a number of processes before it is put on the loom. There is more than one method of thus preparing the yarn for weaving. But the most common method is, after the yarn is brought from the bazar in bundles it is immersed in the sizing material, made of rice or wheat gruel and dried in the sun. It is next stretched on pegs and with the help of a big brush, the threads are separated, the excess of sizing material is removed and a smoother appearance is given. The necessary quantity of yarn is then wound on warper bobbins and fixed on a small wooden creel. Then the threads are drawn through the reed for the purpose of keeping each thread apart. These are further passed through two healds, each having an alternate thread passing through it. These healds are lifted alternately by the foot for the shuttle to pass through and the weaving begins.¹ The handloom industry in Maharashtra and Karnatak can be dealt under three different heads according to the nature of the product: cotton weaving, silk weaving and carpet weaving.

Cotton weaving is by far the largest of the handloom industries. Its chief centres are Sholapur, Parola in East Khandesh, Nagpur, Chanda and Bhandara. According to the Family Budgets Report, 1928, "there is no other important occupation for the working classes in Sholapur except cotton spinning and weaving." The average weaver is confronted with the absence of credit facilities both in the beginning of the weaving process, as well as at the end, for the purchasing of the yarn and the sale of the manufactured product respectively. Often does he purchase his yarn on credit and thus has to pay a higher price than what it

1. R. Manohar Lall, 'Handloom Weaving in India', p. 198.

would cost him on a cash basis. The difference between the cash and credit prices is never less than 4 annas on a bundle of yarn weighing 10 lbs. the average price of which is Rs. 7-12-0 in cash.¹ Similarly, he has to dispose of his finished products through a middleman in order to realize their value immediately and naturally it is much less than what they would fetch in the bazar. As a result of the marketing difficulties of the weavers a class of middlemen have arisen, many of whom are themselves weavers by profession, who are willing to buy the products of the handloom at a lower price and who store them for sale in the marriage season when the prices are generally high. The following statement will show the share of the weaver and the merchant in the profit on a cotton sari.

COST OF A RED-BORDERED SARI WITH DESIGN
AT SHOLAPUR.²

42" x 24' (8 yards).

Production:—One sari a day on the fly-shuttle loom

	Rs.	a.	p.
Warp & Weft yarn	1 6 0
Dyeing charges	0 4 0
Warping "	0 2 0
Sizing "	0 3 0
Gaiting "	0 1 6
Winding weft	0 2 6
Rent, gum, etc,	0 1 0
Weaver's wages in good season	0 8 0
Total cost Rs.	...	2	12 0

1. Report of the Central Provinces Banking Enquiry Committee, p. 228.

1. S. V. Telang, "Report on Handloom Weaving Industry in the Bombay Presidency," p. 6

The selling price of the sari generally ranges from Rs. 3-4-0 to Rs. 3-8-0 according to the nature of the season and the extent of the demand. The merchant thus obtains a profit of annas 8 to 12 while the weaver gets a bare maintenance. The average monthly wages of a weaver range from Rs. 15 to Rs. 20 but a skilled worker can aspire to earn much more.

Sari is the chief product of the handloom. The counts used in weaving it are inferior to those used in the mill and so there is no competition between the products of the mill and the hand-loom. At Sholapur the yarn required by the weaver is obtained from the local mills and the manufactured saris are sold locally or exported to Kolhapur, Satara, Khandesh and Ahmednagar. We give below the approximate value of the saris produced at the chief centres of handloom weaving in Bombay Maharashtra and the value of the saris exported to surrounding areas between 1930-32.

APPROXIMATE VALUE OF THE SARIS PRODUCED AND EXPORTED BETWEEN 1930-32.

(Rs. 100,000)

Centre.	Production.	Export.
Sholapur	... 51	48
Malegaon	... 38.4	36
Sangamner	... 6.6	6
Nagar	... 10.5	9.5
Dhulia	... 2.52	2.12
Parola	... ..	1.2

Cotton saris cost between Rs. 3 to Rs.12 each. One third of it is the cost of the raw-material, another third of the labour and the remainder constitutes the profit.¹ A weaver

1. G. P. Fernandis, 'Op. Cit.' p. 94.

takes about a day and a half to finish a sari and deducting the expenses for reeling etc. he earns about 12 annas a day after working for eight hours. Fly-shuttle looms are in general use at Sholapur but elsewhere they are detested by the weaver as they result in over-production of goods and reduction of prices. For example, at Chanda as many as 600 fly-shuttle sleys were introduced and worked successfully. The resulting over-production, however, brought about a depression in the trade, and instead of exploring suitable marketing facilities for this increased output or of making some other profitable use of the increased leisure which these fly-shuttles might have brought to them, the weavers decided that the fly-shuttle sleys were the root cause of their trouble and in accordance with a caste-resolution made a bonfire of all the fly-shuttle sleys.¹ But considering that the mere use of the fly-shuttle would increase the productive capacity of the weaver by about 30 per cent, it is in his own interest to use it and try to dispose of the product by organizing a co-operative sale society, in the absence of any State-aid. The average earnings of the weaver throughout Maharashtra and Karnatak are much the same, as the whole class is mainly engaged in producing saris and dhoties and the conditions of finance do not show any great difference. If however, the handloom weavers continue to weave their standard products, they are threatened with extinction from the increasing competition of Indian mills and there is no hope of a rise in their income. But if they take to weaving towels, dusters, plain thick bed sheets and bed covers for which there is a growing demand, their condition is bound to improve.²

The pure silk weaving industry is much on the decline everywhere in the province, because the cost of foreign and

1. Report of the C. P. Banking Enquiry Committee, p. 228.

2. M. C. Matheson "Indian Industry, Yesterday, Today and Tomorrow", p. 210.

Indian pure silk has increased and because imitation silk is coming into extensive use. The value of the average output of silk fabrics has fallen from Rs. 12 lakhs in 1925 to Rs. 4 lakhs in 1931 in Yeola and from Rs. 10 lakhs to Rs. 3.5 lakhs in Poona. Still the industry is being carried on besides these two main centres at Ilkal, Hubli, Belgaum, and Thana. The satinette of Yeola, Poona, Nagpur, and elsewhere are very similar to corresponding goods made in Europe and thus render comparison not only unavoidable but essential. Pure silk fabrics, either plain or mixed with gold thread, are woven chiefly at Poona, Ilkal, Hubli, Yeola and Belgaum. The prices of various kinds of woven silks at Belgaum are as follows¹ :—

Silk-bordered saris	...	Rs.	3	to	Rs.	8
Silk-bordered dhoties	...	"	2	to	"	20
Silken scarves	...	"	2	to	"	25
" saris	...	"	50			
" bodices	...	"	3-8	to	"	4
Mixed fabrics	...	"	20	to	"	30

At Yeola they make brocades of high-class workmanship and of high artistic value and it is the principal centre of silk-weaving in the province. *Paithanics* and *Pitambers* are its specialities. There are 18,000 people working in this industry and there is a large local sale for the products. Some of these fabrics find a ready market in the Berar and the Khandesh districts but they rarely travel beyond that. Fly-shuttle looms are not suitable for weaving silks with solid borders and therefore are not in much use among the silk weavers. The raw-material-silk-required by the weavers is imported from Bombay while the gold-thread is locally manufactured. The price of a Pitamber varies from Rs. 20 to Rs. 40 and when it is woven with gold-thread the price

1. G. P. Fernandis, 'Op. Cit.' p. 7.

goes up to Rs. 120, while the price of a paithani ranges between Rs. 90 to Rs. 250.

The weavers of Yeola however, have really fallen on evil days. Almost all of them are steeped in debt to local sowcars, the average indebtedness of a weaver's family being estimated at Rs. 100 to Rs. 500. Too poor to purchase raw-materials for the manufacture of the cloth, they are absolutely at the mercy of the merchants for their work and wages. The average wage received by a weaver is only 6 to 12 annas a day. The weavers of Yeola are hardworking and industrious and their sad plight is due to their complete dependence on the merchants who pay them very miserably. If these weavers could manufacture and sell on their own account, they are capable of bettering their economic condition because the hand-woven silk of Yeola always commands a ready sale. Sir E. Low's remark about the future of this industry is worth consideration. He observes: "the beautiful cloths of gold and silver lace, many coloured silk, or cotton thread of the finest, find few purchasers in these utilitarian times; and the only way in which their manufactures could be helped would be either by opening a market for them in England or America, or by improving the finance of the industry".¹

Carpet weaving in Maharashtra is carried on by the 'Kune Mission' in Poona. The majority of workers are katkaries who ply both vertical and horizontal looms and adjust these according to the length of the article to be manufactured. The style of the carpets is superior and the designs woven into it are Indian. 'They find a market in India but a more ready market in America where they are largely exported.'

Fishing:—The extensive coast-line of Maharashtra and Karnatak running from Daman to Karwar is indented with

1. Industrial Survey of the C. P. Berar, para-32.

creeks, caves and back-waters and possesses many fine harbours which shelter fishing crafts of every size and description. At a distance of about 6 miles from the shore, the sea is sufficiently strewn with submarine rocks, which attract shoals of fish roaming about in the sea. Naturally on this shore drift and drag nets are extensively and profitably used. Favoured thus by nature fishing forms a very important industry. The history of the 'William Carrick,'¹ is rather discouraging in this connection. But if we remember that it was an attempt to establish fishing as a large-scale industry we can very well explain its failure. Here we want to consider fishing as a small-scale industry, carried on by our fishermen since time immemorial and still occupying an important place in our economy.

With regard to fishing our sea-coast may be divided into four well marked areas: Kalai-Arnalla, Arnalla-Rev-danda, Bankot-Redi and Majali-Bhatkal. The fisheries between Kalai and Arnalla are almost entirely in the hands of Hindu fishermen, principally Kolies, Mangelas and Bhoies. But at Arnalla there is a large number of Christian fishermen. The area between Arnalla and Redi is fairly divided between Hindus and Mohammedans with only a sprinkling of Christians at Malvan and Vengurla. The Mohammedan fishermen are known as Daldies and the Hindu fishermen as Kolies, Kharvies or Gabits. In Kanara the principal castes of fishermen are Harkantras, Daldies and Ambies. The belief that fishing is not a very honourable profession has restricted it to a very narrow section of the population comprised of these castes and has prevented men with education and capital from exploiting it on a commercial scale. As a

1. Reports of the Department of Industries, Bombay.
1921-22 p. 23
1922-23 p. 12.
1924-25 p. 19.

consequence, barring a few exceptions, fishing on the Konkan coast has remained essentially a cottage industry, 'maintained by primitive but not ineffective methods, supplied with capital by a large number of petty owners and traders, and worked mostly by illiterate, but not unintelligent section of the population'. The total number of persons engaged in the sea-fisheries of Maharashtra and Karnatak and their production is presented in the following table.

NUMBER OF FISHERMEN AND THEIR PRODUCTION IN
MAHARASHTRA AND KARNATAK IN 1931.¹

Area	Number of fishermen	Volume of pro-	Value of pro-
		duction.	duction.
		Tons	Rs.
Kalai-Arnalla	3,437	6,020	10,56,510.
Arnalla-Revdanda	9,505	13,975	29,38,600
Bankot-Radi	11,289	18,265	22,10,065
Manjali-Bhatkal	5,548	7,775	7,34,737

It can be seen from these figures that the number of persons engaged in the sea-fisheries of our province is more than 30 thousand and their annual production is valued at a very high figure of 69 lakhs of rupees. If we consider riverine and estuarine fishing in addition, which however is a very much neglected branch of this industry the value of production will be still higher. The total amount of capital invested in the industry may fairly be estimated at Rs. 15,00,000 representing the value of boats and Rs. 7,50,000 the value of nets and tackle. The average annual income of the fisherman from the fishing industry varies in different areas. In the Kalai-Arnalla area it has been estimated at 240 rupees and is considered as satisfactory. This high income is due

1. H. T. Sorley, "The Marine Fisheries of the Bombay Presidency," p. 40.

entirely to the enterprising nature of the fishermen in this area who steer their large boats to the Kathiawar Coast to engage in deep-sea fishing and to trade in dry fish. While the income of a fisherman in the Arnalla-Revdanda area which is calculated at Rs. 300 is due entirely to his being the main source of supply to the Bombay City markets. In the remaining two areas however, the figure of his income goes down to Rs. 228 and 168 rupees respectively and is ascribed to the cheap quality of his catch and to his poor equipment. The fish caught on the Western Coast from Daman southwards is of various varieties but the Shark, the Pomphret, the Mackrel, the Sardine and the Bombay Duck are some of the most important among them. Most of the catch is generally sold fresh in the local markets or in Bombay and a small part is disposed of in the towns near by. The fish which remains undisposed is sent to the curing yards, the out-turn of which was estimated at 17,129 tons of cured fish in the year 1931-32. Of this 2,751 tons, valued at Rs. 5,42,018 was exported.

There is a large number of subsidiary industries connected with fishing but very few of them are undertaken in Maharashtra and Karnatak. Fish-guano industry for example is carried on, on a very small scale at Majali in the Kanara District. The quantity of sardine oil turned out by this industry was estimated at 600 gallons in 1931 but the estimated quantity of guano manufactured was 150 tons only. The oil as well as the guano is generally exported to Madras Presidency. Similarly, fish manure, fish maws, shark fins etc., are also manufactured in this province to a small extent and the value of their production in 1931 amounted to nearly 1,88,328 rupees.¹ Fish maws and shark fins are usually exported to

1. Product.	Quantity, tons	Value, Rs.
Fish manure	4,063	1,12,938
Fish maws	51	49,520
Shark fins	32	25,870

London or Hamburg. As regards boats, nets and other appliances used by the fisher community of Maharashtra, we have excellent testimonials from experts like Messrs. Lucas and Hornell. The fishing crafts used in this province are strong, swift and sea-worthy and there are different varieties of them to suit the ever-changing conditions of fishing. The nets too are of various types, lengths and designs, their meshes and shapes being adapted to the shape and habitat of the fish to be caught. The 'Rapan' net which was introduced in the Ratnagiri District some fifty years back is now being extensively used at Malvan and Vengurla and is also becoming popular at other centres.¹

The main difficulties of this industry as those of others belonging to its class are that of finance and marketing. As Mr. Sorley remarks, it is not known to what extent fishermen are indebted to outside money-lenders but there is no reason to think that they are on the whole much better off in this respect than other classes similarly conditioned.² In the purchase of boats, nets and tackles, the only stock in trade of the fishermen, it is necessary for them to invest at least a lump sum of rupees seventy five per head. Every Rapan organization for example requires an initial outlay of two thousand rupees on an average, which has to be collectively raised. For this capital expenditure, fishermen have to approach money lenders who charge exorbitant rates of interest, varying from 20 to 25 per cent. Besides, fishing itself is a very deceptive occupation depending as it does on the vagaries of the sea and the season. During the busy season an ordinary fisher-

1. Amount of capital invested in Rapan nets.

Jaltapur	6,000	Rs.	Shiroda	15,000	Rs.
Maivan	2,70,000	,,	Karwar	35,500	,,
Vengurla	39,000	,,	Honawar	35,000	,,

2. H. T. Sorley, 'Op Cit.' p. 44.

man and even a worker in the fish curing yard earns as much as 5 to 9 rupees per day. But there are times when he finds it difficult to get sufficient even to make two ends meet. Many fishermen therefore couple some other occupation with their main profession. Some cultivate coconut gardens, some work as labourers, some as carpenters and boat-builders, some weave nets or cultivate hemp while some trade in cured fish in distant markets. But those who have no such occupations to turn to in moments of idleness, are at the tender mercy of the money-lenders even for their maintenance, having saved nothing in their palmy days. Thus we find that fishermen are in debts on capital as well as current account and this indebtedness considerably hampers their enterprise. Luckily for them money-lenders rarely act as middlemen in the fishing trade and hence they get full opportunities inspite of their indebtedness to sell their catches in a free market.

In almost all the fishing villages and towns, fresh and cured fish is sold by women whose men-folk hand over their haul to them. Therefore as far as local markets are concerned the fishermen always get a fair chance of realizing the best price for their fish. In the Bombay market which has practically been captured by the fishermen of the Arnalla-Revdanda area the hauls are brought directly to the market and sold wholesale. However, in distant markets like Sangmeshwar, Chiplun, Belgaum etc., sales of fish and fish manure have to be made through middlemen who not infrequently appropriate the lion's share of the profit to themselves. The transport of fish to up-country centres is a difficult problem. When carting was very common, especially in the Western Ghats, fish was easily carried to places beyond them, but now that carting is practically extinct, it has to be exported via Bombay. Motor buses, as one would have expected, have not yet taken up this business of the bullock carts whom they have displaced. Facility for cold storage is also one of the

prime necessities of the fish trade in Maharashtra and Karnatak.

The annual per capita consumption of fish in Maharashtra and Karnatak comes to about 6 lbs. with 20 lbs. in Bombay, 15 lbs. in Calcutta, 8 lbs. in Madras and 44 lbs. in the United Kingdom. These comparative figures clearly indicate the possibilities of fishing in this province.

Tanning and Leather Works:—The village cobbler is a relic of the ancient village economy of Maharashtra and Karnatak. He has managed to survive till this day mainly on the support of the village population and is financially fairly well off. But besides him, there are large colonies of cobblers adjoining certain towns like Poona, Ahmednager, Dhulia, Sholapur, Thana, Belgaum and Nagpur, who are engaged either in tanning hides and skins or in manufacturing leather goods, especially foot-ware.

The tanning industry however, is in a miserable condition. It is suffering mainly from a limited supply of good hides and skins and the antiquated methods of tanning.¹ The dead hides and skins of this province had unfortunately a reputation of being badly preserved and of having dragging marks. But according to the reports of the Departments of Industries these defects have now been considerably reduced as a result of demonstrations given by them in flaying and curing. However, the demands of the exporters and the large-scale tanneries have raised the prices of hides and skins to such an extent that the local tanners find them beyond their means. Under the circumstances they can only get those hides and skins which are rejected by the larger interests. Their methods of tanning, also leave much to be desired. For the vegetable process of tanning, which is largely in vogue, they use various materials

1. A. Chatterton, "Industrial Evolution in India," p. 163.

like Turward bark, Babul bark and Myrabolans, available in abundance in the forests adjoining the western Ghats and the Satpuras. But very little is known about the quality of tannage produced by these materials and hence it is very difficult to use them in the right proportion. The modern tanning process has been adopted in some tanneries but their number is very small. As considerable deposits of chromite occur in different parts of Maharashtra, it is possible to prepare our own chrome compounds and to use them for tanning purposes on a larger scale. The adoption of this improved method of tanning itself might help the dyeing industry to a great extent.

The story of the foot-ware industry is quite different. Its organization is similar to the organization of other handicrafts in Maharashtra with its eternal triangle formed by the karkhandar, the independent worker and the dependent worker. All these three classes of people engaged in this industry are much better off than others working at any other handicraft. Poona, Ahmednagar and Dhulia are the chief centres of this industry in this Province, though it exists in almost all the district towns. Of these three centres, while Poona and Ahmednagar manufacture Indian as well as European type of footwear, Dhulia has specialized in the European type only.

There are a number of foot-ware karkhanas at Poona and Nagar, owned by rich 'Chamhar and Bohara' merchants, each employing about 5 to 10 'Pardeshi Mochies' possessing a very high skill in their profession. They are equipped with sewing machines, cutting and designing instruments etc. and are conducted on modern lines. Their monthly consumption of leather is worth Rs. 300 to 400 on an average and the main types of their production include 'Brahmani Jodas' Chappals, Wahanas, Slippers of Semi-western fashion and

Boots and Shoes of European fashion. Some of these products are sold out in the local markets but a number of them are also exported to other districts. The 'Brahmani Joda' of Poona for example, finds an extensive market throughout Maharashtra and Karnatak. Similarly its European foot-ware has captured a large market in Sholapur, Satara and Belgaum. The foot-ware of Ahmednagar on the other hand is exported to Nasik and Khandesh in large quantities. These handicraft products compare very favourably with the European products both as regards price and lasting quality as can be seen from the following table.

**PRICES AND PERIODS OF DURABILITY OF THE INDIGENOUS
AND FOREIGN FOOT-WARE.**

Footware	Price (Rs. As. Ps.)			Period of Durability (Months).	
	Indigenous.	Foreign.		Indigenous.	Foreign.
A pair of Shoes.	5 6 0	10 4 0	12	13	
A pair of Boots.	6 15 0	12 7 0	10	13	
A pair of Slippers.	3 12 0	6 9 0	8	8	

The workers in the Karkhanas are paid on piece-work basis and their rates are higher than that of the dependent worker who earns 4 annas for a pair of chappals, 14 annas for a pair of 'jodas', 1 rupee for a pair of slippers and 2 rupees for a pair of European shoes. The independent worker usually works to order and sells his ware at a price higher than the market price.

The foot-ware industry of Dhulia is entirely in the hands of independent workers who work in their own cottages and sell the finished product either to a 'Bohara' merchant or to the customer directly. On an average they earn a daily wage of Re. 1 to Rs. 1-4 with 9 to 10 hours of work. They

live in a group in decent, well ventilated houses, which they have built for themselves on the out-skirts of the Dhulia City and are remarkably free from indebtedness.¹

The comparatively better position of the Indian foot-ware industry of Maharashtra and Karnatak is due to the absence of a factory rival. The production of European foot-ware at Poona, Ahmedabad, Dhulia and other places is mostly to order; hence it does not come within the sphere of factory competition. But this apparently advantageous position of the industry is not impregnable. A change in the tastes of the people or an influx of the cheap Japanese ware is likely to deal a heavy blow to the indigenous ware.

The Brass and Copper-ware Industry:—A note on the Handicrafts in the Central Provinces and Berar states that the import of rolled steel has destroyed the brass smelting and hammering industry of Bhandara. The competition of European brass-ware has depressed the industry of this district and the number of brass workers has fallen from 200 in 1921 to 60 in 1931. The condition of this industry is more or less the same at other centres like Poona, Nasik, Ahmednagar, Nagpur, Wardha and Dharwar but the number of brass and copper workers at these places is still considerable.² The average annual production of brass and copper-ware at Poona which by far is now the chief centre of this industry is estimated at about 9 lakhs of rupees and the products of this centre have a large market all over Bombay Maharashtra and Karnatak. Nasik though it still claims an annual production of

1 N. M. Joshi, 'Op. Cit.' p. 212

2 E. g.	Poona	725
	Ahmednagar	1261
	Nagpur	1026
	Dharwar	794

brass and copper-ware worth about 6 lakhs of rupees, has been slowly losing ground to Poona even in its local market. A large part of the output of this centre is exported to the upper parts of the Deccan, Berar and the Central Provinces and comes to about 4 lakhs of rupees. The total production of Nagpur does not go beyond a lakh of rupees every year and about 60% of this is that of bell metal-ware.

There are two main divisions of this industry based on its organization, the industry which uses mechanical appliances and gas power and the industry which does not. Of the former type there are about 8 karkhanas at Poona and 4 at Nasik. Each of these has a fixed capital varying from Rs. 5000 to 10,000 and employs about 20 to 30 persons. They are owned by big capitalists and therefore do not experience any difficulty in the purchase of raw materials and the sale of finished products. Persons working in these karkhanas earn about 25 to 40 rupees per month. The second type of industry prevails not only at Poona and Nasik but all over Maharashtra and Karnatak. There are about 200 karkhanas of this type at Poona and about 120 at Nasik, each employing 10 to 12 workers, whose average daily earnings come to about 12 annas per head. The marketing of the metal-ware turned out by these karkhanas is mostly in the hands of the kasars or the bell-metal workers who are entirely dependent on the orders of the outside merchants with whom they generally have credit transactions.

On the whole, the metal handicrafts in Maharashtra and Karnatak are without any organization and have to face the competition of foreign products which are fast encroaching upon the up-country markets.

Calico Printing.—Of the art crafts in India, none is more universal than dyeing and calico printing. It gives a

continuous employment for the dyer and the printer.¹ Small colonies of dyers still survive in most of the larger weaving centres. The industry is for the most part dependent on hand weaving and has gone through the same vicissitudes as the latter. Fifty per cent of the dyers use synthetic dyes which they buy from the whole-sale dealers in the city near by. The calico printing industry is mainly found in Nagpur, Wardha, Khandesh, Dharwar and Nasik. In the Central Provinces the most skilful experts are found at Chanda and at Wun and Nandura in Berar. They generally print on jazams and saries. There are as many as eight branches of calico printing such as Gold stamping, Ajrak, Gudro printing, Mud printing, Knot dyeing or Bandani works, Chuni Mashru work and Patola Silks.² The craftsmen sell their products either directly or through a middleman. They even print designs to order, on saries or other clothes supplied to them. The average daily wage of a printer comes to Rs. 1-8-0 and his economic condition can be said to be fairly satisfactory. At times when he works overtime he even earns Rs. 2-8-0 per day, but it means very hard work. He uses ordinary wooden stamps for designs and every design may have four or five stamps for different colours and different shades. What the workman requires at present is better designs and proper instruction in the use of dyes. However, their greatest need in common with other craftsmen is in the sphere of finance and marketing. Ninety-nine per cent of the existing printers in Maharashtra and Karnatak are in debt to the merchants from whom they receive advances and though there is a great demand in the country for their workmanship, very few of them are free to sell it to the public. A co-operative sale society would be certainly advantageous to this craft as to many others.

1. G. P. Fernandis, 'Op. Cit.' p. 9.

2. There is a great demand for Patola silks even outside India.

Pottery-making.—The two important classes of people engaged in the pottery industry of Maharashtra and Karnatak are the kumbhars and the kushagars. The former produce inferior kinds of ware like unglazed pottery, bricks, tiles etc. while the latter hold a sort of monopoly in glazed ware. They are found in large numbers at Nagpur, Chanda, Kolhapur, Ratnagiri, Kanara and Belgaum.¹ Due to the spread of aluminium ware in the province, the kumbhars engaged in producing inferior pottery are fast disappearing as a class. But there is yet a large demand for bricks and tiles and on these they can concentrate their attention with advantage. In the case of glazed ware the kushagars have a large market if only they could displace the china ware which has become so popular in the country.

An abundant supply of suitable clay is the prime necessity of a pottery industry, which is completely satisfied by the large deposits of sticky soft clay, which exist at Bhandara, Kolhapur, and Belgaum. Cartloads of clay can be had from these sources for a nominal price. In order to save expenses of carting the kumbhars generally erect their temporary establishments in the vicinity of these sources of clay, though the kushagars work in their own cottages. As compared with the kiln that is used for baking pots, the kiln that is used for baking bricks and tiles is very simple. Generally 100 to 125 vessels are baked at a time in a kiln of average size. The two main things which the pottery industry of Maharashtra and Karnatak seems to be in need of are (1) A mixing or pugging machine that would make a better and finer clay and (2) an improved kiln that would consume less firewood, and would give more certain results without spoiling any pots.²

Gold-thread Industry.—"The manufacture of gold and silver thread is essentially a luxury industry which was well

1. *Memoirs of the Geological Survey of India* Vol. IV, Part III.

2. *Industrial Survey of the Central Provinces and Berar*, p. 56.

established in India under Mohammedan influence and which is even now largely practised and patronized by Mohammedans all over the country".¹ In Maharashtra it is confined only to three places Poona, Yeola, and Ahmednagar. There are four stages in making gold-thread from gold. First the metal is melted, then it is formed into a wire of the thickness of a needle, then it is hammered and rendered hair-like, and then it is twisted on reels. As in the case of handloom-weavers there are three classes of gold-thread makers, karkhandars, independent workers and dependent workers. There are at present ten small-scale karkhanas of gold-thread industry at Poona employing about 125 persons, and the average annual value of their production is estimated at Rs. 2 lakhs. The labour employed is on contract system and the average earnings of a worker range between As. 8 to Rs. 1-4-0 a day. The number of gold-thread karkhanas at Yeola is between 10 to 12 and the average annual value of their production works out at Rs. 2 to 2.5 lakhs. Most of the gold-thread produced at Yeola is used for weaving silk Pitambaras, Paithanias and Turbans while a small quantity is exported. There is no doubt a great demand for gold and silver threads in India, but the competition of French goods which are preferred on account of their high finish and polish is injurious to the industry, which but for the protective duty of 30 per cent would have become totally extinct by now. The financial requirements of this industry are very high, for a considerable amount is necessary to purchase the raw material alone. Similarly, as in the case of other cottage industries, its principal need is that of better marketing. If the gold-thread industry in Maharashtra and Karnatak is thoroughly reorganized on modern lines, with a greater use of mechanical power and introduction of improved appliances, there is a large scope for its development.

1. Report of the Bombay Banking Enquiry Committee, p. 131.

Lacquer work and carpentry :—Ordinary lacquer articles are manufactured at Nasik, Ahmednagar, Poona, Gokak and Savantwadi. All lacquer work is generally done on lathe with lac of various kinds and colours. An artizan engaged in this craft generally earns Rs. 1-8-0 a day for artistic work and annas 10 to 12 for ordinary work. Writing about the lacquer workers of Gokak, Mr. Fernandis remarks : "It is a matter of regret that such artistic talents are unknown outside their remote villages. If these artists were only given more encouragement, they could earn a name for themselves and fame for the artcrafts of the Presidency."¹

Sandalwood and Ivory Carving :—Viewed as an industry, sandalwood carving seems to occupy a very insignificant place in Maharashtra and Karnatak. It is mainly confined to the two districts of Kanara and Belgaum. Although the industry is far from flourishing the persons engaged in it are for the most part fairly well-off, due to the fact that they are not as a rule carvers pure and simple but have other work to fall back upon when the demand for carving is slack. Ivory carving is done both in African Ivory and Asiatic Ivory.

Kanara is a land of rich forests which abound in trees of great economic and artistic value. Sandalwood, teak, deodar, rose, red cedar, walnut and cane palm are some of the precious products of the forest wealth of Kanara. So, it is but natural, that wood should be the medium of expression of art in Kanara; but it is an art that is not exploited by the peasant farmer. Kanara has some special advantages for sandalwood carving viz., the Kanara woodcarver has always at his disposal the finest sandalwood in India. He gets it in a state when it is capable of the most delicate and refined carving. He also has food for his artistic talent in

1. G. P. Fernandis, 'Op. Cit.' p. 93.

the natural scenery and animal life of the place. The average earning of a good carver who comes either from Sitapur or Sirur, working for nearly 5 to 6 hours a day is between Rs. 30 to Rs. 40 per mensem. He would be able to earn more if he got more orders, for greater demand provokes greater industry. The carver generally earns more profit by making small things, for which there is a constant demand and which are within the buying capacity of a large circle of admirers, while big productions like Jewel boxes with rich and artistic carving, depicting scenes from nature and mythology hardly bring him the price of the wood with a modest charge for his labour. This naturally kills his incentive. If the artistic productions of these carvers are widely exhibited all over India as well as in foreign countries they would attract a greater demand and the industry which can well be called the art treasure of Karnatak would attain the heights of prosperity.

Mango Canning :—The canning of mango pulp is being carried on in three small factories in Konkan, established in the last decade. One of them, the Oriental Mango Pulp Canning Factory is at Ankola, another the Central Canning Factory is at Karwar and the third is at Dapoli in the Ratnagiri District. The total annual production of these factories is estimated at 60,000 cans. Each can weighs about 12 ozs. and retail sales are effected at Rs. 10/- per dozen. The cans used in these factories are mostly single seam and are either prepared locally or imported from Bombay. The methods used for exhausting and processing the cans are simple but expensive. None of the factories is well equipped with the proper utensils and machinery and except during the season all of them remain idle. However, the establishment of these factories has given additional impetus to the plantation of grafted mango trees and has also

led to some improvement in the price of the fruit.¹ The profit and loss account of manufacturing 50,000 cans of mango pulp in the central canning factory is as follows :—

	Rs.
Cans, including soldering and other expenses	1,000
Fruits, about 20,000 at Rs. 4 per 100	800
Labour, pulping, packing etc.	250
Labels and labelling	200
Breakages and Commission	500
	2,750
Total receipts from the cans	3,440
Total expenditure as detailed above	2,750
	690
Net profit Rs.	690

It is thus estimated that by canning, one can realise about Rs. 8 per hundred fruits on spot. Yet, the number of mangoes used for canning at present is very small for want of market. Now that the importance of mango as a commercial fruit has been realized by the Government there is every reason to believe that the industry will receive all the attention it deserves. It will not be an exaggeration to say that the canned mango pulp has a great future in Konkan especially as it is likely to have a great demand in India as well as in Europe and America.

Cashew-Nut Roasting:—Cashew-nut roasting is an important industry in the Ratnagiri District, especially in Malvan and Vengurla, where about 35 per cent of the population depends on it in some way or the other. It is estimated that

1. Report of the Mango Marketing Committee, p. 8. "The fruits which were sold at Rs. 1-8 or Rs. 2 per hundred a few years ago fetch Rs. 3-8 per hundred to-day at Ankola."

four women roast and break one khandi—280 lbs.—of nuts in a day and on an average they yield about 25 lbs. of kernel. Out of this 22½ lbs. are given back to the merchant and the balance of 2½ lbs. is retained as breaking and roasting charges. At an average price, 2½ lbs. yield Rs. 1/8 for the labour. Besides, about 2 seers of oil is extracted from the nuts while they are being roasted which adds an anna to the wages of labour. To this again, we can add half the quantity of bagshells realized from a khandi of cashew nuts. Thus, by calculation the average income of a worker engaged in cashew-nut roasting comes to about eight annas per day.

Kernel	...	...	Rs.	0	6	0
Oil	...	...	"	0	1	0
Shells	...	...	"	0	0	9
				<hr/>		
			Rs.	0	7	9

In 1923-26 from Malvan alone cashew nuts worth Rs. 4,80,000 were exported and the figure went up to Rs. 8,39,200 in 1929-30. From 1926 onwards several attempts have been successfully made to organize this industry on a factory basis. The nuts are now roasted not in earthen pots but in brick-built kilns and are broken by women in a large yard attached to the factory. Formerly the kernel was exported to Bombay without removing the thin brown coating which covers it. But from 1926 the kernels are polished and made spotless white and are exported directly to America, packed in airtight tins. One such factory exported kernels worth Rs. 1,75,000 last year and this year the export is expected to be worth Rs. 2,00,000. Every woman who breaks the nuts gets about 9 to 10 annas per day and the same wage is paid for polishing the kernels. Those engaged in polishing the kernel work at home and return the polished kernels to the factory. This factory system however is limited only to Malvan. In villages the

old system still holds good. It is presumed that the industry has a great future if export facilities are extended and if foreign market remains open as it is to-day.

This survey of the existing small-scale industries in Maharashtra and Karnatak is in no way exhaustive. Nevertheless, it brings out their importance in the industrial organization of the province clearly enough. Most of the industries we have surveyed are of long standing, which have survived the competition of large-scale industries, Indian and foreign, on the strength of the inherent vitality they possess. But in spite of this vitality these industries have a number of defects which seriously undermine their prosperity. They are utterly disorganized; the tools and methods used by the workers are primitive and hence inefficient and uneconomic; and there is a complete lack of facilities of finance and marketing. Almost all of them are out of touch with the condition of their markets and naturally the demand for their products is fast diminishing with the change in the tastes and customs of the society. The dependence of these handicrafts on the capitalist dealers both for the supply of raw materials and the sale of finished products is also an additional factor hindering their growth.

The persons engaged in the handicraft industries of Maharashtra and Karnatak can be classified as karkhandars, independent workers, and dependent workers according to their relative position in production. The karkhandars are usually men with comparatively greater personal capital and higher personal credit in the local money markets who are able to run a small establishment with the help of skilled labour. The size of the establishment is generally determined by the sum total of all the available instruments and appliances which can be employed without leading the establishment to assume the proportions of a large-scale factory. The karkhan-

dars are comparatively independent of the capitalist dealers in raw materials and finished products because they possess their own capital and hence are in a better position to make their purchases and sales. Economically, persons in this class are fairly well off. The independent workers have no capital of their own to depend upon. They usually work in their cottages with or without the help of their family, purchasing their raw materials on credit and disposing of their products independently of the middleman. They are at liberty to decide upon the processes and types of their manufactures, dealers of raw materials and finished products and hours of work. Ultimately this amounts to the control of the cost of production and the working conditions. This class of workers is in a position just to make both ends meet with strenuous efforts. The class of dependent workers is a wage earning class having no choice in the selection of work and working conditions and in the determination of their wages. They are heavily indebted and as such have been the worst victims of the depression.

In spite of this miserable plight of our handicrafts and of the persons engaged in them they have a definite place in our industrial organization and they deserve an important role in any plan for the economic development of Maharashtra and Karnataka.

CHAPTER VII

Trade and Transport

The object of economic production is to satisfy human wants, existing or prospective, by giving matter 'form' utility, 'place' utility or 'time' utility. Man cannot create material things; at best he can produce utilities by readjustment of place or form and it is in the readjustment of place that trade and transport play a very important role. Again, market determines production and the extent of a market is in proportion to the ease, the mechanical efficiency and cheapness of communications. If communications are well developed, the reach of the producer is proportionately extended and distant corners are brought within the area of profitable trade, both in raw materials and other factors of production as well as in finished products. So also it is the growth of trade which facilitates geographical division of labour by localising production of different commodities in countries best suited for each. This leads to cheaper and more efficient out-turn and the net result is augmentation of wealth and its equitable distribution. In a way trade is the necessary concomitant of large-scale production and development of communications. Therefore in the following pages we shall first discuss the transport system of Maharashtra and Karnatak and then briefly describe its external, internal and coastal trade. The transport system may be divided under three heads viz. railways, roads and seaways.

The construction of modern roads and railways in India began at about the same time. But in certain parts of Maharashtra and Karnatak railways were introduced rather late while in others they have not been introduced even now. On the

whole, it will be seen that the whole tract is very badly served with railways, the average of railway mileage being 35 miles per 1000 square miles of area. A map inserted by Messrs. G. Mitchell and L. H. Kirkness, in their report on the state of road and railway competition in India, shows an enormous area in this province as being outside the ten-mile radius of railways. This deplorable state of railway communications is one of the primary causes of the backward state of our trade, both internal and external. The different railway systems which serve the provinces of Maharashtra and Karnatak can be seen from the following table.

<i>Railway System.</i>	<i>Area served.</i>	<i>External Connections.</i>
G. I. P.	Bombay Deccan and Berar.	U. P., Bihar and Orissa, Bengal, Hyderabad State and Madras.
B. B. & C. I.	Thana.	Gujarat.
M. & S. M.	Southern Maratha Country and Karnatak.	Mysore State, Madras Presidency, and Nizam's State.
B. N. R.	Nagpur Division	Chhattisgarh Division.

Their mileage in relation to area and population is as under ¹.

	Total length.	Per 1,000 sq. miles of		Per 1,000 of Population.
		Total area.	Cultivated area.	
Bombay.	6,595	45.5	72.7	29.45
C. P.	2,472	25.0	57.5	17.65

These tables bring out that Khandesh, Bombay Deccan and Karnatak are comparatively better served with railways

¹. Report of the Indian Road Development Committee, Appendix B.

than Berar and Nagpur Divisions, where the railway mileage both in relation to area and population works out at a very low figure. They also show that so far as external communications are concerned, practically every part of India is accessible to Maharashtra and Karnatak by railway but in internal communications it keeps a number of gaps. Khandesh and Karnatak are the only divisions of this province which can be said to have been well served with railways both for internal and external communications. Here also, the utility of the Poona-Bangalore line which passes through Karnatak is considerably lessened by the fact that the alignment of the line has been made away from important centres of population, for avoiding the construction of bridges and tunnels.² However, the whole of the coastal strip of Maharashtra and Karnatak, below the ghats, is completely outside the railway system. The project of running a railway line through this tract was under the consideration of the authorities long time back but it was shelved on purely economic considerations.

A railway line requires a potential traffic of goods and passengers, more especially the former to justify its construction. It also requires a favourable topography to keep its initial expenses and maintenance charges within reasonable limits. The costal tract of Maharashtra and Karnatak does not satisfy any of these conditions. If its traffic potentialities are analysed it will be found that apart from fishing and rice husking Konkan has no other industry worth the name. Similarly cultivation of rice, millets, cocoa-nuts, mangoes and cashew-nuts is all that it can boast of in the name of agricul-

1. D. R. Gadgil and L. V. Gogate, 'A Survey of Motor-Bus Transportation in six districts of the Bombay Presidency,' p. 6.

2. D. N. Marshall, 'The Indian Transport System, its Economic Sufficiency and its Geographical Distribution,' Unpublished thesis of the University School of Economics, Bombay, p. 317.

ture. As regards topography, it is well known that Konkan is a rugged, broken, irregular tract of isolated peaks and detached hills and that its geology is similar to that of the Ghats. This would necessitate extensive blasting operations before a railway line could traverse the area. Again there are a number of rivers cutting across the narrow coastal strip with their back waters and inland creeks which would require a large number of bridges, and that too within tidal limits. Taking all these factors into consideration it is hardly necessary to remark that a mere passenger traffic, such as this region would offer does not justify the introduction of a railway-line expensive both in its construction and maintenance.

However, the conditions precedent to the introduction of a railway line outlined above are all satisfied by the Berar and Nagpur divisions. They should therefore be provided with more railway lines at the earliest possible opportunity. The existing railways in these divisions are not as useful as they should be, because of the unsatisfactory state of their inter-connections. By the recent opening of the Kazipet-Balharshah line, this defect has now been partly removed, yet much remains to be done. For instance, this tract has no direct railway connections with the Northern Sarkars and the Upper Godavari Valley, though they are its next door neighbours.

The construction of roads in Maharashtra and Karnatak which began in the latter half of the 19th century was based in the first instance on a series of main trunk lines. They were followed by the construction of a number of other secondary main lines and feeder roads for railways, connecting important centres of trade and industry with them. The main trunk roads and the feeders were usually metalled, and constructed and maintained by the Provincial Governments, while the remaining went over to the Local Boards. It is important to note at this place that though the trunk roads were constructed as 'the main arterial roads' they were but rarely used for

through traffic after the introduction of a railway in their vicinity. Most of these roads had no bridges where large rivers had to be crossed and yet in the regime of the bullock carts they were considered quite satisfactory. With the emergence of motor traffic in recent years, the situation is completely changed. "The road surfaces, the curves, the gradients, the culverts, the causeways and the bridges, are not adopted to motor traffic. Through traffic in long stretches finds itself hampered by particularly bad patches, gaps, or lack of means of fording and the system is unbalanced".¹ However, this lack of balance is less pronounced in Maharashtra and Karnatak than in other parts of India. The following table represents the road system of these Provinces with their foreign connections and interrelations.

<i>Road.</i>	<i>Area served.</i>	<i>External connection.</i>
Bombay-Agra Road.	Nasik & Khandesh.	United Provinces.
Poona-Bangalore	} Deccan, Berar, C.P., & Karnatak.	} Mysore, Madras, Hyderabad, Bihar and Orissa.
Road.		
„ Nagpur Road.		
„ Hyderabad	} Karwar	} Madras, Travancore.
Road.		
Goa-Cochin Road.	} Karnatak	} Hyderabad.
„ Dharwar Road.		
Nagpur-Hydrabad Road.	Wardha	

The distribution of this road-mileage in this province in relation to area and population is as under:—

	Mileage per 100 sq. miles.		Mileage per 1000 of popula- tion.	Percentage of surfaced to total mileage
	Total Cultivated.			
Bombay	21.84	33.70	105.19	47.4
C P. Berar	8.42	19.50	60.70	55.4

1. D. R. Gadgil and L. V. Gogate, 'op. cit.' p. 14.

Here again as in the case of railways the position of Khandesh, Bombay Deccan and Karnatak is infinitely superior to Nagpur and Berar Divisions. However, looking to the economic position of the province as a whole, the figures are none too good. Still the one relieving feature is that the mileage surfaced forms 47.4% of the total in Bombay and as high as 55.4% in the C. P. Berar which is due to the fact that most of the roads in the Central Provinces are urban.

The comparatively better position of Bombay is due to the commendable activities of the provincial authorities who have 75% of their mileage surfaced but unfortunately the Local Boards have not kept up the pace on their side. The through-routes radiate from Bombay, one going to Agra passing through Nasik, and Khandesh districts, while another goes south to Bangalore via Poona, Southern Maratha Country and Dharwar. The Konkan, where there are no railways, is equally unfortunate in respect of roads and the few ones that exist become useless for communication during the rainy season. It is this absence of a properly developed system of land-transport which has hindered the development of sea-borne trade on the west coast of Maharashtra and Karnatak. Khandesh and the regions round about, are well off in road communications but the same cannot be said of Berar and the Central Provinces.

The percentage of surfaced roads to the total in the C.P. Berar is 55.4, an exceptionally good figure, but this statistical effect is due to the fact that most of the roads in the C. P. Berar are urban. The higher percentage of surfaced roads clearly indicates the paucity of roads in the rural areas. The extremely rugged nature of the country may possibly be held out as a cause for this deficiency, but it would not stand examination. Because in C. P. good road metal is available in abundance at short leads practically

every where, and the cost of renewal of waterbound maccadam is relatively low.¹ The real causes are lack of money and interest on the part of the District Boards as can be seen from the following figures of road-expenditure.

ROAD-EXPENDITURE—PROVINCIAL AND LOCAL.

	Percentage of revenue spent on roads.		Incidence of road expenditure per head in annas.	
	Provincial.	Local.	Provincial.	Local.
Assam	7.6	61.5	4.0	2.0
Madras	2.5	36.2	1.6	2.8
Bombay	4.4	15.6	5.0	1.2
United Provinces	3.2	16.7	1.4	1.3
Bengal	2.8	35.3	1.0	1.3
Punjab	6.5	23.0	5.5	2.2
C. P.	8.9	6.1	6.3	0.6

The table clearly shows that while the provincial authorities in the C. P. Berar are doing their best to develop their roads, the local authorities are woefully behind. In the percentage of revenue spent on the roads as well as in the incidence of road-expenditure per head of population the local figures of the Central Provinces are the poorest. Though the provincial figures bear a contrast to this state of affairs it has to be borne in mind that their activity has not meant extensive mileage, but as was seen before, a greater percentage of surfaced roads, and better mileage.

Bullock cart has been the most favourite vehicle of transport in Maharashtra and Karnatak for a long time past. The entire road system of this tract, as we have seen above, was laid out with a view to satisfy its requirements. In recent years, this monopoly of the bullock carts in roads-traffic has

1. Indian Road Development Committee, Evidence Vol. 1. p. 209.

been challenged by motor buses. But they have not been able to make any serious encroachments on their business so far. The number of bullock carts plying in the different parts of Maharashtra in 1931-32 can be seen from the following table.

NUMBER OF BULLOCK-CARTS IN MAHARASHTRA AND
KARNATAK.¹

			(In thousand)
Nagpur Division	...	...	386
Berar	...	...	210
Khandesh	...	...	127
Bombay Deccan	...	...	170
Karnatak	...	...	139
Konkan	...	...	68

The large bulk of traffic in this tract consists of agricultural products moving to different markets. This traffic is mostly in non-perishable bulky goods and it is seasonal in character. The movement of these goods is effected either on behalf of the agriculturist himself or on behalf of a trader, and in this movement the bullock cart holds a predominant position as far as the roads are concerned. The hauls along roads are generally short distance hauls to a market or a railway station. The bullock cart has this supreme advantage that it can go anywhere, use any kind of tracks and it can be available at all points where the traffic originates. Similarly the bullock cart is an integral part of the agricultural economy of the tract and its use when bullocks are not wanted for agricultural operations is obviously economical. Therefore whenever the agriculturist moves his own crops he does it in his cart and is even prepared to lend it to the non-agriculturist or to his fellow agriculturist, during the off-season, at rates which are too low for the buses.

1. Agricultural Statistics of India 1931-32, Vol. II.

Motor buses however, have been able to capture almost all the passenger traffic on the roads and a large part of the traffic in costly and perishable commodities. In competition with the bullock cart the chief advantage that the truck possesses is that of speed and it is this advantage which has secured it the traffic in passengers and in perishable goods like fruits and vegetables. Along with passengers the motor buses also carry in small lots certain agricultural products like grains and poultry products from rural areas and commodities like dry fruit, glassware, stationary, toys, soap etc., from the city markets. The competition of trucks with railways exists on a very limited scale in our province.

The water-ways of Maharashtra and Karnatak are as yet mostly undeveloped. On the West coast of Maharashtra and Karnatak excellent harbours like Janjira, Uran, Malvan, Karwar, Vijayadurg and Mangalore, carry on a brisk trade amongst themselves as well as with other distant ports like Calcutta, Calicut and Cochin. Unfortunately, the hinterland behind the Ghats is not well connected with these ports and no port can prosper unless its hinterland is opened out. The importance of connecting these ports with the hinterland by means of roads and railways is therefore self-evident. Considering the immense possibilities of trade on the Konkani coast, the sooner this is done the better for the economic development of this poorest of regions.

Thus we see that the whole of the transport system of this province is inadequate for the development of our trade. At present our production is largely restricted to agriculture and therefore much of our trade both internal and external is confined to agricultural products. But even now there are some complaints about the insufficiency of roads and railways and they are sure to increase as we proceed along the path of industrialisation. In a way, development of

roads, railways and harbours is a condition precedent to our industrial development and as such must be undertaken without delay.

As regards our inland trade the greatest difficulty that confronts us at the outset is about statistics. The figures of the railborne trade for recent years are not yet published in a consolidated fashion and hence we have to fall back on the antiquated figures of 1920-21. Even then the figures that are published do not represent values but quantities and that too for separate administrative units, only portions of which make up the area of Maharashtra and Karnatak as constituted for this study. Therefore we shall deal with the figures for C. P. Berar and Bombay Presidency as representing C. P. Maharashtra, Bombay Maharashtra and Karnatak and proceed with the work.

The distribution of the extra-provincial trade of C. P. Maharashtra which consists of the exports of agricultural products like cotton, wheat, jowar, oilseeds, rice and oranges, minerals like manganese, industrial products like cotton piece-goods and shellac and of the imports of cotton, silk and woollen cloth, cotton yarn, porcelain, glass, enamel and aluminium ware, oilman's stores, hosiery, etc., is represented by the following table.

C. P. BERAR—EXTERNAL TRADE MOVEMENTS.

	Imports. (1000 cwts.)	Exports. (1000 cwts.)
Bihar-Orissa	... 5,929	1,350
Bombay Port	... 2,904	15,049
Central India	... 2,732	1,499
Bengal	... 2,260	1,001
United Provinces	... 2,038	1,378
Calcutta	... 1,199	8,132

The Central Provinces and Berar are land-locked and naturally the trade movements flow towards their adjoining provinces like U. P., Bihar-Orissa and Central India. However, it is rather strange to find that Madras and Nizam's territory which also adjoin them do not figure in the table. Perhaps it is due to the fact that until last year Central Provinces and Berar had no railway connection with these parts. Another fact which comes to the notice from the table is the great importance of the port of Bombay to the export trade of the provinces.

The distribution of the extra-provincial trade of Bombay Maharashtra and Karnatak which consists of the exports of Indian yarn and piece-goods, metals, grain and pulses, provisions, oils, salt and tobacco and of the imports of raw cotton, grain and pulses, oilseeds, coal and coke, provisions and sugar is as follows :—

BOMBAY PRESIDENCY—EXTERNAL TRADE MOVEMENTS.

	Imports. (1000 cwts.)	Exports. (1000 cwts.)
Bihar-Orissa	... 16,375	261
Bombay Port	... 15,352	20,610
Bengal	... 6,010	34
Nizam's territory	... 3,980	2,178
United Provinces	... 3,884	1,333
Madras	... 3,080	1,767

As we see from these figures, Bihar and Orissa lead in the provincial import movements without any corresponding exports. Bombay Port comes second and with it the province has a considerable amount of import and export trade, it being the most important outlet for the area. Bengal coming next weighs heavily on the import side but receives very little exports. Imports from Bengal consist of coal, minerals, metallic ores, jute, and kerosene. Nizam's territory sends

oils-seeds and spices to Bombay and receives various commodities, while U. P. sends grains, pulses, oil cakes, fodder and sugar. Madras sends railway materials and oil-seeds and receives grains and silks. In addition to its own trade movements, movements to and from the port also pass through the Province because the hinterland of the port of Bombay extends far beyond the limits of the Bombay Presidency. The extent of these extra movements through the province which do not enter our trade but engage our transport system can be seen from the following figures.

BOMBAY PORT—INLAND TRADE MOVEMENTS.

	Imports. (1000 cwts.)	Exports. (1000 cwts.)
Bombay	... 20,611	15,352
C. P. Berar	... 15,050	2,904
Bihar-Orissa	... 10,690	124
Bengal	... 7,501	49
United Provinces	... 5,032	1,501
Nizam's territory	... 3,016	2,366
Punjab	... 2,950	1,814

The one important point that this table discloses is, that Bombay Port is the main outlet as well as port of landing for the trade movements of the Bombay Presidency and C. P. Berar and naturally of Maharashtra and Karnatak. This important position of the port of Bombay is due to its being the terminus of all the important railways, roads and steamer-lines passing through and along the coast of Maharashtra and Karnatak. Much of this trade can be diverted to other ports on the Konkan and Malbar coast if only they are well connected with the hinterland by means of roads and railways.

As regards internal trade the difficulties referred to in the case of extra-provincial trade are aggravated. The trade

which from the point of view of administrative units might appear as inter-provincial becomes intra-provincial, considered in the light of the area covered by Maharashtra and Karnatak for this study. Therefore whenever figures are used they should be considered as approximate estimates at their best.

The internal trade of Maharashtra and Karnatak is carried on in commodities produced in the province or in commodities imported into the province from other parts of India or from foreign countries. Important commodities of the first class are grain, pulses, oil-seeds, ghee, oranges, building materials-such as bricks, tiles, flooring stones and lime-fuel, cooking oils, cotton piece-goods, yarn and handloom products, brass and bell-metal wares etc.¹ Commodities imported from other parts of India and from foreign countries include iron and steel products of Jamshedpur, woollen cloth, kerosene, petrol and silks. Figures for the values or quantities of these goods are not available but the Bombay Provincial Banking Enquiry Committee gives figures of the distribution of internal trade for some parts of the Presidency.² According to it Konkan has an internal trade worth Rs. 73 crores, Deccan including Bijapur Rs. 19.4 crores, Karnatak including Southern Maratha country Rs. 5.9 crores, and Goa Rs. 1.7 crores. In the C. P. Maharashtra the internal trade in agricultural products alone amounts to Rs. 3.2 crores but a much larger part of the internal trade of this province consists of manufactured and imported goods.

In the coastal trade of Maharashtra and Karnatak Karanja, Honavar, Vengurla, Uran, Bankot, Ratnagiri, Malvan, Vijayadurg, Karwar, Marma Goa and Mangalore, each claim an annual coastal trade of more than 40 lakhs of rupees. But as compared with the overwhelming share of Bombay which

1. Report of the C. P. Banking Enquiry Committee, p. 210.

2. Report of the Bombay Banking Enquiry Committee, p. 119.

comes to about 60 crores of rupees per year, the share of the Konkan and Malabar ports is insignificant.¹ At the cost of reiteration we must say that the lamentable absence of roads and railways connecting these ports with the hinterland is solely responsible for this miserable condition of our ports on the western coast. It must be remembered that the Konkan ports apart from their trade with the Bombay Port have also a brisk trade among themselves and also with ports of the other provinces of India. The ports traded with are as distant as Cochin, Travancore, Madras and Calcutta. The main items of the coastal trade, which is carried on in Machwas and steamers consist of cloth, sugar, salt, wheat, glass-ware, kerosene, food grains, fish, cashew-nut, cocoanut, teak-wood and mango. The following table will give an idea of the importance of mango trade on the Western Coast.

MANGO EXPORTS FROM THE VARIOUS PORTS OF KONKAN.²

Port.	Number of packages exported.	
	By Machwa.	By Steamer.
Bankot	... 1,831	15,000
Harnai	... 216	...
Dabhol	...	2,400
Jaygad	... 189	3,000
Ratnagiri	... 940	33,594
Purnagad	...	6,000
Jaitapur	...	2,000
Vijayadurg	...	4,025
Devgad	... 4,953	4,011
Achara	...	100
Malvan	...	9,523
Vengurla	...	27,229
Goa	...	92,779

1. Report of the Bombay Banking Enquiry Committee. p. 20.

2. Including the export of loose mangoes the number of baskets exported from the Ratnagiri District is over one lakh and sixteen thousand baskets.

Similarly the exports of cashew-nut from Malvan alone were worth Rs. 8,39,254 in the last year. The development of the natural resources of Konkan and consequently of the coastal trade will be one of the main planks of the economic development of Maharashtra and immense are the possibilities of its success.

After the analytical description of the inland and coastal trade of Maharashtra and Karnatak, which in the absence of statistics does not however give us any clear idea about its extent and value, we shall have a peep into the system of its organization. Let us take for instance, the most important constituent of our internal trade viz., piece-goods, foreign as well as Indian and see how they come into the hands of the ultimate buyer.

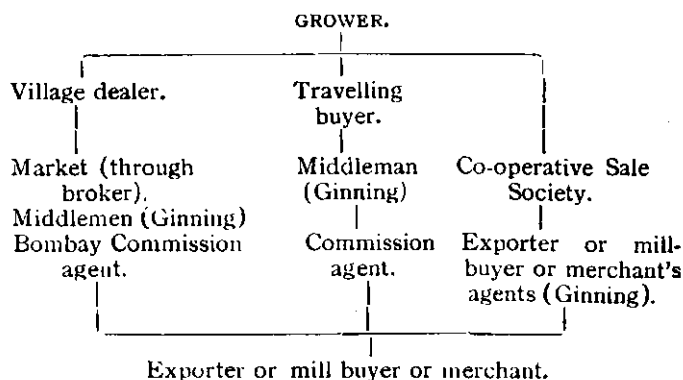
Generally, the wholesale merchants intending to buy the foreign piece-goods do so through the importing firms. These importing firms which are managed by foreigners receive whatever credit facilities they require from the Exchange Banks. They in their turn finance the wholesale merchant who is allowed even piece-meal clearance of his goods. When however, the wholesale merchant is dealing directly with the foreign manufacturers or shippers the banks do not allow piece-meal clearance. But if the consignee needs funds for taking delivery of his goods, he is given a loan against the security of the goods for twelve months or even longer. Similarly ample facilities are provided for the storage of goods by the Port Trust Ware-houses. The existence of the Port Trust Ware-houses coupled with the well-organised system of credit given by the Exchange Banks and importing houses, has resulted in the adequate financing of our trade in imported goods and there does not seem to be any demand for greater facilities. The wholesale merchant who buys the goods sells them to the mofussil

retail merchant usually through a commission agent and he in his turn passes them on to the village trader and thus the imported piece-goods get into the hands of the ultimate buyer.

In the case of Indian piece-goods which have a brisk internal trade in regions surrounding the mill-centres of Sholapur and Nagpur, the organization is not much different except for the fact that organized banks play a very little part in financing it and that there are no bonded warehouses anywhere in the up-country as they are at Bombay. However, in this branch of piece-goods business, there exists a peculiar system of salesmanship known as the guarantee broker system. The guarantee broker is a man who deposits a certain amount of money with a particular mill which grants him credit to the extent of four times that amount. He does not purchase any goods from the mill but simply guarantees payment for the goods purchased by merchants. The merchants are financed by the Shroffs or the Dalals who in their turn get accomodation from the banks. The mofussil trader who buys goods from the wholesale merchant through a commission agent generally gets credit from him but if he fails to do so the Shroff or the Sowcar comes to his help. The retail trader who is the last link in this sale organization gets credit either from the mofussil merchant or the money-lender. The internal trade in sugar and kerosene oil is also well organized but the organization in respect of other commodities is not so good as that of piece-goods. The distribution is effected on much the similar lines but the facilities of warehousing and credit are etirely inadequate.

With regard to the movement of agricultural crops and products of cottage industries, the marketing organization is somewhat different from that for the manufactured or imported

goods. In the case of agricultural crops which have a large foreign demand, there are agents of the exporting firms who go into the interior and buy the harvests of the agriculturists. As an example, the various channels through which cotton, the chief export crop of the province, passes from the agriculturist to the market can be seen from the following chart.¹



The cotton growers of Khandesh and Karnatak generally sell their crop in the village itself, to the village dealer, to the itinerant trader or merchant, or to the agent of an exporting firm or that of a mill. They think that the price which they get by taking their cotton to the nearest market is not sufficiently high to justify all the trouble of carting. In Berar however, where the wholesale markets are established under the 'Cotton and Grains Markets Law' the grower sells his cotton directly in the market. With regards to cotton sold in the village it is the village dealer or the travelling buyer who brings it to the market, where it is sold through adatyas or dalals who not infrequently indulge in sharp practices. However, they have full experience and knowledge about

1. Royal Commission on Agriculture in India, Evidence Vol. VI.

the business which the cotton grower or the village dealer does not possess and hence are indispensable to him. The **adatyas** purchase the cotton for whole-sale buyers who are agents either of the exporting firms or of the mills and send it for ginning. After ginning it is pressed into bales and sent to its destination. As a general rule the growers who bring their cotton to wholesale markets are more dependent upon the **dalals** and **adatyas** than those who sell it in their own villages. This is due to the lack of storage facilities at the market centres, where the grower can keep his crop till he gets a fair price. He therefore is compelled to sell it the very day he brings it to the market and as he is always ignorant about the market price which is determined in America, he usually runs the risk of being cheated. The villager on the other hand can keep his crop in his own house for as many days as he likes and is thus in a better position as a seller. Organized wholesale markets are found only in Berar where they are controlled by cotton market committees appointed under the 'Cotton and Grains Markets Law.' In Khandesh and Karnatak some municipalities like that of Jalgaon, Hubli and Bijapur have provided open spaces which serve as cotton markets, whereas at places like Pachora there is no market at all and the transactions take place in the compounds of ginning factories. The organization of markets on the Berar type and the establishment of ware-houses is the most urgent need of our internal trade. For other export crops like wheat, groundnut and tobacco, the same chain of transactions exist with the difference that there are fewer middlemen and their paraphernalia exists on a much smaller scale. The largest tobacco centre is at Nipani in Karnatak, where the annual tobacco sales amount to Rs. 75 lakhs.

There are co-operative sale societies composed of industrial members for the sale of agricultural produce. There are

also purchase and sale unions which are unions of credit societies and shops and depots run by Central Banks which do the same business. Of these the cotton sale societies are most important. They confine themselves to the sale of cotton only and are working satisfactorily in Gujerat and Karnatak. However, the success of these societies depends upon the quantity of produce they get for sale. In order to face the inevitable competition of the *dalals*, they must command a fair percentage of the produce coming into the market. Increased godown facilities would assure them the percentage of business they want and hence they should provide them as early as possible.

Food crops, fruits, vegetables and products of cottage industries are generally sold at weekly bazars which are both collecting as well as distributing centres. These weekly bazars are a very common feature of Deccan, Konkan and Karnatak e.g., there are as many as 42 markets in the district of Sholapur and 50 in Bijapur and are wholly governed by custom. Sales at these bazars take place both directly as well as through the *adatyas*. Sales by auction is generally the practice of the *adatyas* but quite often they settle the transactions with purchasers under cover. The most familiar example of this practice is the sale of potatoes in the Poona market.¹ Here the sale of potatoes is monopolised by half a dozen *dalals* who pay their own price to the potato grower and pocket a large amount of profit. The *saries*, *kambals*, clayworks, baskets, brooms, mats, bangles, shoes, and many other products of the cottage industries, that come to the market are generally bought by the village dealer in his village at low prices and he sells the same in the weekly bazar at prices which yield him a very high rate of profit on his limited capital. The cottage weaver or worker is gene-

1. *Shetki ani Shetkari*, Issues 1931-32.

rally not in a position to attend these bazars regularly and hence has to content himself with whatever he receives from the village dealer. In the case of Gur which is the most important product of the Deccan districts of Ahmednagar and Poona the practice of sale is rather different. The gur manufacturers are generally indebted to the merchants in the cities and towns nearby and hence are required to sell their product through them alone. These merchants are dalals who put cartloads of gur to auction and credit the price received minus their commission, to the account of the manufacturer who is not necessarily present at the time of the auction. Similarly, a different system prevails in the marketing of mangoes. The crop is usually purchased by contractors at a time when the mango trees are in blossom and 20 per cent of the price settled is paid immediately. The contractors pick the mangoes when they are mature and send them to the agents in Bombay who dispose them of by auction or by settling the transaction under cover.¹ The price realized by the contractor, it is said, is only one third of that realized from the consumer, much of the loss being accounted for by the damaged fruit, freight charges, commission and absence of cold-storage facilities.

In the above description of the organization of Internal trade in Maharashtra and Karnatak we have seen how important is the part played by the middleman in the disposal of the villagers' products. It is alleged that many times he indulges in sharp practices, acts as an agent to both the seller and the purchaser and being more dependent on the purchaser for his profits sacrifices the interests of the seller and thus is the main cause of the poverty of the agriculturist. But this is too sweeping a criticism of the agent who makes it possible for the illiterate cultivator to market

1. Raosaheb G. N. Sahasrabudde, 'Royal Commission on Agriculture in India,' Evidence Vol. VI.

his produce in a place about the customs and practices of which he is wholly ignorant. He takes risks, arranges for manufacturing processes necessary for the marketing of a product such as ginning of cotton, curing of tobacco, decoration of groundnut and hulling of paddy and supplies finance as and when necessary. It is not therefore very easy to oust him by establishing co-operative sale societies as is so often suggested by persons who only look to his defects but are completely unaware of the services he renders to the village community. But it is quite possible to make him serve the interests of the small producer better, by abolishing transactions under cover, by providing storage facilities at the market centres and by establishing market committees like those existing in Berar at every market place in the province. Co-operative sale societies will go a long way in improving the present position of the small producer but in no case can they cover the whole field now occupied by the middleman.

The second important fact which comes to our notice from the present organization of our internal trade as described above is the lack of storage facilities in the market centres. In a few places there are some godowns provided by commission agents and co-operative cotton sale societies but their number is hopelessly inadequate. The largest co-operative sale organization in the province which exists at Hubli has no godown accommodation of its own and has to hire an open space at a high rental. In East Khandesh and Karnatak there are very few markets with godown facilities and in many other places the only storage facilities available are the compounds of the ginning and pressing factories. This compels the producer to sell his product as soon as he brings it to the market, irrespective of the position of prices. Provision of adequate storage facilities would therefore increase the

freedom of the agriculturist to hold up the produce for a reasonably long time.¹

To recapitulate our position as regards transport facilities and trade, we have shown that the existing mileage of railways and roads in the C. P. Berar and Konkan in view of the future prospects of their development are extremely inadequate. Barring the main trunk roads passing through Central Provinces and Berar there is no road system inter-connecting the various places of commercial and agricultural importance and similarly there is lack of railways and good roads connecting the ports on the western coast of Maharashtra and Karnatak with the hinterland behind the Ghats. Especially in Konkan this dearth of a good transport system has prevented its economic development and inflicted untold miseries upon the people. Even if it were conceded that the building of a railway line along the western coast will be economically unsound, we do not see any reason why roads should not be developed so as to facilitate motor traffic even during the rainy season. In describing the road system of Maharashtra and Karnatak we have seen that motor traffic has immensely developed during the last decade. It is however regrettable that the motor companies plying service cars in the province are almost all heavily indebted or those which had their own capital, are completely ruined.² Neither has this motor traffic had any appreciable effect on the movement of internal trade.

Further, in estimating the volume and distribution of our external, internal and coastal trade—the figures of which we could not get—we saw that agricultural products like wheat, cotton and oilseeds bulk large in our exports, while coal,

1. Statement of the Deccan Merchants Association before the Bombay Banking Enquiry Committee.

2. "The Pravina", July 1931, pp. 33-38

cotton, woollen and silk piece-goods form our main imports. In the internal trade the movements are those of food grains, commercial crops, imported goods and goods manufactured in the province. Berar receives its rice from the Wainganga Valley and sends its cotton to Sholapur, Nagpur and Bombay. In regions about Sholapur and Nagpur there is a brisk trade in cloth produced in the respective mills while imported piece-goods are distributed all over the province. Besides, there are considerable movements of wheat, rice, jowar, oilseeds, gur, oranges, grapes, mangoes, and innumerable products of cottage industries between the various regions of the province. Though our coastal trade is mainly with the Port of Bombay the native craft is busy in other ports also. Our main exports through coastal waters are of mango and cashew-nut while our imports consist of a long list of commodities from foreign piece-goods to the teakwood of Malabar. Much of the trade that is now concentrated at Bombay could be diverted to Bankot, Jaigad, Vijayadurg, Marma Goa, Karwar and Mangalore if only these ports were directly connected with the hinterland behind the Ghats by means of roads or railways. So also there are immense possibilities of developing our external trade—which will be quite necessary if we are to enter the threshold of industrialisation—by building more roads and connecting important centres of trade by means of railway lines.

The defects in the organization of our internal trade which have been described are not so great as they are made out to be. Still, better financial accommodation than what is at present given by the indigenous bankers, and, better warehousing and storage facilities are needed. In the small trader who is financed by the Sowcar at present, there is a large field for the co-operative institutions to develop. They have also a large scope for development in helping the producer to dispose of his goods without the help of the middleman who has

practically monopolized the markets. Co-operative Cotton Sale Societies have become successful in Karnatak. Similarly there are other sale societies selling gur, paddy, groundnut, wheat, chillies and other produce which are making considerable progress. Complete displacement of the middleman should not, however, be our aim as he is useful to the small producer in more ways than one.

Lastly, no one can gainsay the importance of trade in the economic development of a country, more so at a time when commercialism has become the watchword of every industrial nation of the world. In Maharashtra and Karnatak where the main economic problem is the overcrowding of agriculture, development of trade is as important, if not more, as that of industries and therefore must not be ignored.

CHAPTER VIII

Finance and Banking

Finance is the life-blood of the economic system. All economic activity whether it be agriculture, industry or commerce, will be at a standstill in the absence of adequate finance. So far as agriculture is concerned finance is necessary for improving the methods of cultivation and making permanent improvements in the fields-for current expenditure and capital investment. In the industrial activity apart from initial investment, finance is the supreme necessity at every step from the purchase of raw materials to the sale of the finished product. As regards commerce finance is the very basis of all exchange transactions. This importance of the provision of finance in the economic system has made it an altogether a separate branch of economic activity. Naturally, the collection of the small savings of the people and their diversion into the channels where they can be most productive has become a business by itself. The individuals and institutions engaged in this business are called financing agencies and their development in a country has come to be considered as the best index of its economic development. We shall therefore consider in the pages that follow the financial needs of our agriculture industry and trade and how far they are being satisfied at present, i.e. the development of financing agencies in Maharashtra and Karnatak.

Financing of Agriculture:—In discussing the question of our agricultural finance we shall have to deal with three classes of agriculturists. Firstly, there is a large number of cultivators who are hardly able to maintain themselves by tilling the land. Secondly, there are those who just support,

themselves by renting for cultivation some neighbouring fields in addition to their own. While the third class is wholly comprised of landlords who own extensive fields, a major portion of which they do not cultivate themselves but rent to others. At present a vast majority of the agriculturists in Maharashtra and Karnatak belong to the first two classes while those belonging to the last class are very few. The financial needs of all these classes differ in their nature and extent and are supplied by different agencies. However, agriculturists in general need capital on two accounts; for the current expenses of cultivation and for the improvement of the fields. This, where the holdings are sufficiently large so as to be capable of economic cultivation and giving adequate maintenance to an average family. Whereas in the case of agriculturists belonging to the first class, finance is needed in addition, to feed themselves and their families.

At the outset therefore we should like to point out that the holdings belonging to a major portion of the agriculturists in Maharashtra and Karnatak are uneconomic. This class of agriculturists therefore is heavily indebted to the Pathan money-lender, the Marwari and the Sowcar who exploit him to the best of their ability. Many a time the Pathan charges interest at the rate of 400 per cent and uses physical force to recover his dues. The Marwari who at times employs dishonest methods to recover the money lent is much better than the Pathan. The village Sowcar on the other hand is far more considerate and fair in his dealings than the above-mentioned new-comers. No organized banking will be able to solve the problem of these people who are forced to incur debts for subsistence over and above the financial needs of cultivation. When the crop is ready they have to sell it to the Sowcar from whom they had borrowed money before

cultivation and some of the family members have to move out of the village to earn wages. The Sowcars in exploiting the cultivators are careful to see that enough has been left to them for existence, so that the victims may again be squeezed at the next harvest. It is worth noting here that the debt incurred by these cultivators for the purpose of cultivation proper is very small in amount but their holdings are so meagre that their cultivation can never become profitable under the present economic conditions of Maharashtra and Karnatak. No institution therefore wishing to do sound banking can make them any advance. It is only the village Sowcar, or the Marwari, or the Pathan who will be prepared to advance them money as he can recover it back by methods which no modern banker would be prepared to employ. As remarked above these agriculturists are perpetually in debt. "To pay the debt incurred by the father the son has to serve the Sowcar for life. Instances are not wanting where to repay the debt incurred for marriage the wedded couple has to serve on a salary fixed by the Sowcar for several years."¹ No co-operative credit society can effectively function among these people, because the fundamental principle on which its successful development depends is self-help and self-help is an impossibility in the case of these resourceless cultivators. Their present resourceless condition is due to over-ruralization which has been the outcome of the policy of indifference and even set-back followed till recently by the Government with regard to our industries. It will therefore improve and ultimately disappear only if a large proportion of them who are at present subsisting on agriculture for want of better employment are absorbed in industries. Till then they have no other choice but to continue to be the perpetual victims of their exploiters.

1. Statement of the Deccan Merchants Association, before the Bombay Banking Enquiry Committee. p. 2.

We have already said that the Pathan money-lender is the worst of all who accommodate the resourceless cultivator. But for the passing of the Deccan Agriculturists' Relief Act consequent upon the riots between the money-lenders and the ryots which broke out in the Deccan during the seventies of the last century, it is hardly possible to believe how he could have got an entrance into the business till then monopolized by the Marwaries and the village Sowcars. The Act was passed on the recommendation of the Riots Enquiry Committee who arrived at the conclusion that the malpractices of the money-lenders were the root cause of all the trouble.¹ However, instead of relieving the position of the cultivators which was its avowed purpose the Act worsened their condition. The new Act changed the attitude of the Sowcars towards the ryots and in order to safe-guard their position against law they ceased to lend freely and began to charge higher rates of interest. It was this time that the Pathan money-lender who lent freely to all and sundry without demanding security got entrance into the rural areas. He had his own methods of exacting the dues which secured him from any defaults but his exorbitant rates ruined the cultivators completely. "To summarise the results of the working of the Act, we can safely say that although the Act prevented the small agriculturists being turned into landless agricultural workers, it ushered in an era when fraudulent transactions increased in number, the business of unscrupulous Sowcars flourished, honest and straight-forward Sowcars almost retired from the field, the relations of the Sowcars with their clients became bitter, and the despicable Pathan money-lenders got an easy entrance in the field. The Pathans readily stepped in to take the place of all those that retired from the business and began to cater for the needs of those who could not get money from their

1. P. Pillai, "Economic Conditions in India", p 120.

former creditors."¹ This Act therefore instead of relieving the cultivator has intensified his miseries and the sooner it is repealed the better it will be in the interests of the ryots.

The agriculturists belonging to the second class are also not in a flourishing condition. They also are unable to better their economic position for lack of financial help. Evidently, in this class of agriculturists we include those who can maintain themselves on their own pieces of land if attempts are made to grant them proper financial and marketing facilities. They require loans to meet the current expenses of cultivation and to make permanent improvements in their fields. However, the rates of interest charged being exorbitant they confine their needs only to current expenses and have no incentive whatsoever to effect permanent improvements on their holdings. At present they are financed by the following agencies:—

- I. Village Sowcars.
- II. Co-operative Credit Societies.
- III. Government.
- IV. Traders.
- V. Fellow agriculturists.

From amongst these the village Sowcar is the most important. He is either a professional money-lender, a landlord or a merchant. Being in the neighbourhood of the cultivator he knows his economic condition very well and hence is in a better position to give him loans when required. The loans are both secured as well as unsecured but the unsecured loans carry a higher rate of interest which varies from district to district. Approximately, it can be said that the rate of interest on secured loans varies from 6 per cent to 15 per cent and that on unsecured loans from 15 to 24 per

1. Statement of the Deccan Merchants Association, p. 5.

cent. Land, ornaments of gold and silver, crops and other movable as well as immovable property are the only kind of security that the cultivator can offer. He is sometimes involved in fraudulent documents which represent a higher amount of loan than what he actually receives. To repay the loans he is compelled to sell his produce at a very disadvantageous rate as he has no staying power and when the Sowcar himself is a dalal he harasses the agriculturist exactly at the harvest time with a view to purchase the produce at a very low price.

Next to village Sowcars, there are the Co-operative Credit Societies who finance this class of agriculturists to a limited extent. These societies have become more successful in Bombay Maharashtra and Karnatak than in Berar and Nagpur divisions. The unlimited liability of the members makes the business of these societies very secure and wherever they have been established the Sowcar has been compelled to lower his rate of interest. But the Co-operative Credit Societies in the Central Provinces and Berar are not equitably distributed so much so that while in the whole of the Chanda Tahasil there is not a single society, there are tahashils having as many as five societies each.¹ This does not serve the agriculturist in any way. The class of agriculturists with whose problems we are dealing affords a good field for the development of co-operative credit movement. As a matter of fact co-operative societies are the best machinery to solve their financial difficulties. Since these agriculturists have some credit and are likely to prosper if they are freed from the clutches of the Sowcar the co-operative credit movement has every prospect of success with them.

Under the Agriculturists' Loans Act and the Land Improvement Loans Act, the Government advances money

1. Report of the C. P. Berar Banking Enquiry Committee. p. 260,

to agriculturists for certain purposes in the form popularly known as Taccavi. These loans are given to agriculturists for effecting permanent improvements, such as sinking wells, setting Rahats and fencing the fields. Wherever there is a co-operative society the Taccavi loans are granted through it. The report of the Registrar of Co-operative Societies, Bombay Presidency, shows that out of Rs. 3,00,000 put at the disposal of the Provincial Co-operative Bank only a sum of Rs 1,02,270 was actually utilized by the cultivators.¹ The Registrar grumbles that some of the Central Co-operative Banks showed unwillingness to take up this business. He himself however admits two defects in the present system. Firstly, the margin of $\frac{1}{4}\%$ allowed to the banks is not sufficient to enable them to engage a special staff and secondly a good deal of delay is caused in the enquiry of applications for taccavi loans. If complaints of delay cease to exist and if the authorities concerned revise their attitude towards the ryots the taccavi loans will be more popular. The low agricultural yield, uneconomic holdings and lack of education among the agriculturists are also to a certain extent responsible for the lack of demand for Taccavi loans. The agriculturist does not feel confident that he will be able to repay the taccavi loan from the additional income that he may derive from the improvement made in the land. Nevertheless the amount sanctioned for such loans is insignificant when compared to the financial requirements of the province.²

The following table which gives some idea of the shares of different agencies in financing the agriculturists in the Nagpur-Berar division, further confirms this opinion.

1. Report of the Registrar of Co-operative Societies in the Bombay Presidency, for the year 1928-30.

2. Sir D. E. Wachha, 'Indian Journal of Economics, Vol. 1, part I. "The Taccavi advances are a mere palliative and in no sense a help to the ryot to diminish this load of his indebtedness.

PERCENTAGE SHARE OF THE DIFFERENT AGENCIES IN
FINANCING AGRICULTURE.

		Govern- ment.	Co-operative Societies.	Village Sowcar.
Amraoti	...	.34	8.10	91.56
Akola	...	.73	4.98	94.29
Buldhana	...	.75	5.22	94.03
Yeotmal	...	.86	3.74	85.88
Nagpur	...	.16	1.04	70.30
Balaghat	...	.57	2.28	78.15
Bhandara	...	.41	.8	57.59
Chanda	...	1.18	3.1	82.12

The accommodation given by the fellow agriculturist is infinitely small and hence does not deserve any space in this chapter.

The third class of agriculturists consists of landlords. Some of them who are indebted require financial help on easy terms to redeem their lands. The landlords meet the expenses of cultivation from their own funds. Whatever permanent improvements they make are financed from their own resources, but if agriculture is to be improved and modern methods of cultivation are to be introduced the landlords will require loans for long periods. The needs of the solvent agriculturists and landlords in this respect can be met by the formation of Land Mortgage Banks. Two banks of this type have been established by the Bombay Government since 1928 at Dharwar and Pachora. They are essentially an experimental measure and are being financed provisionally by the Bombay Provincial Co-operative Bank, with the help of the Government. The Dharwar Bank provides finance to its members throughout the district while the activities of the Pachora Bank are restricted to the limits of the Taluka. The limit of individual finance has been

fixed at 10,000 and every loan has to be given with the sanction of the Provincial Bank. The bulk of the loans given by these banks have been chiefly for the redemption of previous debts and in a few cases only they have been advanced for the installation of costly machinery and for the improvement of land. Borrowers and intending borrowers alone can become members of these banks. Their position as on the 31st March 1933 can be seen from the following table.

POSITION OF THE LAND MORTGAGE BANKS
AT DHARWAR AND PACHORA.

Bank	No. of members.	Amount of loans given. Rs.	Average loans per member Rs.	Loans outstanding. Rs.	Loans overdue Rs.
Dharwar.	74	1,36,825	2,012	1,25,489	1,812
Pachora	197	1,16,702	2,121	1,08,475	7,578

Most of the loans given by these banks are for a period of 10 to 20 years. The extent of overdues and defaults so far is rather discouraging but is due to the phenomenal fall in the prices which could not be foreseen at the time of advancing the loans. For example, the cotton and groundnut crops in Dharwar and Pachora have suffered heavily successively for the last two years due to excessive rains and this must have seriously undermined the repaying capacity of the loan holders. Referring to this situation the Land Mortgage Committee appointed in 1933 to examine the question of the development of land mortgage banking in the Presidency remarks: "The estimate of the repaying capacity of the borrower has proved defective, in that sufficient allowance for variations in prices or for unfavourable seasons had not been made. Consequently in bad years, no extension for the period of repayment of the loan could be given. In addition to the above factors some constitutional defects have also been responsible for this state of affairs. Only borrowers or intending borrowers are eligible for membership, and conse-

quently, in unfavourable years there is not sufficient pressure exercised by the Board to secure payment of the instalment.¹ The Committee however does not find anything discouraging in the affairs of the experimental banks and therefore has suggested their extension throughout the Presidency. Its recommendations have been approved by the Government and Co-operative Land Mortgage Banks are now being started in every district.

Financing of Industries—Here again the problems of financing large-scale industries and small-scale industries are different. In Maharashtra and Karnatak excepting perhaps the cotton mills the sugar factories and the hydro-electric works there is no industry established on a large-scale basis. The cotton industry is financed by means of a peculiar system called the Managing Agency. It is a private partnership of three or four persons usually related to one another. The ownership of the agency is hereditary. The managing agents hold a large number of shares in the mill and make themselves responsible for the financing of the running expenses as well as management of the mill, the purchase of supplies and sale of the goods. Many a time the methods of remunerating these agents are such that the interests of the managing agents turn out to be quite the opposite of those of the mill. Especially where their commission is based on the total volume of production the interests of the managing agents lie in swelling the output as much as possible, irrespective of the effect of such a policy on the profits of the mill. There can be no doubt that this system must be overhauled so as to bring about a greater identity of interests between the mill and the managing agents which alone can lead to the prosperity of our cotton industry.²

1. Report of the Land Mortgage Committee, p. 4.

2. Report of the Indian Tariff Board on the Cotton Industry in India.

Much the greater part of our industrial system however, consists of small-scale industries, which again can be divided into two classes viz., those that come under the Factories Act and those that do not cottage industries. The cottage industries can further be divided into two classes namely, main industries and subsidiary industries. The main industries are those that give full time employment to the artizan while the subsidiary industries are those that bring side income to the agriculturist. Some of the small factory industries like the Kirloskar Brothers Ltd., Ogale Glass Works Ltd., Phadke Textile & Industrial Works etc., started during this decade are organized on a joint stock basis. They naturally had to raise their capital by the issue of shares. Those industries which are owned by individuals are financed to a great extent by the owners. They require money for two purposes capital expenditure and running expenses. Capital expenditure is largely made from the original capital while floating capital is either raised by accepting fixed deposits or by borrowing from Sowcars or banks. But in Maharashtra and Karnatak the banks are very few and are not of much help to the industrialist. Very recently an attempt has been made to form the Maharashtra Industrial Co-operative Agency Limited, through the efforts of the Maharashtra Manufacturers' Association. The attempt has met with a considerable amount of success. The aims and objects of the said agency are to purchase and supply raw materials on commission in compliance with indents from its members, to arrange for sales on commission of the finished produce of the members and to finance its members on the security of raw materials, finished articles and trade bills. While describing the small-scale industries of the province we have seen how each of the industries was hampered in its development by lack of finance. Such a society therefore if it proves to be the harbinger of many more of its type will really be a great help in launching upon a scheme of industrialisation which is highly

necessary to balance our economic system. The cottage industries are largely financed by the Sowcar and to a small extent by the co-operative credit societies, wherever they have been started for the purpose.¹

Financing of Trade:—In the preceding chapter we have fully described how the internal and external trade of our province is financed by a chain of financiers from the Exchange Bank to the village Sowcar. Even there it was brought out that while the external trade is fairly well financed much remains to be desired in the financing of internal trade.¹ And there also, while the wholesale merchant receives the necessary credit from the Shroff and the indigenous banker, the retail trader is largely dependent upon the village Sowcar. If we are to prosper by trade, either the methods of the Sowcar will have to be overhauled or altogether new agencies must be established to satisfy the financial requirements of trade and marketing. Co-operative sale societies, if well organized can very well shoulder a large share of this responsibility.

Banking:—Among the banking institutions of Maharashtra and Karnatak, the branches of the Imperial Bank, Joint Stock Banks, indigenous banks and Co-operative banks and societies are the most important. The following table reveals their strength in this province.

Imperial Bank (branches) ...	...	14
Joint Stock Banks ...	...	15
Indigenous Bank ...	...	1
Co-operative Banks and Societies ...	...	3,425

As the Imperial Bank is prohibited by law from advancing money on the security of land, or making advances for a longer period than six months, its branches in the province

1. G. P. Fernandis, 'Art-crafts of the Bombay Presidency', p. 74

cannot take any appreciable part in financing the needs of the individual cultivator, though in some isolated instances they have made advances to big cultivators on the security of gold deposited with them. It will be correct to say that their business outside Government Banking is at present confined to taking a part in the financing of trade, the marketing of crops and the movement of produce on a limited scale. Their business relations are restricted to those big grain and other merchants, shroffs and factory owners of the trading towns who are on their rather limited list of approved customers. Thus we see that these branch banks are of little use to the cultivator or the small industrialist and there are complaints that instead of helping the up-country trade, industries and agriculture they drain away the capital resources of the interior to the ports of export.¹

The Joint Stock banks in our province excepting the Industrial and Mortgage Loans Limited of Sholapur finance our internal trade. Like the branches of the Imperial Bank these banks do not finance the agriculturists directly. But in addition to supplying credit facilities to businessmen and financing the internal trade they also do ordinary banking business such as receiving deposits, lending money, negotiating and collecting bills etc. They finance the movement of crops and the internal trade through *shroffs*—indigenous bankers—by advancing money to them or by discounting their *hundis*, but the assistance they give is limited and the indigenous bankers complain that they do not receive adequate help either from the branches of the Imperial Bank or from the Joint Stock Banks. As a matter of fact, the assistance rendered by these banks for the finance of agriculture and small industries is insignificant.² However, the recently established Industrial and Mortgage Loans of Sholapur is an

1. Report of the Bombay Banking Enquiry Committee. p. 123.
2. Report of the Bombay Banking Enquiry Committee p. 33.

exception in this case. This bank has made a beginning in financing small industries and is one of the hopeful features of our Joint Stock Banking. Thus it will have to be admitted that Joint Stock Banking has not made any great progress in Maharashtra and Karnatak, and though some new banks have been established at Dharwar and Belgaum in recent years, almost all of them have taken to financing internal trade only. The field of industrial and agricultural finance has been completely ignored and that is our greatest need at the present moment.

The only indigenious institution in Maharashtra doing banking business on modern lines is the firm of Rai Bahadur Bansilal Abirchand in C. P. It has five branches in Berar and Nagpur division and 17 outside the province. Although the firm does not come under the provisions of the Indian Companys' Act, it transacts business on the lines of the modern banks. It differs from the Joint Stock Banks in that it combines trade with banking and accepts immovable property as security for loans. The clientele of this firm includes the business community, persons dealing in cotton, grain, sugar, gold and silver, petty traders, farmers, small industrialists and artizans. Among its depositors, are to be found Government servants, members of the learned professions, minors, widows etc. Charity funds also are occasionally deposited with them¹. The rate of interest charged by the firm depends on the character of the borrower and the security offered by him, varying from 6 to 12 per cent. There are a number of big firms like those of Raja Gokuldas, Chitnavis, Ghatate, Botany, Booty, Ganpatrao Pande, and others which do lending business in Berar and Nagpur division on a considerable scale but which cannot be called as banks because they do not accept deposits as a matter of ordinary business.

1. Report of the C. P. Berar Banking Enquiry Committee, P. 93.

The co-operative credit societies and banks introduced in the beginning of the present century have gone a long way in meeting the needs of rural credit. They have however become more successful in Bombay Maharashtra and Karnatak than in Berar and C. P. where due to over-enthusiasm in starting the societies the movement suffered a good deal in the last decade.

The co-operative credit movement has attempted to rescue the agriculturist and the artizan from the clutches of the Sowcar. The primary society forms the basis of the movement while the Provincial Co-operative Bank is at the apex. Irrespective of the position of various borrowers the rate of interest charged is uniform. Although the societies have far from succeeded in eliminating the Sowcars it must be admitted that wherever they have been formed they have given relief to their members and have indirectly influenced the rate of interest.¹ The village societies get the necessary funds for their operations from four sources viz., their share capital, deposits, loans either from the Provincial Co-operative Banks or their branches or the District Central Co-operative Banks and loans from outsiders. Since these societies are strict in demanding the repayment of the loan, the farmers

1. G. F. S. Collins, 'Royal Commission on Agriculture in India,' Evidence Vol. II part I, p. 200.

The Sowcar's rate used to be abnormally high thirty years ago before the coming of Co-operation. For instance in the Karnatak it used to be about 24 per cent. At present it is slightly higher than the societies' rate. The following are typical instances for comparison.

Area.	Sowcar's Rate.	Societies' Rate.
Dharwar	... 12 to 15 per cent	9½ to 11 per cent
Belgaum	... 12 to 18	" " "
S. & N. Kanara	... 9 to 12	" " "
Thana	... 12 to 15	about 11 per cent
E. & W. Khandesh	... 12 to 18	" "
Sholapur, Satara	... " " "	" "

not infrequently give preference to Sowcars over them. Moreover, on many occasions the members approach the village Sowcars for loans to repay the society and thus defeat its fundamental object. With a view to meet all the demands of the agriculturists, a system under which the members are required to submit statements showing their likely needs during the course of a year has been introduced, in some parts of the province and it is working quite satisfactorily. In towns and cities urban Co-operative Societies are formed with unlimited liability. In many places these societies are working admirably and some of them have started full fledged banking business.

The next link in the co-operative organization is the District Central Banks which are organised with a view to finance the village and urban societies. Their working area generally corresponds to the revenue district and in places where they do not exist in the Bombay Presidency the provincial Banks have opened their branches. The District Central Co-operative Banks get the necessary funds through three sources viz., share capital, deposits from members and outsiders and loans from the Provincial Co-operative Banks.

The Provincial Co-operative Banks are the apex Banks. Out of the two apex Banks—one at Nagpur and the other at Bombay—the Bombay Provincial Co-operative Bank is more advanced. Out of its twenty-two branches twenty are in Maharashtra and Karnatak. These branches which have been opened to facilitate the financing of primary societies and central banks do not finance them directly. They have their advisory committees which consider the needs and difficulties of societies and try to get them redressed. The system of normal and maximum credit introduced for the primary societies has created a great confidence among them. So far as the finances of the Provincial Banks are concerned

they draw funds from various sources such as share capital, deposits, debentures and advances from the Imperial Bank. On the whole the co-operative societies have done something for the small cultivator and industrialist, but still there is much that is left undone and which they can easily do with better management and propaganda. Ultimately, it must not be forgotten that the co-operative movement is a great force which if well directed will remove many of our grievances as regards finance and marketing.¹

This review of the financing agencies in Maharashtra and Karnatak, howsoever brief it may be, clearly proves the lack of adequate facilities of finance in the country. It also explains to a certain extent the extremely slow pace of our economic progress during the century as compared with some other provinces of India and even Indian States. In every branch of our economic activity whether it be agriculture, industry or trade our progress is obstructed at every step by financial difficulties. At present the whole financing organization of the province consists mostly of the indigenous bankers like the Shroffs, the Pathans, the Marwaries and the Village-Sowcars. The Joint Stock Banks and the Co-operative Credit Societies though pretty old to the soil by now, have not been able to make much head-way as yet. It is however true that the development of these institutions in the sphere of agriculture, the main-stay of our people, is greatly hampered by the very constitution of rural society. The majority of our agriculturists fall into the category of insolvents, that is they have to balance their annual family budgets by incurring debts. No sound banking institution of the modern type will ever come to the help of this class. Naturally they take resort to one of the indigenous financing agencies mentioned above and their footsteps are closely followed by retail traders and cottage workers. The indigenous agencies

1. W. H. Buchan, "Agricultural Journal of India," p. 240.

accommodate them all but their methods of accommodation are not congenial to the material advancement of the people; nay in many cases they are positively detrimental. The establishment of Co-operative Land Mortgage Banks in the Bombay Presidency which has only recently attracted the attention of the Government might go a long way in relieving the agriculturists from their heavy debts but the problem of the insolvent agriculturist will still remain unsolved. Government help in the form of taccavi loans is not being utilized by the farmer because of the lengthy and tiresome procedure it entails. The possibilities of co-operative finance in the field of trade and industry are indeed very great but so far they have been realized in this province, to a very small extent. We therefore find that the conditions in Maharashtra and Karnatak fully bear out the general proposition that the growth of financial agencies in a country serves as an index of its economic development.

CHAPTER IX

Conclusion

In the preceding pages we have discussed piecemeal the geographical basis of the economic life of Maharashtra and Karnatak and the main branches of economic activity followed by the people. Here we shall try to bring together the loose threads of the discussion, so as to present a general idea about the whole economic life of the province and the material well-being of its people. This necessarily involves a repetition of the broad conclusions we have already drawn at the end of each chapter but we readily undertake it. Because a complete and self-contained picture of the economic life of Maharashtra and Karnatak alone will enable us to view its problems in their proper perspective.

To begin with, the economic geography of the province or to use a familiar expression, its natural environment, though not the best in every respect, is certainly promising enough for a tropical land like ours. Our soils are rich and varied and can produce almost all the food crops and raw materials we need. In minerals we are a little deficient, still we claim the best manganese deposits in India along with the deposits of coal, lime-stone and bauxite. In certain tracts of our province rainfall is rather precarious and on the whole is not well distributed throughout the year. Similarly, our river system is not much useful for navigation or irrigation. But in the Ghats it provides large store-houses of electricity which can easily make up our deficiency in motive power. A large part of our area is covered with forests which are rich in timber and which provide abundant grazing to the cattle along the ghats. Our geographical situation

is quite favourable for the development of a large inland trade with the other provinces of India and the excellent natural harbours on the west coast also give assurances, if developed, of a flourishing sea-borne trade. The tropical climate of the province is not congenial for hard work but the intensity of heat is considerably reduced by the altitude of the country and the extremes of temperature are curbed by the Arabian sea.

The potentialities of these gifts of nature to Maharashtra and Karnatak have however not been effectively tackled by the people. It is mainly the human factor which is therefore responsible for the present economic condition of this province, because what nature has given it has failed to utilize. The total population of Maharashtra and Karnatak according to the latest census is 21,844 thousand. About 50 per cent of this population does not take any part in the productive activity. It is comprised of what are termed as dependents. Of the working population more than 70 per cent is engaged in agriculture, 10 per cent in industries, 7 per cent in trade, 4 per cent in liberal professions and service and about 1 per cent in activities which are economically unproductive. Thus, we find that the distribution of our population in the three main branches of economic activity namely, agriculture, industry and trade is frightfully uneven. An unnecessarily large proportion of the people are cultivating the fields while the field of industry and trade remains unexploited. This unbalanced economy where one occupation is overcrowded to the neglect of others is at the root of almost all our major economic problems. It is true that, by nature the province of Maharashtra and Karnatak as the rest of India is meant to be predominantly agricultural. But our contention is that predominance does not mean complete dependence and if our province is reduced to that state, though not literally, surely there must be a way out of it.

We shall now take a brief review of the three main branches of economic activity in Maharashtra and Karnatak and try to set out their problems in their proper setting.

1. *Agriculture*:—This is the main occupation of the people of Maharashtra and Karnatak, as many as 70 per cent of them drawing their maintenance from it. They can be divided into three classes according to their relative position: (1) The insolvent cultivators whose holdings are too small to maintain them throughout the year and who therefore usually incur debts to make both ends meet; (ii) The solvent cultivators whose holdings are large enough just to afford maintenance but who cannot improve the methods of cultivation without borrowing; (iii) The landlords who generally do not cultivate their land but let it out to others and live on the rent they receive. They have no interest whatsoever in the improvement of agriculture. The majority of the cultivators in Maharashtra and Karnatak belong to the first two classes. Of them the insolvent cultivators are heavily indebted and nothing in the nature of extraneous help will improve their position. The solvent cultivators on the other hand are a progressive element and are sure to respond favourably to any stimulus for agricultural improvement. The co-operative organization and the Land Mortgage banks have therefore great possibilities of success with them.

The three classes of agriculturists mentioned above cultivate a variety of crops suitable to the different conditions of soil and rainfall in the province. However, it is the main concern of the Cultivator in Maharashtra and Karnatak to be self-sufficient in his food supplies and hence food crops naturally get a preference over others. A list of food crops grown in this province would include cereals like jowar, rice, ragi and bajri, and pulses like gram and tur. Commercial crops are only next in importance to food crops to our cultivator because they bring him the small cash he needs for meeting

his monetary obligations and purchasing the necessaries of life. Cotton, wheat, groundnut, sesamum and linseed are the main crops of this category. Horticulture or gardening which also will help the cultivator to secure the money income he needs has not yet attracted his attention inspite of the favourable conditions of nature. Sugar-cane is the only crop of this class which has been planted by the cultivator on an extensive scale. The plantation of fruit gardens which is likely to be a very paying proposition has so far been completely neglected. Besides, though the variety of food crops and commercial crops grown in this province is imposing enough to present a false picture of prosperity, their yield per acre is comparatively very poor. To increase this yield is the main problem of our agricultural development which rests on improvements in the methods of cultivation and agricultural finance. Agriculturists themselves are not in a position to tackle this problem without some outside help which can be rendered by the Government alone.

Sub-division and fragmentation of holdings is perhaps the greatest obstacle in the way of agricultural progress in Maharashtra and Karnatak. Because, if the holding is very small and scattered into pieces all over the village its cultivation becomes unnecessarily expensive and introduction of improved methods of cultivation an impossibility. The present stage of sub-division and fragmentation in this province is due mainly to the overcrowding of agriculture. Subdivision is the immediate and direct consequence of the Hindu Law of Partition while the latter phase has arisen out of the actual practice of its enforcement. Both the phases are equally bad, but while there can be a remedy against fragmentation there is nothing against sub-division, unless it be the amendment of the Law of Partition which involves many other considerations besides economic. For the present, the evil is more serious in Bombay Maharashtra and

Karnatak than in the Nagpur-Berar division and there also is in its worst form in the Districts of Satara, Kolaba and Ratnagiri. The average holding per cultivator's family is 21 acres in the central Provinces and Berar, 14.5 acres in the Deccan, 15.3 acres in Karnatak and 7.9 acres in Konkan. This is clearly an indication of the density of population in the different divisions of Maharashtra and Karnatak. The tendency to sub-division has gone to the length of rendering a majority of our holdings uneconomic, i.e. they have become so small that they do not provide sufficient work for a pair of oxen and its owner; nor do they yield sufficient for their maintenance. The existence of these small holdings, scattered over the village in small pieces, has further aggravated the situation. No efforts have yet been made in this province, as in the Punjab, to consolidate the fragments on a co-operative basis and the 'Bombay Small Holdings Bill' which was introduced in the Council to prevent the sub-division of holdings beyond a minimum size that could be profitably cultivated, did not pass. Under these circumstances there is no reason to expect that this evil tendency to sub-division and fragmentation of holdings will stop, on the contrary with the growth of our population it is bound to increase. But unless and until this tendency is checked and holdings are consolidated and made economic by some method or the other, the possibilities of agricultural development in this province are nil.

Improvement in the methods of cultivation which can be undertaken only after the consolidation of holdings needs an adequate supply of water, manure and cattle. The present position of the cultivators of Maharashtra and Karnatak in all these respects is anything but encouraging and they are not able to alter it themselves, even if they wish it, because of their extremely slender resources. The question of water-supply is serious everywhere in the province, as the

period of our monsoon is restricted to six months, but is especially felt in the famine zone of the Bombay Eastern Deccan. The Government have so far remained content with their canal schemes which in their very nature are unproductive of revenue and limited in scope, while tanks, storage-works, wells and *bandharas* which do not require the heavy expenditure necessary for canal schemes and which are more helpful to the agriculturist, have not received adequate attention.

The question of manures throws a clear light on the inability of the farmer to make improvements in his system of cultivation of his own account. It is a widely known fact that the cow-dung which is the best available manure to the cultivator and for that even the cheapest, is being used as fuel. It should not be inferred from this that the cultivator does not know its manurial qualities. He knows them very well but he also knows that if he uses cow-dung for manuring his fields he will not be able to meet his requirements of fuel and naturally in the scheme of preferences he places fuel much above manure. The same difficulty occurs in the way of his using the oilseeds manure. Our people have been clamouring for the stoppage of oilseeds export, as they honestly believe that, if the oilseeds are crushed in the country itself, there would be a large supply of manure which can be used by the agriculturist. They however forget that his purchasing power is very low and that he cannot afford to spend anything on manures, howsoever cheap they may be.

Agricultural live-stock is only next in importance to water and manure for improvement in the methods of cultivation. But our agricultural cattle have been fast deteriorating during the century. This is also due, among other reasons, to the poverty of the agriculturist. In order to improve the stock he must have a good breed which is more costly than the

ordinary bull and to buy which he has no money. Apart from this the most important cause of the deterioration of our agricultural live-stock is the absence of grazing facilities. The extension of cultivation has not only occupied all the available area except perhaps in Chanda and Yeotmal but has even encroached upon village pastures which had so long been reserved for the cattle. The cultivator is not in the habit of growing special crops for fodder as he cannot afford to feed cattle by starving his family, nor is he accustomed to stall-feeding. This is borne out by the Chief Conservator of Forests for the Central Provinces and Berar who remarks: "Since 1910 endeavours have been made to induce agriculturists to resort to stall-feeding and to purchase baled grass pressed by the Forest Department; but practically no success has been attained and often the baled grass that has been stored has had to be written off in succeeding years or disposed of at a loss.¹ This being the case, the question of supplying fodder to the agricultural cattle really assumes very serious proportions and is even intensified by the fact that as the quality of the cattle deteriorates and cultivation extends, the number of agricultural cattle needed by the cultivator will increase.

Since our agriculturists have no resources of their own to meet the needs of improved cultivation mentioned above, it is obvious that some outside agencies must come forward to supply them the necessary finance. They require this help for two different sets of purposes, for current expenditure and for permanent improvements. The money needed on the first account can be repaid within a short period of time while the repayment of loans contracted on the second account necessarily extend over a long term. For the short term

1. 'Royal Commission on Agriculture in India', Evidence Vol. VI. p. 272. Letter No. C, 87. 14th January 1914.

credit the cultivators mainly rely on the Pathan money-lenders the village Sowcars and their fraternity whose only interest in agriculture is to capture more victims into their nets and to extend the business. Co-operative credit societies, it is true, have recently come to the rescue of the cultivators and are likely to prove very helpful in the provision of short-term credit. But the co-operative movement is not sufficiently intelligible to the illiterate cultivators and it will be long before they understand its spirit and subscribe to the aims it has in view. Till then they are very likely to prove defaulters as can well be seen from the history of the movement in the Central Provinces and Berar, and dislike the strict rules of these societies. They rather prefer the Sawcars because, though exacting, they never enquire into the purpose of the loan, and are sufficiently lax in demanding repayment. Thus from the co-operative societies even we cannot expect any great help for a long time to come. The third source of credit to the cultivators is the Government. Under the Land Improvement Loans Act, the Government give advances to the cultivators for meeting the current expenses of cultivation. But it is generally found that the procedure in connection with the granting of these loans is very lengthy and it is even alleged that the loans which ultimately come into the hands of the cultivators are much less than the amounts standing against their names in the Government accounts. Naturally, the agriculturists are very averse to apply for these loans and thus this Government offer of a meagre help has also for the most part proved in-effective. The sources of long-term credit to the cultivators are even more limited than those of the short-term one. The Government have been offering loans for permanent improvements to the agriculturists under the Land Improvement Loans Act for some time past and this was the only source of long-term credit in the province till the establishment of some

Land Mortgage Banks in recent years. But even this source of help was neglected by the farmers for the same reasons which prevented them from taking short-term loans from the Government. The Land Mortgage Banks which are now being extended throughout the Bombay Presidency will however be of great help to the agriculturists in this field and their establishment really marks the dawn of a new era for our agriculture.

Provision of adequate facilities for the marketing of agricultural produce is the second problem of agricultural development in our province. This relates chiefly to the commercial crops. Just as improvement in the average yield of our crops will increase the volume of our agricultural production, improvement in the marketing facilities would increase its monetary value to the cultivator. The income of the cultivators of commercial crops wholly depends on the price they realize for their produce. But a large number of our agriculturists growing food crops also rely on the sale of a part of their harvest for the money they need. It is therefore essential that the agriculturist should realize for his commodity a fair price in the market. This is however far from what he actually does under the present circumstances. There are only two ways open to him at the time for disposing of his produce. He can either sell it directly to the Sawcar or the village trader or carry it himself to the market nearby and dispose it of through a dalal. The practice differs with different commodities only in minor details. When the cultivator sells his commodity in the village itself he usually gets a little less than what he would get if he sells it in the market. But in the village he has the advantage of choosing his own time for sale. This is not the case in the market where there are no godown facilities and where the prices especially of the commercial crops like cotton and wheat are changing every day and of which he has no

knowledge. The middleman or the dalal many a time acts as the agent of the wholesale buyer as well as that of the cultivator and because he stands to gain more from the buyer, unscrupulously sacrifices the interests of the cultivator. Usually, the transactions take place under cover and hence the cultivator does not know the price at which they are settled. When making payment to the cultivator the dalal pays him his own price and deducts his commission from it. Where the markets are organized as in Berar by means of special Acts under the supervision of a Market-committee, this sort of deception is less common but even there it is by no means absent. In order to remove this injustice to the cultivator Co-operative Sale Societies have been formed in the cotton tracts of Khandesh, Berar and Karnatak and they have achieved a great success, in the last named region. But, shortage of godowns where the members can keep their produce and get advances on its security has hampered their further progress. Thus we see that the cultivator suffers a double loss because of the inadequacy of finance and marketing facilities. The first affects the volume and quality of his produce while the second prevents him from getting its fair price in the market. Establishment of Market Committees of the Berar type or the Co-operative Sale Societies on an extensive scale might afford at least a partial solution of this marketing problem.

Our Land Revenue system is also a great obstacle to the agricultural progress of the province. The controversy whether the land Revenue demand of the Government is in the nature of a rent or of a tax has not yet ended, but the Government have accepted the principle that the revenue should be assessed on the net profits of cultivation. In view of this principle they have successively reduced their demands which were very excessive in the first half of the 19th century and have exempted the assessment of im-

provements. Granting that the Government have a right to share with the agriculturist his profits of cultivation, they must first prove that agriculture in Maharashtra and Karnatak yields some profits, before they demand their share. But this aspect of the question has been completely ignored, perhaps because a consideration of it might go against them. In fact, if we examine the profit and loss accounts of cultivation, that are available to us, we find that in many cases not only cultivation of fields is not profitable but is definitely a losing proposition.¹ The inference that it must be profitable because the cultivator has not given it up is absolutely unwarranted. He sticks to it only as an alternative to starvation. This being the case, the payment of land-revenue by ryot necessarily trenches upon his capital and thereby diminishes his productive power. The process has continued till this day and there is no knowing when it will end. In the mean time the productive capacity of the agriculturist is gradually but continuously being crippled.

Finally, the progress of our agriculture depends to a great extent on the development of subsidiary industries. The nature of our agriculture is such that, the cultivator even if he is in possession of an economic holding must remain idle for over six months of the year on an average. This period of idleness during which the cultivator has no agricultural operations to perform occurs at intervals and varies, in different parts of province, with the conditions of soil, climate and rainfall and the methods of cultivation. For example, while in the Central Provinces and Berar it amounts to 125 days in the Bombay Maharashtra it goes up to a high figure of 245 days. It therefore means a great loss of working days to the agricultural society as a whole and an opening for a series of demoralizing influences which undermine its constitution.

1 See Appendix III.

Obviously, if these intervals of working-days could be utilized in some suitable productive occupation it will mean an equally great benefit to the agriculturists both material and moral. At present a small number of agriculturists work in their spare time as labourers in the nearest factories or take to basket weaving, rope-making, carting, carpentry, handloom weaving or some such occupations but they are not very paying. Those of them who take to dairy-farming make some money, but this industry is fast going out of their reach because of the difficulties of finance and grazing. Therefore, so long as our agriculturists do not get enough facilities to carry on such lucrative industries like poultry-farming, bee-keeping, cattle breeding etc. there is no hope for them of obtaining a subsidiary income to supplement their earnings of cultivation and so long as they do not obtain it, it is futile to expect any great progress in our agriculture.

II. Industry:—In the name of laissez-faire the industrial development of India was completely ignored till the adoption of a policy of discriminating protection since 1923. Naturally, the same attitude determined the growth of industries in Maharashtra and Karnatak and the overcrowding of our agriculture has been traced largely to the indifference of the Government towards the industrial possibilities of this province for over a century. At present the few industries that we claim hardly give employment to about 10 per cent of our population. An examination of the structure and organization of these industries reveals that they fall into two well marked categories. On the one hand there are some huge concerns of a gigantic type, equipped with the latest machinery, employing a large number of persons and producing goods on a mass scale. They are known as large-scale industries. On the other hand there are certain industries reminiscent of the ancient type which are housed in small cottages and which produce goods on a limited scale.

They are the small-scale industries or handicrafts. These two types of industries have their special spheres of production mutually exclusive and supplementary to each other. Large-scale industries, with their inherent advantage of internal and external economies, have a great scope in the production of commodities which have a standardised market. While small-scale industries prosper in those branches of production, where the likes and dislikes of the individual and the requirements of art have a predominating influence.

The large-scale industries of Maharashtra and Karnatak include among others the cotton industry, the hydro-electric works, the sugar industry, the engineering industry, the glass industry, the tanning industry, the shellac industry, the mining industry, the ginning and pressing factories, the gur industry, the oil presses and the paper mills. The amount of capital invested in these industries is well in the neighbourhood of 20 crores of rupees and the number of persons employed by them is about 121 thousand on an average. Out of these industries the cotton industry, the sugar industry, the tanning industry and the paper mills have been receiving protection, some by means of an import duty on foreign manufactured products and others by means of an export duty on raw material. The cotton industry which is the oldest and the largest organized industry in the province was the first to receive the attention of the Government in this respect. At present it has to face the keen competition of Japan in piecegoods of 30 to 40 counts which bulk large in the production of our cotton mills. As compared with the Bombay mills, which in spite of the protection are having a very bad time, the cotton mills in Maharashtra and Karnatak are fairly prospering and they have a good scope for further development in view of the growing markets in their immediate neighbourhood. One of the serious defects in the

management of these mills is the managing agency system which should be modified at the earliest opportunity. The ginning and pressing factories are scattered all over the cotton tracts of Khandesh, Berar and Karnatak and are a valuable source of employment to the agriculturists during the off-season. For the most part they are owned and managed by private persons.

Almost all the remaining industries of this class are the outgrowth of the last two decades. Still, considering the various handicaps under which late comers in the industrial field are bound to labour the progress they have made is not discouraging. From the point of view of a self-sufficient economy it can even be said that, the production of a majority of these industries is enough to satisfy the requirements of the province at the present standard of living. Of course this statement holds good only of the specific products which our industries are manufacturing at present. However, barring the manganese mines which have already reached their limit of development and the factories manufacturing agricultural implements, the limited market of which is almost exhausted, our large-scale industries have a good scope for further development. This can be achieved either by increasing the number of industrial units or by extending the existing plants or by increasing the efficiency of production. The last of these methods is perhaps the most economical and yet the finance and enterprise needed for its adoption is lacking among the people.

Some of the large-scale industries of Maharashtra and Karnatak like the cotton mills, the sugar factories, the glass works, the manganese mines and a few of the engineering factories are established on a joint stock basis while others like the ginning and pressing factories, gur factories, oil presses etc. are owned and managed by private enterprise. But even

at the present stage of development a good many of these concerns of both the type are experiencing difficulties in obtaining the finance they need for capital investment as well as current expenditure. The proverbially shy savings of our people are not yet prepared to come to their rescue nor is there a single industrial bank in the province which would meet their requirements on easy terms. Therefore, the provision of adequate finance either by the establishment of industrial banks or by some other method is the chief problem of our industrial development. Similarly, large-scale industries can develop only to the limit of their markets the extent of which is determined in the last resort by the facilities of communication and transportation. Provision of these facilities is naturally as important to our industries as that of finance. At present the development of our roads and railways is incommensurate with the economic possibilities of the province as a whole, but in the Central Provinces and Berar and in Konkan it is extremely poor. In addition the policy of railway rates adopted by the Government is also in many cases detrimental to the interests of our industries as it is to Indian industries in general.

Among the small-scale industries which are scattered all over Maharashtra and Karnatak, handloom weaving, fishing, tanning, leather works, pottery making and various art-crafts like calico printing, gold-thread weaving and wood carving are the most important. Of them the handloom weaving industry is the largest and the healthiest as its very existence side by side with the cotton mills will amply prove. It exists almost all over the province except Konkan and cotton saris of inferior counts is its main product. Fishing is essentially the occupation of the coastal region extending from Daman to Mangalore. Riverine and estuarine fishing has not yet been developed in our province and hence fishing in the open sea is the only source which can meet the

people's demand for edible fish. The tanning and leather industries are confined mainly to Poona, Belgaum, Ahmednagar and Nagpur and though the tanning industry is languishing, the leather industry is in a fairly prosperous condition because of the demand for its foot-ware. The pottery making industry of Chanda, Nagpur and Belgaum is losing ground to the imported alluminium and glazed china ware while the art-crafts of Yeola, Poona, Nasik and Karwar are drawing a weary existence for want of market.

It is not possible to obtain even a rough idea about the amount of capital invested in these industries nor is it possible to reckon the number of persons employed by them. But, like the agricultural society it is possible to classify the persons engaged in these industries into three categories, Karkhandars, independent workers and dependent workers, according to their economic condition. The Karkhandars are usually men with comparatively greater personal capital and higher personal credit in the local money market who are able to run a small establishment with the help of skilled labour. They are not wholly dependent on the dealers in raw materials and finished products because of their personal resources and hence are economically in a fairly good position. The independent workers have no capital of their own to depend upon. They usually work in their cottages with or without the help of their family, purchasing their raw materials on credit and disposing of their products independently of the middleman. This class of workers is in a position just to make both ends meet with strenuous efforts. The class of dependent workers which outways the combined strength of the other two classes is a wage earning class having no choice in the selection of work and working conditions and in the determination of their wages. They are heavily indebted and as such have been the worst victims of the depression.

The main drawback of all these small-scale industries in Maharashtra and Karnatak is that they are unorganized. All their difficulties of finance and marketing and of the introduction of improved methods of work can ultimately be traced to this root cause. The Handloom industry as we have already seen is scattered all over the province and yet there are hardly one or two organizations of handloom weavers. The same is true about the village tanners, cobblers, kolies, kumbhars, Kushagars, calico printers, gold-thread weavers and the rest of their fraternity. Because of this lack of organisation the cottage workers do not get cheap credit which they require for the purchase of raw material and which as in the case of gold-thread industry is very costly. As a result they are compelled to work on mere wages under a Karkhandar or to run to the village Sowcar or the money-lender who gives them the necessary credit on condition that they should sell their finished products through them. In such cases the workers lose both ways. They borrow at a heavy rate of interest and again do not realize the best price for their work. With regard to our art-crafts the problem of marketing is more important than that of finance. The various art-crafts of our province are languishing because their products are not known over a wider area and because their market is absolutely undeveloped. The one agency namely the Co-operative Societies, which can render immense help to the cottage industries both in the sphere of finance and marketing is not yet awake to its responsibility in this direction. Co-operative Societies have not yet made any serious attempt to supply finance and marketing facilities to the cottage workers and what meagre progress they have made at some places is insignificant as compared with the gravity of the problem.

In the absence of adequate facilities of finance the cottage workers also find it impossible to use improved appliances in their work. The introduction of fly-shuttle looms, healds,

reeds, shuttles, and pirns in the handloom industry, the improvement of the kiln in the pottery industry, the introduction of sewing machines in the leather industry, all these reforms in our cottage industries are highly desirable for achieving industrial progress. But it cannot be forgotten that these improvements require large initial expenses which the cottage workers cannot be expected to meet from their savings because savings they have none.

III. Trade:—The exchange of commodities in the province which maintains about 7 per cent of our population can be considered under the three headings, external trade, internal trade and coastal trade.

The external trade of Maharashtra and Karnatak is either with the other provinces of India or with foreign countries through the Bombay harbour. In the latter case cotton and oilseeds are the main articles of our export, while piece-goods and glass-ware bulk large in our imports. The movements of crops entering into foreign trade are financed by the Exchange Banks through exporting houses and the facilities granted by them are sufficient to meet our present requirements. The import trade also is financed by the Exchange Banks through importing houses but in this case the retail trader in the mofussil does not get adequate credit without taking resort to the village Sowcar or the money-lender. Our inland external trade with Indian provinces is mainly confined to Bihar and Orissa, Central India, United Provinces, Bengal, Nizam's territory and a part of the Madras Presidency, and consists of the export of agricultural produce and cotton piece-goods and the import of coal and sugar. Most of this trade is financed by the Shroffs, money-lenders and village Sowcars and the part played by Joint Stock Banks is extremely small. The deficiency of roads and railways in our external connections with Bihar & Orissa and Nizam's territory, especially from

the Nagpur-Berar division has proved a great hindrance to the development of trade with those regions. Besides, as external trade presupposes increased production we cannot entertain any hope about its further development so long as our agricultural and industrial position remains what it is. In fact it has received a definite set-back at present due to the world-wide trade depression.

We carry on a brisk internal trade in commodities imported as well as produced in the province. A part of it is financed by the Joint Stock Banks while the Shroffs, money-lenders, traders and village Sowcars finance the major portion. The dalal or the adatya plays a predominant part in this trade and the weekly bazars and fairs held in prominent villages serve as collecting and distributing centres. There is a complete lack of organized markets except in Berar and the weights used in transactions differ with every village. Only recently, weights and measures have been made uniform throughout the Bombay Presidency and to that extent our marketing organization has now been improved. Because the use of unfavourable weights—unfavourable to the customer—was one of the pet methods resorted to by the dalal in exploiting the poor cultivator. In dealing with the lack of marketing facilities for the agriculturist and the cottage worker we have clearly shown how they fail to realize a fair price for their commodities under the existing conditions. At the present stage our internal trade is considerably slack due to the fall in agricultural prices.

As regards our coastal trade, its condition is extremely poor due mainly to the total absence of railways and good roads connecting the Konkan and Malabar ports with their hinterland behind the Ghats. What little trade there exists is carried on in *Machwas* or steamers and consists of the agricultural and forest produce of the coastal region

and of the imports of piece-goods and various other commodities from Bombay. Unless and until the ports are connected with the Bombay Maharashtra and Karnatak by means of railways no development can be expected in this branch of our trade.

Thus we find that like industries and agriculture our trade also does not show any encouraging tendency. For the development of trade three things are essential. Firstly, there must be adequate development of roads and railways. Secondly, the volume of production must be increasing and thirdly, there should be no difficulty about finance. So far as the first requirement is concerned the development of railway lines is insufficient in the Central Provinces and Berar and on the Konkan Coast. We have been clamouring for the introduction of railways in the Konkan for the last twenty years but the Government do not seem to favour the idea. Even the Diva-Dasgaon railway planned so many years ago has not yet been introduced. In the absence of railway communications much of the trade which can be easily diverted to the Konkan ports now concentrates at the Bombay harbour and thus hinders the development of our ports and consequently of our coastal trade.

In the case of roads the Government have now relegated their responsibility to the District Boards who are far behind the Provincial Governments in undertaking new constructions. The real cause of this slackness on the part of the District Boards is the inadequacy of funds at their disposal and the policy of the Government to stop their grants whenever anyone of them shows the necessary enthusiasm and raises additional funds by taxation to undertake new schemes of improvement. The example of the Ratnagiri District Board is a case in point. Five years before the Board imposed Octroi duties to get funds for the develop-

ment of roads, sanitation, primary education etc. After securing the necessary money the Board planned many schemes for the development of roads in the Ratnagiri District and some of them were actually worked out. But Government did not allow the board to proceed with their progressive policy. They stopped its grant and thus compelled the Board to use the income of Octroi duties towards meeting their ordinary expenses. So long as this policy lasts no district Board would willingly incur the burden of taxation which would only mean a relief to the provincial exchequer.

Next to the development of communications what is necessary for the growth of trade is increased production. So far as Maharashtra and Karnatak are concerned no appreciable progress has yet been made in the volume of production for reasons already discussed.

In respect of finance our foreign trade has better facilities than either the extra-provincial trade or the internal trade. Here again, it is the small trader who stands at a greater disadvantage. So long as our indigenous banking system is not organized and linked up with the modern system there will not be an easy flow of finance to smooth the course of trade which till then must necessarily suffer. The importance of this remark will be realized if we consider that the part played by the Imperial Bank and the Joint Stock Banks in financing our trade is considerably less than that played by the Shroffs, village-Sowcars and money-lenders. The absence of warehousing facilities is again one of the greatest defects of the organization of our trade which has hampered the development of credit in the province.

This resumé of our position in the main branches of economic activity and the problems we have to solve clearly proves that, the human factor in Maharashtra and Karnatak has been extraordinarily slack in exploiting its natural

resources. Almost all the difficulties which have held up our progress in agriculture, industry and trade are of human origin and all of them can be removed by strenuous well directed efforts. Such efforts however, call for a close co-operation between the Government and the people which is conspicuously absent in our province at the time. The consequences of this lack of harmony are already evident in every branch of our economic activity but they can be further elucidated by a consideration of our average per capita income, the real index of our economic life. Calculation of this income is one of the most complicated problems of statistics but it has partly been solved for us by one of the Census Reports of the Bombay Presidency.¹ We give below a table from this report which classifies the population of Bombay Maharashtra and Karnatak on the basis of the annual per capita income.

THE NET ANNUAL PER CAPITA INCOME OF THE PEOPLE
OF BOMBAY MAHARASHTRA AND KARNATAK.

From Rs.	0 to	Rs.	25	Percentage of population.		
				Konkan.	Khandesh- Deccan.	Karnatak.
	0 to	Rs.	25	14.6	2.5	3
"	"	25 "	" 50	32.3	16.3	13
"	"	50 "	" 75	18.7	23.7	24.3
"	"	75 "	" 125	15.3	25.1	28.5
"	"	125 "	" 175	8.0	11.5	11.7
"	"	175 "	" 225	3.6	7.4	5.5
"	"	225 "	" 275	1.8	4.0	4.2
"	"	275 "	" 325	1.6	2.2	2.1
"	"	325 "	" 375	2.3	1.6	1.8
"	"	375 "	" 775			
		& over.		3.8	5.7	5.9

1. Census Report of the Bombay Presidency 1921, Appendix,

This shows that the percentage of population having an annual income below Rs. 75 is 66 in Konkan, 43 in Khandesh-Deccan and 40 in Karnatak. Those having an annual income between Rs. 75 and 175 are 23 per cent in Konkan, 37 per cent in Khandesh-Deccan and 40 per cent in Karnatak. In the third class where the income ranges from 175 to 325 there are 7 per cent from Konkan, 14 per cent from Khandesh-Deccan and 12 per cent from Karnatak and those above this class are 6 per cent in Konkan, 7 per cent in Khandesh-Deccan and 8 per cent in Karnatak. From these figures we can infer that 66 per cent of the people in Konkan, 43 per cent in Khandesh-Deccan and 40 per cent in Karnatak are living on a bare minimum. It is this class of the population as we have seen in the preceding chapter, which incurs debts from the Pathan, the Marvari, or the village Sowcar to make both ends meet. Though these figures represent our position as it was in 1921 there is no reason to expect any change in it since that time and if there be any change at all it will be for the worse in view of the fall in agricultural prices. In the Nagpur-Berar division the condition is more or less the same though comparatively hopeful. The C. P. Berar Banking Enquiry Committee arrives at Rs. 504 as the average income per cultivator's family holding an average piece of land of 21 acres.¹ The family in this case consists of 5 members. Therefore the per capita estimate will be Rs. 108. The class earning this average represents 47 per cent of the population. So far as the agricultural labourer is concerned the same committee arrives at Rs. 176 as his income per family. But it seems to have failed to give due importance to the fact that on an average there are two earning members in a labour family. Taking the earnings of the female worker as Rs. 125 on an average, the income per labour family will be Rs. 300 which means

1. Report of the C. P. Berar Banking Enquiry Committee. P. 82.

Rs. 60 per capita. This exactly corresponds with the average per capita income of the labour in Konkan which is also Rs. 300 per family, but is higher than that in Khandesh-Deccan and Karnatak.² On the whole therefore we can conclude that approximately 50 per cent of the population in Maharashtra and Karnatak has hardly a bare minimum of existence.

To sum up: in the first place 80 per cent of our population is rural, secondly, more than 70 per cent of it is engaged in agriculture and thirdly, 50 per cent of it is living on a margin of subsistence. Taking into consideration the fact that improvement in the standard of living is the goal of all economic activity, the condition of this 50 per cent of our population which is in debts deserves serious attention. In order to make them produce more for themselves they will have to be provided with better employment than what they get at present. But this cannot be effected unless there is a re-organization of our economic system which would make for an equitable distribution of population between the various branches of economic activity.

2. The average agricultural wages in different regions of Maharashtra and Karnatak are as follows:—

		As. p.	
Konkan	...	8 3	per day per labourer
Karnatak	...	6 2	" "
Bombay Maharashtra.	...	6 11	" "

Report of the Bombay Banking Enquiry Committee, p. 23.

APPENDIX I

Rapidity of Subdivision of Holdings.

WEST KHANDESH—LEAST AFFECTED.

Size of the holding.		Number of Holdings.		
Acres.		1886	1903	1921
Under 5	...	7,384	4,000	7,138
%	...	12.4	8.4	12.4
5 to 25	...	33,325	27,964	33,409
%	...	56.2	58.6	57.4
25 to 100	...	17,465	14,637	16,095
%	...			27.5
100 to 500	...	1,056	1,035	1,532
%	...			2.6
Over 500	...	18	25	70
%	...			.12
Total number	...	59,248	47,661	58,244
Total area	...	14,28,918	12,22,046	15,10,210
Average area per holding	...	24.1	25.6	25.8

SATARA DISTRICT—WORST AFFECTED.

Size of the holding.	Acres.	Number of holdings.		
		1886	1903	1921
Under 5	...	17,827	18,482	1,35,454
%	...	24.8	25.0	61.5
5 to 25	...	30,991	30,028	71,670
%	...	43.1	44.7	32.5
25 to 100	...	20,751	19,819	12,387
				5.6
100 to 500	...	2,283	2,478	846
%	...			3
Over 500	...	38	67	20
Total number	...	71,890	73,874	2,20,377
Total area		17,63,097	17,81,151	16,89,705
Average area per holding	...	24.5	24.1	7.9

THANA DISTRICT—SEVERELY AFFECTED.

Size of the holding.	Acres.	Number of Holdings.		
		1886	1903	1921
Under 5	...	43,382	50,586	61,975
%	...	54.5	59.6	69.8
5 to 25	...	26,058	25,720	20,390
%	...	32.8	30.3	22.9
25 to 100	...	8,280	7,426	5,245
%	...	13.7	8.7	5.9
100 to 500	...	894	1,027	1,093
%	...	1.1	1.2	1.2
Over 500	...	18	42	91
%	...	0.2	0.05	.12
Total number	...	78,532	84,801	88,794
Total area	...	9,64,477	8,98,831	9,28,601
Average area per holding	...	12	10.6	10.4

APPENDIX II

HANDLOOM WEAVING IN MAHARASHTRA AND KARNATAK.

Weaving centre.	No. of Looms.	Daily product.	
		Value.	Rs.
1. Sangamner	... 2,000	6,000	
2. Bhingar	... 900	4,000	
3. Pathardi	... 650	2,800	
4. Yeola	... 3,000	10,000	
5. Nagda	... 402	700	
6. Malegaon	... 4,000	10,000	
7. Dhulia	... 1,600	1,800	
8. Nasirabad	... 700	1,500	
9. Erandol	... 545	1,000	
10. Dharangaon	... 2,200	2,500	
11. Parola	... 1,700	2,400	
12. Karamb	... 500	800	
13. Sholapur	... 6,200	10,000	
14. Valsang	... 650	2,000	
15. Bagalkot	... 350	2,500	
16. Kamatgi	... 200	5,000	
17. Ilkal	... 3,025	1,700	
18. Guledgudd	... 3,500	10,000	
19. Kerur	... 1,100	1,500	
20. Gadag	... 3,250	1,250	

Weaving centre.	No. of Looms.	Daily product.	
		Value.	
		Rs.	
21. Gajendragad	... 2,050	1,500	
22. Hebsur	... 262	500	
23. Ranibennur	... 2,060	1,250	
24. Hubli	... 3,512	2,000	
25. Belgaum	... 275	800	
26. Bailhongal	... 406	800	
27. Pachhapur	... 208	300	
28. Gokak	... 123	1,000	
29. Kankarli	... 125	300	
30. Kharepatan	... 35	75	
31. Mhaswadi	... 200	375	
32. Wai	... 67	300	
33. Bhiwandi	... 2,000	5,000	
34. Poona	... 800	5,000	

Weaving centre. (b)	No. of Looms.	No. of Weavers.
1. Nagpur	... 35,300	50,000
2. Wardha	... 500	2,221
3. Chanda	... 10,200	8,301
4. Bhandara	... 11,000	10,804
5. Balaghat	... 937	3,176
6. Amraoti	... 4,300	4,800
7. Akola	... 1,095	1,544
8. Buldhana	... 1,005	1,224
9. Yeotmal	... 2,600	3,500

APPENDIX III

PROFIT AND LOSS ACCOUNTS OF CULTIVATION IN MAHARASHTRA AND KARNATAK.

Accounts of Sugarcane Cultivation.

Village No.	Expenses of Cultivation per acre.			Gross Income per acre.			Profit & Loss per acre.			
	Rs.	as.	p.	Rs.	as.	p.	Rs.	as.	p.	
1	973	10	0	903	15	0	-	69	11	0
2	942	8	0	977	14	0	+	35	6	0
3	968	10	0	972	7	0	+	3	13	0
4	1,067	14	0	705	3	0	-	362	11	0
5	897	14	0	859	13	0	-	38	1	0
6	872	6	0	891	0	0	+	18	10	0
7	851	12	0	908	7	0	+	56	11	0
8	545	6	0	276	0	0	-	259	0	0
9	651	14	0	512	7	0	-	139	7	0
10	838	7	0	649	8	0	-	188	15	0

ACCOUNTS OF BAJRI CULTIVATION.

Village No.	Expenses of	Gross Income	Profit & Loss
	Cultivation	per acre.	per acre.
	Rs. as. p.	Rs. as. p.	Rs. as. p.
1	37 14 0	43 0 0	+ 5 2 0
2	24 15 0	24 13 0	- 0 2 0
3	17 1 0	6 5 0	- 10 12 0
4	31 15 0	46 15 0	+ 15 0 0
5	108 1 0	118 5 0	+ 10 4 0
6	68 1 0	54 6 0	- 13 11 0
7	33 6 0	8 6 0	- 25 0 0
8	30 6 0	45 7 0	+ 15 1 0
9	20 12 0	37 7 0	+ 16 11 0
10	21 0 0	23 5 0	+ 2 5 0

ACCOUNTS OF JOWAR CULTIVATION.

Village No.	Expenses of	Gross Income	Profit & Loss
	Cultivation	per acre.	per acre.
	Rs. as. p.	Rs. as. p.	Rs. as. p.
1	30 13 0	11 12 0	- 19 1 0
2	29 14 0	21 11 0	- 8 3 0
3	10 9 0	1 9 0	- 9 0 0
4	8 9 0	1 9 0	- 7 0 0
5	22 3 0	6 0 0	- 16 3 0
6	6 10 0	4 0 0	- 2 10 0
7	13 0 0	2 4 0	- 10 12 0
8	48 10 0	53 15 0	+ 5 5 0
9	37 6 3	51 0 0	+ 13 10 0

APPENDIX IV

Population of Maharashtra and Karnatak

The growth of population in a country is determined by the surplus of its births over deaths and may be a sign of its poverty or prosperity according to the way in which it is brought about. A high birth-rate accompanied by a high death-rate or a low birth-rate accompanied by a low death-rate would both result in an increase of population. But the implications of the two ways are different. A high birth-rate and a high death-rate are the symptoms of misery while a low birth-rate and a low death-rate are the results of prosperity. In the first case there is an immense wastage of human energy due to the high death-rate and even then the resultant rate of increase in the population may not be so high as that in the second case. The trend of population in India as a whole is governed by a high birth-rate in association with a high death rate to which the provinces of Maharashtra and Karnatak contribute their might in full measure. Therefore the growth of our population from 15,716,000 in 1881 to 21,844,000 in 1931 can-not be considered as a sign of our prosperity, it is quite the otherwise. The rate of its growth every census can be seen from the following table.

POPULATION OF MAHARASHTRA AND KARNATAK
AT EVERY CENSUS

(In 1000 Persons)

Year.	Nagpur- Berar.	Deccan.	Konkan.	Karnatak.
1881	5,369	5,337	2,624	2,386
1891	5,806	6,238	2,871	3,917
1901	5,413	5,959	2,944	3,977
1911	6,166	6,411	3,007	4,028
1921	6,222	6,059	2,877	4,034
1931	7,044	6,193	3,186	4,421

These figures indicate that during the decade 1881 to 1891 there was a large growth of population in all the regions of Maharashtra and Karnatak. Perhaps this is due to the fact that these ten years were years of continuous prosperity. After that however, the general tendency has not been the same for all the regions. In the decade 1891 to 1901 the population of Konkan and Karnatak slightly increased while that in the Nagpur-Berar and Deccan largely diminished due to the occurrence of famines which did not affect the former. In the next decade there is again an all-round increase in the number of population over its number in the preceding decade. In the decade 1911 to 1921 the tendency to increase has been kept up only in the Nagpur-Berar division and to a very slight extent in Karnatak while in all the other regions the number of population diminished due to the occurrence of Influenza which took a very heavy toll from Deccan and Konkan. In 1921-31 there is again an all round increase in population due perhaps to the post-war cycle of prosperity. The census figures of 1931 however must be handled with great caution as they were collected at a time when the whole country was in the ferment of of the Civil Disobedience movement.

If we draw graphs representing the growth of population in these different divisions of Maharashtra and Karnatak we shall notice that while the population of Konkan and Karnatak has more or less remained constant between 1891 to 1921, it has been changing in every decade in other regions. During 1891-1901 the population of the Deccan decreased by 3 lakhs; during 1901-1911 it increased by 5 lakhs and during 1911-21 it again diminished by 4 lakhs. This decrease was the result of two severe famines which swept away a large number of people while the occurrence of plague kept down the rate of increase during 1901-11. The growth of population in the Nagpur-Berar division seems to be much more

regular. There was a slight decrease—4 lakhs—in the last decade of the 19th century, but since then it has increased by 16 lakhs. In Konkan and Karnatak excepting the Bijapur District, the rainfall is more regular than in the Deccan and hence the ups and downs in the growth of their population are very slight. Only in the decade 1911-21 there has been a decrease in the population of these regions, otherwise there is a continuous increase since 1881. However, the increase is very slow since 1891 which can be explained by the fact that a large portion of the population from the Konkan migrates to other regions in search of employment and is not included in the census as inhabiting that region. This also lowers the birth rate and keeps down the rate of increase.
