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SMALL SCALE PRODUCTION IN INDIA

A study in Indian Industrial Organisation

BY

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PREFACE

I gladly comply with Mr. Ramakrishna Ayyar's request for a preface to his interesting book, since the subject with which it deals is important. The book is a plea for the further investigation of small-scale production in India on the ground that it is both economically important in the present and capable of affording an improving livelihood to large numbers of people in the future. He seems to me to make out his case; but it may be worth while to mention one or two general considerations that support it.

Any sudden or revolutionary change in the economic organisation of a community involves social dislocation and the suffering caused by this may for a long time outweigh the economic gains of the reorganisation. The experience of Great Britain in the period in which modern industry was established amply illustrates this; in India the effects of large-scale factory employment are likely to be even greater, because the change involved is greater. The way a man lives is intimately related with the way he makes a living; the form that family life takes is dependent on the forms that property rights and employment systems take; an established economic system exercises a moral as well as an economic control over the individuals within it. It is important, therefore, if even the most necessary economic re-organisation is not to cause misery, to study all its effects, and to control the transition, even delaying it if necessary, from one economic phase to the next. Mr. Ramakrishna Ayyar is right to emphasise the wider social effects of economic change, since the protective policy hitherto adopted has tended to accelerate the development of factory industry without any regard to its secondary effects.

In one of its aspects the change from small-scale to large-scale enterprise is a change from rural to urban conditions. It is easier to provide education and regulate industrial conditions for an urban population; but it is also much more expensive. Moreover rural conditions are better understood, and the population knows how to adapt itself to them, since the vast majority have always lived under them. Now rural depopulation is not peculiar to India; it is a tendency noticed in practically every country that has population statistics. It is due to two causes, neither of which in itself is bad; the growing efficiency of

agricultural operations which makes it possible to feed the world's population with less and less labour, and to the growing separation of industrial and agricultural work. The second of these is a cause of rural depopulation, because the industries that used to be carried on in connection with agricultural work—textiles, agricultural implement making, milling, etc.—are now more and more concentrated in towns. The combination of part-time industrial work with agriculture still survives in most countries; Mr. Ramakrishna Ayyar gives reasons for supposing that, with comparatively little Government aid, the village industries of India could be made so efficient as to survive in competition with urban large-scale industries. Such a possibility is worth exploring, since the preservation of such industries would reinforce agriculture, and preserve the rural community to which the population is accustomed.

A further consideration is that the urbanised agriculturist in large-scale industry is usually rather a helpless person. Modern industry affords a relatively high standard of life to the skilled and educated wage-earners of Western Europe and America, who can organise effective trade-unions and, being enfranchised, can command the protection of the State. Its effect on the workers is very different, when these safe-guards are lacking.

Whether further inquiry would confirm or destroy the hope that the village industries can survive, it is impossible to say. The penetrative and competitive power of modern large-scale industry is shown in the relative decline of other forms of industry. Mr. Ramakrishna Ayyar relies, among other aids, on Co-operation to give small-scale enterprise the necessary strength to hold its own. Co-operation has served this end in certain branches of small-scale agriculture; more than that, it has tended to develop the moral qualities which its successful working requires. But it should not be forgotten that Co-operation is inherently a more difficult form of organisation than ordinary competitive private enterprise, just because it depends on the loyal and harmonious action of a large number of individuals, while the latter requires only the self-seeking initiative of the few. It cannot be assumed that a co-operative organisation can be created, just because it is desirable. This, however, is only an additional line of investigation suggested by Mr. Ramakrishna Ayyar's interesting little book.

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PREFATORY NOTE

The subject of this book forms a course of 4 lectures delivered by me at the Senate House, University of Madras, in January 1927. I have thought it desirable to write out the lectures with a few additions which had become necessary to make the data up-to-date. The aim of this little book is merely to suggest and indicate the lines on which Indian industrial development requires to be guided. I am deeply indebted to Professor Henry Clay of Manchester University for having kindly agreed to write a valuable preface to the book. My thanks are also due to the Syndicate of the Madras University for having given me permission to publish the manuscript in the form of a book.

Annamalai University }
January 1930. }

V. G. R.

I

PRESENT POSITION OF SMALL SCALE PRODUCTION IN INDIA

One of the chief factors in the success of any business in the field of Industry and Trade is the scale of production. Though every student of Economics has a fairly good idea of what we generally mean by production on a large and small scale, an attempt to define them presents some difficulty. There is certainly no sharp division between large and small scale production. The terms are comparative. But how are we to judge whether the operations of any business are on a comparatively large or small scale? If we want to compare businesses in a particular field of production, it may be possible to compare them by the size of the factory, the amount of capital invested, the number of men employed or the output in terms of money or quantity produced. It must be noted that it is not possible to compare businesses in different industries from the point of view of scale of production; it is not even possible in different branches of the same industry. For example, a very large arable farm would be very small if it is to be used for sheep farming and a small arable farm would be very large for a market garden. In fact in agriculture, the scale of production is always measured by the area of the land. It is thus necessary to bear in mind that the terms small scale and large scale production have to be used in a comparative, and not in an absolute sense.

Generally speaking, ever since the Industrial Revolution in Europe, there has been a general tendency to large scale production in all progressive countries; but in India small scale production is still more widespread than large-scale production.

India is now passing through an industrial revolution from the older type to the modern form of industrial organisation. The economic life of India in the past aimed at a non-specialised life in which the 2 arts of

The Meaning of
Small Scale Production.

The Economic
Transition in India.

agriculture and industry were combined. The villages were the seats of a variety of small industries and the artisans in the towns did not abandon agriculture. Every one had his defined status in the social economy. Each village was more or less a self-contained economic unit. Wages, rent and prices were largely fixed by custom. Industry was necessarily on a small scale, the markets being small. There was no great division of labour and the localisation of industries was imperfectly developed. There were no great facilities for quick transport. The institution of caste largely regulated the course of industry and trade. Payments were largely in kind. The craftsmen clung to their hereditary calling and transmitted the technique of their craft from generation to generation. In fact, society was organised largely on a basis of personal relations and duties.

This primitive but stable structure of social and economic life in India has been greatly modified by the impact of western influence. The whole country is becoming more and more economically inter-dependent. Custom is ceasing to be a binding force of society, and competition is asserting itself in the determination of wages and prices even in the rural parts. Industries are being organised on a large scale with an increasing division of labour. The economic history of India in recent times is largely the history of a rapid transition from the older type of village economy and handicraft to the modern system of capitalism, competition, and large scale production. This sudden development in the economic life of India has destroyed her indigenous industries and has ushered in some of the evils of industrialism without compensating advantages.

The Industrial Revolution in India is largely due to the impact of the industrial ideals of the western countries, and this process of industrialism is being accelerated by the development of railways and other modern facilities of communication. The progress of the industrial revolution on these lines is fraught with some serious evils which are believed to be mostly of a temporary character—destruction of the Guilds, decay of small workshops,

Conflicting views on
the Economic modernisation of India.

the factory system with its evils of overwork, employment of women and children, overcrowding in the industrial towns etc. In European countries some of these evils have been minimised by labour organisations, and by labour legislation by the state. The need for these remedies is being felt in India to-day and some steps have already been taken to remedy such evils. What are the lines of India's industrial advance? Should India reject altogether the methods of Western industrial organisation or should she replace the old system entirely by the economic organisation of the West?; or Should India gradually adapt herself to the industrial system of the West, while preserving and developing within proper limits her old small scale industries and handicrafts?

The New School:—the extreme advocates of the Western industrial system consist to a large extent of British and Indian large scale manufacturers and they believe that the economic regeneration of India must come through the adoption of the industrial organisation of the West. The old domestic organisation of industry has become effete and outworn.

The Old School:—the advocates of the old system point out the many evils of Western industrialism. The industrialisation of India on Western lines would reduce the large number of independent artisans to the level of drudges of automatic machinery. The migration of the people from villages to overcrowded industrial cities and the consequent disintegration of the family, the general decay of the villages which, in a country like India, have been and ought to be the real social and economic unit, the conflict of labour and capital—these are some of the evils of excessive industrialisation. Large scale organisation does not leave much scope for secondary industries which are of great importance in a great agricultural country. Mr. Gandhi, an extreme advocate of the old system, condemns machinery and machine production and pleads strongly for the revival of the old handicrafts and cottage industries on the ground that, though it does not give more wealth to the nation, it certainly brings more welfare by securing better physical, moral and social

conditions of the mass of workers. To quote his own words "Machinery is the chief symbol of modern civilisation, and has begun to desolate Europe. The workers in the mills of Bombay have become slaves. The condition of the women working in the mills is shocking. . . . It may be considered a heresy, but I am bound to say that it were better for us to send money to Manchester and to use flimsy Manchester cloth than to multiply mills in India. By using Manchester cloth, we would only waste our money, but reproducing Manchester in India, we shall keep our money at the price of our blood because our very moral being will be sapped". Thus he wants the people of India to discard machinery on the ground that it is opposed to the very spirit of Indian civilisation. Again some have opposed the introduction of machinery organisation on a large scale on the ground that it has destructive effects on the art industries of the country. The problem of industrial regeneration of India, it is said, is as much artistic as economic, and any healthy national development must secure the revivification of the arts, and the awakening of the artistic sense of the nation.¹

The Industrial evolution of India is bound to be influenced by the methods of Western Industrialism, but the success accompanying the adoption of western institutions will always be limited by the peculiar social and economic traditions of the country. Economic activities are always circumscribed by the social environment. In India statistical accounts of organised industries show that large scale production has superseded small scale production in industries producing standardised goods and services for which the demand is large and expanding; and in such industries, there is little doubt that large scale business has real advantages over small scale production in the use of machinery, division of labour, purchase of raw materials and the marketing of products. Statistics show that large scale production has made great progress in recent years in the transport industries, mining

The Proper view of the Industrial evolution of India.

¹ Havell—Essays on Indian Art and Industry, p. 67.

and metallurgical industries relating to iron, coal, gold, petroleum etc., in many manufacturing industries as cotton, jute, and also in insurance and banking.¹ The introduction of machinery and modern methods of organisation will be found useful in India in the case of some of these large industries. As a matter of fact, there is nothing inherently wrong in a machine, and there is no doubt that the use of machinery has enormously increased productive efficiency in many modern industries. The real abuse of machinery comes from the capitalists who use it as an instrument to exploit the poor. Machinery exists for man, and not man for machinery, and it is reasonable to think that, with the growth of a proper social conscience and higher business morality, many of the evils of machinery organisation could be removed.

The study of economic history has led to the conclusion that the development of production has passed through some definite stages in all countries and it is reasonable to infer that India is no exception, and that the factory system of production on a large scale which has already established itself in some industries must sooner or later supersede the small scale production which still prevails. But it is not absolutely certain that this should happen in India as in other highly industrialised countries. Our knowledge of economic history at present is not adequate to draw absolute conclusions until we know more of the development of processes in the countries of the West as well as the East. All nations are not alike in their social and economic life. There is, therefore, some force in the contention that the factory system may prove not quite suitable to Indian ways of living and thinking, and that some other system of production suited to Indian environment may be established. Whether the introduction of Western industrialism would be for the benefit of the people of India, as a whole, is a question to which no conclusive answer has yet been given, and, in dealing with a question of such fundamental importance, let us remember that India is a poor country, and wants a system of production which not only increases material wealth, but also ensures national welfare. The present system

¹ Statistical Abstract for British India 1924, pp. 628-33.

of production and distribution in Western countries has undoubtedly increased the total wealth, but it is admitted on all hands that it has failed to secure a better living for all. It is, therefore, reasonable to think that the modern factory production, and the system of distribution that has resulted from it are not absolutely inevitable in India.

The economic prosperity of India lies no doubt in developing large-scale production in enterprises which, by economies and efficiency, would meet some of the primary needs of the population, and also enterprises where the law of increasing returns operates to a large extent; but at the same time the social institutions and communal traditions of the country must form, wherever possible, the basis of a healthy industrial organisation. In the Western countries, after the recent war, the problem of the economist is the evolution of a social order in which production will be controlled by a social purpose. Socialism, Co-operation and other movements are indications of a distrust of the existing industrial system and of the need for a change of economic ideals in the Western countries. An industrial system which produces material wealth at the cost of the destruction of human personality stands condemned. The demand for a revision of industrial values leads to the demand for those social, economic institutions which promote personal and social welfare. In spite of the marvellous mechanical developments of the past century, handicrafts are still very important to the Indian people¹. The ideals of corporate life underlying the old economic order are still to be found in the villages. The new economic ideal which Western nations are now seeking to realise, perhaps more acutely after the war, will be found underlying the communal traditions and institutions of India. In spite of the progress made by large-scale production in some of the Indian industries in recent years, some of the small industries still show remarkable vitality. Small scale production occupies practically the whole field in retail trade, and in agriculture, and employs a larger number of industrial workers in small industries than those employed in the larger industries. In fact, small scale

¹ Imp. Gaz. of India, Vol. 3, p. 168.

production in India still supplies many of the requirements of the whole population.

In spite of the rapid rise of some large-scale industries of the modern type, like the iron and steel industry, cotton and jute mills etc., India is still essentially a country of small scale industries of the older type. The variety of forms of organisation in the case of the small scale industries is not generally appreciated. Small industries comprise some broad groups : (a) Cottage industries which are carried on in the villages along with agriculture. The Indian village even at the present day is generally self-contained. The village weaver plies his handloom with the help of his wife and children in his cottage ; the potter turns his wheel on the grounds adjoining the fields ; the blacksmith, the cobbler, the carpenter, the oil presser, the goldsmith are all engaged in meeting the simple wants of the villagers. These cottage industries comprise cotton weaving, basket-work, oil-crushing, pottery etc., (b) industries which are carried on, in towns or in villages, with no connection with the land, and the workers depend for their earnings exclusively upon their industrial work—small workshops of small producers engaged in weaving, metal industries etc. Each small producer employs a few workmen who use tools and some simple machinery. Small workshops of this kind are found in various forms, and it is reasonable to think that they will not disappear with the development of modern factory organisation.

With regard to the sale of the produce, these small industries also offer some variety of organisation. In the small industries of the cottage type, the worker sells his produce directly to the consumer. In the small industries of the workshop type, the workers work for a master who either sells the produce to a whole-sale dealer, or simply acts as a middleman. (c) Indian agriculture is also a small scale industry. The average Indian farmer with his small holding cultivates it on a much smaller scale than the average farmer in Western countries. About 71% of the Indian population are directly or indirectly connected with agricultural pursuits as compared with about 55% in Germany and

about 22 % in England. In India, village agriculture and cottage industries still supply most of the wants of the vast population, as is the case in Russia even to-day. (d) In several Indian towns some small industries of the factory type, e.g. flour-mills, rice-mills etc., have made some progress in recent times. These industries employ modern machinery driven by electricity or steam in small factories, and they employ a comparatively small number of labourers.

A brief survey of the chief industries will give us an idea of the present position of small scale production in India. Handloom weaving is one of the oldest and most important industries of India. In spite of the fact that handloom weaving has suffered greatly by the competition of machine-made cloths, the village weaver 'still holds an honoured position and turns out a fair portion of the dresses worn by the more conservative and orthodox members of the community.'¹ In many parts of the country handloom weaving is a by-occupation of those who are engaged in agricultural pursuits, and there are also important centres of professional handloom weaving. There are still markets all over the country eminently suited to the hand weaver, such as the production of special *saris*, and women's cloths of different variety, in which the power loom manufacturer does not compete successfully owing to the small or localised nature of the demand. In the various parts of India artistic and highly finished cloths are being produced to suit the individual tastes of the people.² In Burma and Assam, weaving is still a domestic industry carried on mainly by women. Though the handloom weaving is more costly than the power-loom, handweaving is still a living industry in India, and with the adoption of improvements in the handloom, and in the position of the weaver, handloom weaving which is concerned mainly with the home market can continue as an important Indian industry side by side with the power-loom.

¹ Imp. Gaz. of India, Vol. 3, P. 197.

² Imp. Gaz. of India, Vol. 3, P. 198-202.

The silk industry is another useful cottage industry employing a large number of the people in the villages. The greater part of the silk produced in the country is done by the handlooms as the preliminary processes are capable of being carried as cottage industries but in recent years India is opening her own markets to a foreign competition which would affect adversely the position of the local handloom workers.

Among other textile industries we may mention the jute and woollen industries. The jute industry of which India has a monopoly was, till recent times, a domestic craft but with the establishment of the jute mills on modern lines, 'the decline in handloom jute weaving is far greater than in the case of cotton'¹ and the future of the jute industry, it may be remarked, lies in large-scale production on modern methods. The woollen industry of India is now no longer a small scale industry, but all over the country there are various handloom factories where coarse blankets, shawls, carpets, rugs etc., are being produced. Carpet-weaving is practised all over India with remarkable variety of designs.²

Of great importance, both from a practical point of view and from an aesthetic standpoint, are the metal industries of India, particularly in copper, brass, gold and silver. Every large village has its copper smith and jeweller. In some cases, these local industries attain a considerable magnitude, though it is difficult to estimate the actual number of persons employed in these industries and the value of the goods they turn out.³

Among the other artistic and minor industries, we may mention ivory carving, pottery and wood-work. The series of monographs published by the various provincial governments in India give us an idea of the beautiful styles of wood-carving practised in the various parts of the country. The art industries of India connected with wood are practised on a small scale as hand industries.

¹ Imp. Gaz. of India, Vol. 3 p. 203.

² Imp. Gaz. of India, Vol. 3 p. 214.

³ Ananda Coomaraswami—The Arts and Crafts of India Chap. V. Imp. Gaz. of India, Vol. 3, Chap. IV.

From this brief review of the industrial situation, it is clear that small scale production still occupies an important place in the economic life of India. It is difficult to estimate the actual number of persons employed in the village and other small industries but there is no doubt that these industries still employ a much larger number than those engaged in the large-scale industries of the towns. It is interesting to observe that many of the Indian cottage and other small industries have still much vitality in spite of a severe struggle against the severe competition of indigenous machine-made goods as well as goods imported from foreign countries. Much of the vitality of these small industries is due to the singular tenacity with which the workers hold to their particular industry. To some extent this may be attributed to natural preference and traditional ties, and in part, to the fact that in many of the industries the workers show considerable skill and judgment in their occupations and in some cases, the persistence and vitality of these industries may be explained by the difficulty of migration and the uncertainty of success in the case of the pioneer who gave up his traditional calling for the busier life of the towns. Most of the village craftsmen are workers who are paid by the village. Another reason for the survival of some of the cottage industries is that, in India, the machine is the exception, and manual labour the rule, in spite of the fact that, in large centres, like Bombay, Calcutta, Madras, Cawnpore, and Lahore numerous factories of the modern type have been established.¹ Those who are engaged in the village industries hold with extraordinary tenacity to their calling and only acute social and economic distress causes them to give up their traditional occupation. The workers in these industries have no high standard of life and in most cases the strain on their physical strength is unduly severe. The small industries, not being governed by the Indian Factories Act, are not subject to restrictions of hours of labour, and so the workers work for long hours disproportionate to their earnings. In the case of the domestic workers who are employed in their homes by middlemen, the number of hours worked depends largely on the amount

¹ India in 1926-27, p. 330.

of work that has to be done and this may fluctuate with the seasons. In the case of some of the village industries *e.g.*, pottery, wood-carving etc., long hours are almost invariable, for here there is every inducement to overproduction. In such cases work begins frequently with sunrise and the workers drudge the whole day. Nevertheless work of this kind is not generally felt to be a great strain because many of the operations incidental to these industries are such as can be taken up, put down and resumed at will and in the case of woman fit inconveniently with their ordinary domestic duties. The absence of compulsion and control tends to relieve the intense and monotonous nature of the work. From a hedonistic standpoint, it is not difficult to choose between the lot of the urban worker in a factory under the power of the fast-driven machinery and the village worker who carries on his work quietly in the midst of his wife and children. ✓

Small scale production holds an important place even in the economic life of the European countries. In France, and Germany, it is estimated to employ nearly $\frac{1}{3}$ of the total industrial workers. In spite of the progress in large scale production, the triumph of big industries is not so universal as is popularly supposed. The small scale industries still persist even in highly industrialised countries. In France it has been estimated that while half of the population lives upon agriculture, and one-third upon industry, the people engaged in industry are equally distributed between the large and the small industries. In Germany the small home industries are widespread and hold an assured place in industrial development. Switzerland is remarkable for the survival of various domestic industries and nearly $\frac{1}{3}$ of the total population is now actively engaged in these industries—watch-manufacturers, makers of musical boxes, weavers, wood-carvers, straw-plaiters, basket-makers and the like. It is perhaps in Russia more than in any other country that one can appreciate the value and importance of rural industries and trades. The home handicrafts (Koostarnige Isdijele) of the Russian people supply their ordinary wants and, in some cases, have brought them considerable wealth.

Although the average earnings of the village handicraftsmen, as compared with the wages earned by the working classes of Western Europe, are exceedingly poor, most of these industries bring the workers many millions of roubles. During the long winters, a large number of men and women turn to handicrafts and produce various kinds of goods which are remarkably cheap and useful. Each village or group of villages in N. Russia which has had communal institutions for centuries specialises in some particular industry. As Russia is the largest agricultural country in Europe, the village or home industries are of greater importance than those of industrial towns. For instance, the factories and mills of the Moscow government, under normal conditions, are estimated to employ about 188,000 workmen, while the villages of the same government employ about 190,000. In the majority of governments, there are few or no factories and the proportion of town to country workmen is very marked. Silk weaving carried on in Central Asia and the Caucasus is a very important industry. In Moscow and Vladimir alone silk goods are, in normal times, manufactured by the peasants to the value of nearly 10 million roubles. Another great village industry is the preparation of skins and furs of wild animals. The 140 million Russian peasants are greatly attached to their country and its industries which constitute an important factor in the economic life of Russia. It is thus clear that small industries persist in the economic life of some European countries.

In India, small industries have shown remarkable efficiency in the past, and still occupy a large part in the system of production. The low wages, the scattered character of the Indian cottage and other small industries, and the difficulty of organising them are perhaps some of the serious defects of the present system of small scale production in India. In spite of these inevitable defects in the economic organisation, small scale production in India at present covers a much larger area than in European countries.

II

THE NEED FOR THE PRESERVATION AND DEVELOPMENT OF SMALL SCALE INDUSTRIES IN INDIA

Though India is, to day, largely an agricultural country, there is overwhelming evidence to show that there was a time when she was one of the leading manufacturing countries of the world.¹ Till the beginning of the 19th century, Indian manufactures were in great demand in European markets, and these manufactures of India were the products of manual labour. The Indian craftsman showed remarkable skill and judgment, and the artistic excellence of his work was greatly admired in Western countries. "At a time when the west of Europe, the birth place of the modern industrial system", says the Indian Industrial Commission² "was inhabited by un-civilized tribes, India was famous for the wealth of her rulers, and for the high artistic skill of her craftsman. And even at a much later period, when merchant adventurers from the west made their first appearance in India, the industrial development of this country was, at any rate, not inferior to that of the more advanced European nations". The silk manufactures, the metal and the cotton industries, had shown a high degree of development in India. The Indian knowledge of metallurgy is very ancient and widespread. There existed in India a very early knowledge of the art of preparing steel; the steel of India was known to the Greeks and the Persians, and its manufacture, on a small scale, has survived to the present day in India. Weaving is again the oldest and the most important of the industrial arts of India. It was a true domestic industry all over India

¹ Sir. W. Hunter—Indian Empire. M. Martin—The Indian Empire. Imp. Gaz. V. 3
Ranade—Essays on Indian Economics (1906) pp. 171-72.

² Report of the Indian Industrial Commission 1918, Chap. I.

practised by even women of rank, or as a part of the household work.

The end of the 18th and the early years of the 19th centuries were marked by vast changes in industrial production in England, and other countries, owing to the introduction of machinery. Production on a large scale superseded production on a small scale. These industrial changes greatly affected the economic life of India. Nothing was done to place the indigenous industries of India on modern lines. On the other hand, the East-India company and the British government at home adopted a policy of crippling the native industries. In the words of Sir W. Hunter, the distinguished historian of India: "Many circumstances conspired to injure the Indian industry in the last century. England excluded these fabrics not by fiscal duties but by absolute prohibition . . . while, on the one hand, the downfall of the native courts deprived the skilled workman of his chief market, on the other hand, the English capitalist has enlisted in his service the forces of nature against which the village artisans in vain try to compete. The tide of circumstance has compelled the Indian weaver to exchange his loom for the plough, and has crushed many of the minor handicrafts". India was thus reduced from a manufacturing to a purely agricultural country.¹

The prejudicial effects of the importation of cheap machine-made goods on Indian Small Industries have been summed up by the Indian Industrial Commission in the following words: "The effect (of imports) on small industries in India has been considerable, but has not always been in the same direction. The import of brass sheets, for example, has reduced the demand for the services of the brass founder, but has greatly extended the business of the maker of brass hollow-ware. Cheaper iron obtainable in convenient sections has helped the cultivator . . . and has diminished the cost of many of his indigenous implements. The position of the village artisans is

¹ R. C. Dutt-Economic History of Brit. India, Vol. I. (Mill and Wilson-History of India, Vol. I. pp. 538-539. Note). Report of the Indian Industrial commission (1918), Chap. I.

changing. The tendency is for them to lose their status as village servants . . . and to become more and more ordinary artisans who compete fully among themselves for custom. The influx of mill-made piece-goods, not only of foreign but of Indian manufacture, had before the war cheapened the price of cloth in comparison with other commodities, and had enormously extended its use by the poorer classes, but had, at the same time, prejudicially affected the communities of village weavers scattered all over the country¹.

India is naturally a country of small industries. "Here" says Wolff, "is a population of many millions 90% of whom are riveted to the soil, which, with its fragmentary small holdings, provides employment for the ryots only during part of their time, and yet prevent them from going away to seek a living elsewhere . . . and Mr. Ewbank found, in the course of a recent enquiry, that small industry figures very largely indeed in Indian economic life as a whole. There were a short time ago, so he shows, of the 315 millions peopling India, 35 millions depending on industry. Of that number, 18 millions were dependents, leaving 17 millions actually employed. And of these, only 823,000 were known to be employed in power mills leaving over 16 millions occupied in small workshops. That clearly shows the capacity of Indians for small industry and the readiness with which they take to such industry as a congenial calling"². It is thus quite evident that small industry is still a dominant feature of Indian economic life. The neglect of these industries involves the migration of millions of these producers into agriculture, where there is already a great pressure of population.

Again, modern large scale production of the European type in India is not possible owing to the small volume of trade, lack of indigenous capital, and organisation, and, even with the rapid growth of large industries, it may not be possible to provide

¹ Report of the Indian Industrial Commission 1918, Chap. I.

² Wolff—Co-operation in India, p. 280 *et seq.*

employment for the millions of persons who will be thrown out of work by the decay of the small industries.

In agricultural countries, village industries serve as a by-occupation to agriculture. The loss of economic equilibrium brought about by the decline of the handicrafts and indigenous arts in India has brought a pressure on the soil leading to agricultural indebtedness. The wide-spread destruction of Indian handicrafts is increasing the tendency to diminishing returns in Indian agriculture. The true remedy for this lies in organising handicrafts and cottage industries, wherever possible, on sound economic and social foundations. The development of village industries, if co-ordinated with agriculture, would secure a supplementary income for the cultivators, and would thereby lessen the evils of agrarian indebtedness. As Moreland observes, "It is a matter of common knowledge that the present income of the country, even if it were equitably distributed, would not suffice to provide the population with even the indispensable elements of a reasonable life. This fundamental factor of poverty is, unquestionably, co-related with the undue preponderance of agriculture as a means of livelihood¹." The Indian agriculturist is the foundation upon which the whole economic prosperity of India depends, and the government departments of Industries should aim at making an improvement in his standard of life their chief concern. Measures taken for the improvement of agriculture will, therefore, be incomplete without a close and co-ordinated effort at organising and resuscitating rural industries.

It has been well observed, "the development of small industries side by side with the great factories is not antagonistic; on the other hand, it is an economic necessity. The extension and growth of large scale organisation, no doubt, implies the absorption of the small industries, but we may also note a parallel process, which consists in the continuous creation of new industries usually taking their start on a small scale. Large scale factory organisation calls into existence a number of small workshops, partly to supply its own needs, and, partly to transform its

¹ Quarterly Review. April, 1917.

produce to a number of other uses. In countries where large scale organisation has made great progress, the cheapness of its products has favoured the creation of a number of small industries”¹.

The various provincial governments of India are at present unable to help the initiation of large industrial undertakings involving large capital, the use of complicated machinery, and competition in the world markets; and so they must direct their attention towards the organisation and development of small industries, preferably on co-operative lines. Small industries in India have, therefore, a large task to fulfil, and are an economic necessity for supporting the vast rural population.

Indian art industries have been highly appreciated by students of Indian art all over the world.
Artistic value of Indian Small Scale Industries. “The Indian styles”, writes the historian of Indian Art,” are unrivalled for patient elaboration of the details which are always designed with elegance, and always executed with care. The very extent of ornamentation produces feelings of astonishment, and the smaller examples are always pleasing from the elegance of the parts, and the appropriateness of the whole . . . No affection, and no imitation of other styles ever interfere to prevent the purpose-like expression of every part, and the effect consequently is always satisfactory and pleasing, and when the extent is sufficient, produces many of the best and highest modes of expression of which the art of architecture is anywhere capable”.²

Another sympathetic critic of Indian art, in speaking of Indian craftsmanship and culture, observes. “The important part which craftsmen, more especially, oriental craftsmen, have always played in the world’s history as missionaries of civilisation, culture and religion is not generally realised by bookmen. Even at the present day, the Indian craftsman deeply versed in his *silpa-sastras* learned in folk lore and in national epic literature, is though excluded from Indian universities . . . far more highly

¹ Kropotkin Fields, Factories, and Workshops, pp. 170-171.

² Fergusson—Indian Architecture.

cultured intellectually and spiritually than the average Indian graduate".¹

The Indian craftsmen still possess a good deal of originality, and, are struggling to maintain the indigenous traditions in spite of serious neglect. The condition of the art industries is an index of the economic progress and the artistic development of a nation. The development of the art industries brings into play the highest creative abilities.

The industrial arts of India are so numerous and varied that nothing more than a bare enumeration of them can be attempted here. The industries are those connected with metals, wood, stone etc. wood-work, ivory-carving, embroidery, mat-making, carpet-making, stone-carving, miniature-painting, gold and silver plate, lacquer-ware etc.² At present, these art industries of India are carried on all over the country, and, only a very few of them are worked on modern lines with scientific appliances. In every Indian village, all the traditional handicrafts are still to be found at work. The decay of these industries will mean the loss of the most skilful handicrafts, and the artistic side of Indian culture.

The wholesale importation of machinery into India in the field of manufacture will result in the deterioration of most of the skilled and trained handicrafts. The limitations of machinery in the field of art production have been recognised by all modern writers and in the modern era of machine production the art industries of a country will be ruined unless they are guided by a sound and intelligent public opinion and refined taste. Even Professor Marshall, a strong advocate of modern industrial organisation, admits the prejudicial effects of the extended use of machinery on skilled workmanship. He says "Let us return to the increasing tendency of machinery to supplant the skilled hand which is greatly increasing man's power over nature and his

Some of the Industrial Arts of India.

Prejudicial effects of the extended use of machinery on skilled artisanship.

¹ E. B. Havell—Indian Sculpture and Painting (1908) p. 183.

² Sir George Birdwood—The Industrial Arts of India ; Imp. Gaz. of India Vol. 3.

material wealth, though it is not an unmixed benefit from the social point of view. In fact if all the world were a single person with one purpose, and that the highest, it might be well to put some check on this rapid supersession of human skill; even at the expense of delaying the increase of material comforts and luxuries”.

India is a land of villages. There are about 68,522 villages and only about 2313 towns¹. About 90% of the population is rural, while in a country like England 79% of the population is urban. Most of the towns of India are no more than big villages, and can bear no comparison with the cities of the western countries. Many writers have dwelt upon the characteristic features of the Indian village community as a self-sufficing social and economic unit, and as the centre of India's civilisation in the past. Something of the old economic life can still be found in the villages; the carpenter, the potter, the blacksmith, the weaver, the tailor, the shoe-maker etc., are recognised members of most village communities. The higher crafts, those of the artistic workers in wood, metals, stone, textiles etc., are carried on in special localities, in direct relationship to physical conditions. Many of these artists and craftsmen engaged in the higher arts and crafts prefer to be independent small producers with moderate profits rather than the highly paid employees of big concerns. The existence of the rural industries on a small scale serves as a spur to individual enterprise with its potentialities for individual and social progress. In the cottage industries, the workers work in or near their homes, securing thereby self-respect, economic and artistic freedom which are conducive to social and industrial stability. It may also be noted that the small industry, particularly the cottage industry, is an instance of industry which can be developed without interfering with the established trade of the world².

¹ Indian Industrial Commission—Report, p. 416.

² Indian Industrial Commission—Evidence Vol. I, p. 8.

Social and Moral
value of the small In-
dustries.

Again, the case for the village industries is strengthened by the fact that it gives opportunity for the self-expression of the worker. The Indian craftsmen have inherited a tradition and training handed down from generation to generation. At the same time they are not unwilling to introduce improvements wherever they have found them profitable, as will be seen in the introduction of improved handlooms, the sewing machines, and other labour-saving appliances. As it has been well-observed 'Indian craftsmen show a large capacity in the utilisation of copper and brass and their alloys. In Burma, for example, images of a stupendous size are cast in brass by a small band of operators whose appliances would seem absolutely inadequate judged by European standards. In many parts of India, again, chain bangles are moulded and sold for a few annas a pair which in Europe and America could be produced at many times the price charged'¹. The modern tendency to measure every industry solely in terms of material wealth has to be deprecated. Industrial prosperity has its human as well as material values, and it must not be forgotten that an industry is neither prosperous nor healthy which shows a great output of material goods at the cost of the deterioration in the health and character of the workers.

The problem of village reconstruction is now regarded as one of the most important problems of Indian rural economy. The resuscitation of small industries in India is intimately connected with rural reconstruction. Any step taken towards the improvement of agriculture in India, and of developing a higher standard of life in the villages will tend to promote the growth of small industries. The evil effects of concentrated industries on village life are not sufficiently realised by those who advocate complete industrialisation of the country. Rural industries in association with agriculture are of great importance in an agricultural country. Village industries not only arrest the decay of village life, but make the people settling there comfortable and prosperous. "To this end" says Wolff, "rural industries made to combine with the cultivation of the soil so as to fill up idle towns or to

¹ Imp. Gaz. of India, Vol. 3, p. 240.

occupy superfluous hands may be expected to prove a material help.¹

The case for small scale production is further strengthened by the conditions of Indian agriculture. In giving evidence before the Royal Commission on Indian Agriculture, the Director and the Assisant Director of Agriculture, Bengal, observed "We do not consider that the establishment of large farms by capitalists is economically sound. The present proprietor who is the backbone of agriculture . . . would be turned out of his holding to become a casual labourer." Alfred Marshall, the doyen of English Economists, points out the great advantage to the public interest of small holdings which can be worked by people who have some other occupation, and also allotments of large-gardens: "They increase the number of people who are working in the open air with their hands; they give to the agricultural labourer a stepping-stone upwards, prevent him from being compelled to leave agriculture to find some scope for his ambition, and thus check the great evil of the continued flow of the ablest and bravest farmlads to the towns. They break the monotony of existence, they give a healthy change from indoor life, they offer scope for variety of character and for the play of fancy and imagination in the arrangement of individual life; they afford a counter-attraction to the grosser and baser pleasures; they often ennoble a family to hold together that would otherwise have to separate; under favourable conditions, they improve considerably the material conditions of the worker; and they diminish the fretting as well as the positive loss caused by the inevitable interruptions of their ordinary work."²

'Back to the land' is a watchword which, in one form or another, is beginning to appeal to political and economic thinkers all over the world. The problem in most of the western countries is now the discovery and provision of some effective counterpoise adequate to draw the urban population away to the country-side, and in a country, like England, the revivification of small farming

¹ Wolff—Rural Reconstruction p. 308.

² Marshall—Principles of Economics p. 742.

seems to be animated by some such purpose. In India the difficulties are not so great, but it is necessary to sound a note of warning as there is a tendency towards migration of people from the country to the towns. In fact, domestic industries in association with agriculture will be one of the best means of promoting social welfare in an agricultural country.

Some tendencies in machine development are in favour of the small producer. The transmission of power by electricity, the invention of small machines, the diffusion of trade knowledge, the growth of scientific knowledge and the easy means of broadcasting it—all these are developments in favour of the small producer. In the words of Kropotkin, “if we compare the advantage of the great and the small industries, we find that there are three advantages in favour of the former. (1) Economy in the cost of motive power (2) Division of labour and its harmonic organisation (3) the advantages offered for the sale of the produce. Of these, the first is more and more eliminated by the progress achieved in the transmission of power; the second exists in small industries as well as great industries, and the third could be overcome by co-operation among small producers”¹

The small producer is often an individual working with hired labourers and, in some cases, the small scale producer is a body of labourers working for themselves, and, in such cases, they will be helped by modern machine development. This particular kind of small scale production, by improving the economic and social condition of the labourers, will be valuable in securing industrial stability and social welfare.

The case for the development of small industries in India is pretty strong. As Saunders observes: “With reference to small industries, there is a wide field open to government. There are numerous village industries, in Burma, some of which are extensively carried on, and serve or used to serve the needs of the people throughout the province, while others are more local in character. Such are weaving, pottery, slipper-making, umbrella-

¹Kropotkin-Fields, Factories and Workshops, pp. 303-304.

making,—lacquer-work, jaggery-boiling, and a number of others. Many of these are efficient in their own way ; but they are carried on in ignorance of what western knowledge has achieved, and many of them are threatened with extinction. It seems desirable that, wherever it can be done, the craftsmen should be put in the way of learning such western methods and improvements as may be of assistance to them. They are still village industries and though some are capable of concentration in large factories, it is in the direction of maintaining their present character that government help should be given. The question of markets cannot be lost sight of, as the ordinary villager is not capable of advertising his wares, of accumulating stocks or developing new markets ; government assistance is properly necessary for these purposes. Here co-operative societies offer a means of development which may be of the greatest value"¹. The old established small scale industries, like the village weaving industry and other handicrafts, have been adversely affected largely by the competition of foreign manufactures, and, in some cases, by the competition of the domestic large-scale industries.

As the Census report of 1911 observes "the extensive importation of cheap European piece-goods and utensils and the establishment in India itself of numerous factories of the western type have more or less destroyed many village industries. The high prices of agricultural produce have also led many village artisans to abandon their hereditary crafts in favour of agriculture".² Wherever some of these small industries are suffering, the main cause is the lack of convenient credit. The remarkable vitality shown by many of these small-scale industries, in spite of long period of neglect, shows that, with government support and a strong national sentiment in their favour, there is a great future for some of these small industries.

To conclude, in modern industrial organisation, small scale industries have a place as well as the large industries. But

¹ Indian Industrial Commission—Evidence, Vol. 5, p. 617.

² Indian Census Report 1911, p. 409.

in developing small industries, we have to distinguish between healthy forms of small scale production and unhealthy sweated businesses, where the workmen work for the middlemen at low wages. Such sweated industries do not deserve encouragement. But healthy forms of small-scale production in India, wherever social and economic conditions permit, have to be encouraged and preserved with a view to attain a healthy social economy.

III

INDUSTRIES SUITABLE FOR SMALL SCALE ORGANISATION

Small industries hold an important place in the industrial life of every country. It would be a mistake to suppose that industrial progress necessarily implies the supersession of small industries by large industries. In the words of a recent and able writer, "the advantages of large scale production are so great that we might expect the small firm to be driven out of industry. But the small firm refuses to be driven out . . . The small firm has advantages of its own to set against the obvious economies of a large output. We must remember that large and small firms are competing for a growing volume of trade, and not for a fixed amount so that the gains of the large concern need not necessarily be at the expense of the small concern"¹.

We may now consider some of the conditions favourable to organisation of industries on a small scale. In the first place, factory organisation implies certain economic conditions which are not always to be found in every industry. Large scale production is not profitable unless there is a wide and steady demand for the goods so produced. Secondly, factory organisation is not possible without large capital and means of communication which are necessary to widen the markets. The organisation of production on a large scale by the free use of machinery and division of labour involves that the different processes of production should be carried on continuously but such processes are not possible in the case of seasonal industries like agriculture. Thus technical obstacles in standardising the processes are a real obstacle to large scale enterprise in some industries.

¹ H. Clay.—Economics for the General Reader.

There are certain industries where the large-scale organisation is at a great disadvantage because of the difficulty of securing close supervision, which is so essential to efficient production. There are industries in which great aggregations of capital are necessary, and, in such cases, the advantages of large scale production are not sufficient for its development. The small firm holds its own in cases where consumers expect facilities to be near at hand, and, in many cases, they will patronise a small shop near their homes rather than a large establishment far away from them. As Marshall observes: "Of two businesses competing in the same trade, that with the larger capital can nearly always buy at the cheaper rate, and can avail itself of many economies in the specialisation of skill and machinery, and in other ways which are out of the reach of the smaller business; while the only important special advantage which the latter is likely to have consists of its greater facilities for getting near its customers and consulting their individual wants."¹

Industries which have the best chances of organisation on a small scale are those in which the demand for the product is limited to particular classes or localities so that the large scale producer cannot compete successfully. In the case of artistic handicrafts and decorative industries (*e.g.* carpetweaving, expensive cotton fabrics, lace work and embroidery, metal work, ivory work, wood-carving etc.) which produce costly commodities for the rich few, the large producer finds it impossible to compete with the small producer because of the limited market and the artistic excellence of the products.

Some industries which meet individual requirements are also suitable for small scale organisation. Some consumers refuse to accept the common standardised machine-goods and their individual tastes have to be satisfied. The essence of art is individuality and things of exquisite workmanship always bear the impress of the maker's personality, and, in such cases, handicrafts have a distinct advantage over large scale machine-production.

¹ Marshall-Principles of Economics, 8th Edn. p. 693.

There are again some industries which produce only some coarse materials as, for example, some varieties of country cloths, which are in demand in certain localities; the demand for such designs is strictly local, and the large-scale production cannot profitably compete with the small producer. In the manufacture of every coarse cloth, the handloom is free from the competition of the powerloom, as the material used in the handloom is not sufficiently strong to be operated by power machines. In the case of some of these industries, the small producer is helped to some extent by the proximity of the market and knowledge of local demand. Again, it is a noteworthy feature of modern industrial organisation that small industries are found to be developing as subsidiary to the large factories. As Marshall observes "In the clothing trades especially we see the revival of what has been called 'house industry' which prevailed long ago in the textile industries; that is the system in which large undertakers give out work to be done in cottages and very small workshops to persons who work alone or with the aid of some members of their family, or who perhaps employ 2 or 3 hired assistants. In the remote villages in almost every county of England agents of large undertakers come round to give out to the cottagers partially prepared materials for goods of all sorts, . . . and take back with them the finished goods". But the possible dangers of the multiplication of such small work-shops in crowded cities have been brought out clearly by the same writer, and these must serve as a warning to India in her future economic development. "It is, however, in the great capital cities in the world, and in other large towns, especially old towns, where there is a great deal of unskilled and unorganised labour, with somewhat low physique and morale, that the system is most fully developed, especially, in the clothing trades which employ 200,000 people in London alone and in the cheap furniture trades."¹

We have seen how small industries of the small workshop and cottage type can be developed along with large industries

¹ Marshall—Principles of Economics, 8th Edn. p. 295.

either independently or as subsidiary industries. In India, in all the provincial towns, we find quite a large number of small workshops engaged in the finest work in gold, silver, wood, brass etc. The workshop system is more general all over India in the metal trades, and also, to some extent, in handloom weaving. One great advantage of the workshop organisation over cottage industries is the greater facilities in respect of capital, credit, supply of raw materials, and marketing of goods. As there is not sufficient indigenous capital in India for large scale enterprises, the investment of capital in small workshops offers a wide field for the educated Indians of the middle classes in our country.

The arts and crafts of India are so varied and so widely scattered all over the country that a detailed treatment of them cannot be attempted here ¹ and many of the industries which satisfy the conditions outlined above are capable of survival and organisation on a small scale. Among the more important small and cottage industries where there is scope for small scale organisation, we may refer in particular to handloom weaving. Statistical evidence regarding the development of handweaving has been carefully collected and presented by the Indian Industrial Commission. ² The importance of the industry is also explained by Coubrough in his 'Notes on Indian Piece-goods trade' published by the Government of India. At the census of 1921 an attempt was made to estimate the number of handloom, in 2 provinces of India; in the Madras Presidency, and Bihar and Orissa, the number of handlooms actually at work was reckoned to be 169,403 and 164,592 respectively. The remarkable vitality of handweaving may be seen from the fact that hundreds of weavers still ply their shuttles even in a great centre of mill production like Bombay. In the Bombay Presidency the pro-

¹ See A. K. Coomaraswami-Arts and Crafts of India. Sir George Birdwood—Industrial Arts of India. Imp. Gaz. of India v. 3.

² Indian Industrial Commission-Report-Appendix I; Bulletins of Indian Industries and Trade, No. 16—Notes on Indian Piece-goods Trade; Amalsad-Handbook on Handloom weaving in the Madras Presidency.

duction of hand woven cloth is calculated to have increased by 40% over the amount produced 25 years ago. Textile experts are of opinion that the the handweaver can compete with the mill-owner in weaving the higher and the lower counts, but not in the medium counts. An important factor in favour of the handloom in India is the great number of specialised types of cloth which have the sanction of custom, and which are not suitable, both as regards quality and quantity, to large scale production in mills. It is difficult to give exact figures of the production of the different types of specialised cloths produced by handlooms. Superficial observers often remark that the Indian handloom has no place in Indian industrial development. It is generally believed that the hand-weaving in India has been practically strangled to death by the competition of foreign piece-goods and mill made cloth. In recent times, particularly during the period of the war, the hand-weaver was hit hard by the check on the imports of foreign yarn, the great demand in India for textiles for war purposes, and the consequent increase in the consumption of yarn by Indian mills, the scarcity and dearness of dyes, but since the close of the war he has shown signs of increasing his output. In the 3 years 1920-21 to 1922-23 the mills used 1050 millions of yarn while 920 millions was available for handloom weavers. The following figures show the consumption in India of the mill-made cloth, hand-woven cloth and foreign piece-goods.

—	Figures in millions of yards per annum		
	1896-97 to 1900-01	1918-19 to 1922-23	1920-21 to 1922-23
Mill made cloth ...	301 (10%)	1432-(39%)	1498 (37%)
Hand Woven cloth ...	846 (27%)	1058-(29%)	1226 (31%)
Foreign piece goods ...	1932 (63%)	1166 (32%)	1284 (32%)
	3079 (100)	3656 (100)	4008 (100)

These figures show, among other things, that there is an appreciable improvement in the percentage of consumption of handwoven cloth in India. In this connection, it is interesting to note that $\frac{1}{3}$ of the weight of cotton goods made on the handlooms in all India is made in the Madras Presidency and the weight of the cloth woven in the handloom in the Madras Presidency is nearly 5 times as much as that woven on the power looms.

The great importance of handloom weaving in India may be seen from the fact that it supplies the country with nearly $\frac{1}{3}$ of its requirements of cloth. There is no doubt that the handloom industry is steadily, though slowly, increasing its output. All the highest classes of textile weaving in India are done solely on the handloom industry. It may also be noted that the mill industry and the handloom industry are not really antagonistic. It may be said that the amount of direct competition between the mills and the handloom is very restricted. The handlooms in India at present provide a large market for yarns produced by mills, as the handlooms are using large quantities of mill yarn of regular twist and strength in the place of the irregular and usually coarse handspun yarn of former days.

It may be added that the hand weaving industry in India should not be measured entirely in terms of mere production. Like other village crafts, it is peculiarly suited to the sentiments habits, and caste organisation of the Indian worker. The village weaver in India with his conservative instincts prefers to weave a few yards of cloth every day in his own surroundings, and thus prefers the hardships of village life and cottage craft in the midst of his wife and children to the evils of industrialised city life. The decay of hand weaving as a cottage industry has also a disintegrating effect on village life. Finally the handweaver is often not merely a worker but a craftsman and an artist. The difficulties of the handloom industry in respect of the technique of the craft have been minimised by the modern improvements of the handloom. The difficulties of the handloom weaver in respect of capital can be met largely by co-operation.

Among other indigenous industries which are capable of organisation on a small scale are those connected with wood, silk-rearing, and some of the metal trades. The fact is, small industries, whether worked by human hands or power, can hold their own against factory work in cases in which the material used is such as the power machine cannot handle, or in, which the human hand yields a substantially more valuable product, or else products which suit local tastes. It is necessary to study the economics of paper manufacture from bamboo pulp, the oil-crushing industry, pottery, rope-making industry and seri-culture.

Those of us who hold that small industries have no place in modern industrial organisation have only to study the position of these industries in some of the western countries. It would not be possible to enumerate here all the varieties of small industries which have developed in these countries side by side with larger industries. In France, small industries are to be found in great variety. The silk-weaving of Lyons, the silk-ribbon weaving of St. Etienne, the watch industry of the Jura—to mention a few of them—are remarkable for their vitality, and are flourishing as small industries. In Italy, small industries of a rural character straw-plaiting, basket-making, mat-making, wood-work of various kinds, pipe-making etc., serve as a by-occupation and provide remunerative work for a greater part of the year. In Germany, Hungary, and most of the smaller states of S. E. Europe, the instinctive aptitudes and old customs of the people have helped the development of various small industries, and the efficiency of some of these industries is largely due to the fact that, wherever possible, modern machines and appliances are used in the small workshops.

The next question is—How are the small industries to be helped? In the first place, it is absolutely necessary to undertake a comprehensive survey of the production of the country with special reference to small industries. It is unfortunate that in our

Small industries in France, Italy, Switzerland etc.

Census of Small Scale industries.

country there is no periodical census of production, as in the case of England, United States and other European countries. An intensive enquiry into the present state, growth and technical development of small industries in India should be undertaken by the various provincial governments. In 1924 a survey of the cottage industries of Bengal was undertaken by the Department of Industries with a view to increase the production of raw materials used by them, and also to improve the methods of their manufacture. It is a matter for gratification that the Madras Government have recently adopted a definite policy towards the improvement of the small industries. In his evidence before the Royal Commission on Indian Agriculture, the Director of Industries, Madras, observed that a survey of cottage industries in the Presidency, existing and potential, is to be undertaken with a view to develop and organise them or to introduce new industries. The absence of accurate and comprehensive statistics of production in India, in all its aspects, makes it difficult to measure the economic activities of the people, and to trace the changes which are taking place from time to time. It can hardly be said that the existing statistics published by the department of statistics and other bodies enable us to measure the productive power of the community. Annual returns, which are approximately trustworthy, are available for some of the agricultural and mineral products. On the other hand, the statistics of industrial production are far from satisfactory. Even the statistics of agricultural production are not free from defects. In the first place, the estimates of the acreage and yield of crops in some provinces are stated to be more or less conjectural. Measures are, no doubt, being taken to bring about an improvement, but no great improvement can be expected unless government is prepared to incur considerable expenditure to secure permanent and reliable agencies. Again the statistics of agricultural produce are inadequate, in the sense that they relate only to a few of the most important crops. The returns of live-stock are officially admitted to be incomplete. No figures of output are available, except for the organised industries

like jute, cotton, paper, wool, iron and steel. The words of Dr. Bowley with reference to the improvement of official statistics in England might well be applied to India. "The compulsory powers of collecting statistics are too few, and too seldom applied. The public is getting educated to understand in part the use of inquiries and it is quite possible to increase the demands made on them. The bulk of the burden of furnishing information now tends to fall on a few sympathetic employers or others, and we tend to get a biased selection." About 10% of the total working population in British India is estimated to be supported by industries of which organised industries support only about 1%, and so it is important to estimate the output of unorganised or cottage industries. The Census of 1921 made an attempt in this direction with regard to handlooms and complete figures for all the provinces are not available. At present, there are no means of estimating the output of the small industries in India. In the words of the Indian Economic Enquiry Committee: "The material relating to production from cottage industries is exceedingly meagre. In India, cottage industries play a very important part in production. Nevertheless the information which is available is scanty. . . . in a few cases, the information relating to the output per man, per family per day, or per month, quantity of bye-products, and the number of workers engaged in particular cottage industries can be picked up here and there. But, beyond localised and spasmodic efforts, no attempt has been made to ascertain the total production of cottage industries. We consider it of great importance that an estimate of the quantity and value of the total annual production of cottage industries should be ascertained along with the estimated value of raw material used up. It would be interesting to ascertain, at the same time, the number of persons engaged wholly or partially in such industries distinguishing dependents and hired workers from the owners. In weaving, the number and kind of looms might be ascertained, and, similarly, in cottage industries using machinery of one kind or other, the number of such machines might be

recorded. Where the production varies in quality, the grades might also be noted"¹.

Small scale industries of the workshop type, such as local quarries, brick-fields, metal trades, textiles workshops etc., are to be found all over the country. The outturn of such businesses could be obtained to a large extent by economic surveys of the principal towns. District boards, municipalities and other local bodies may be made to furnish the available information in regard to many small scale enterprises. The difficulties are perhaps greater in the case of cottage industries, as there is a good deal of joint production due to their close association with agriculture, and as some of the cottage industries do not belong to the category of original manufactures. The field of investigation of small and cottage industries is very vast and the available statistical data are imperfect. There is a good deal of local variation of working conditions between one part of the country and another.

These conditions show the great need for an intensive enquiry by the local governments. As outlined by the Indian Economic Enquiry Committee, the census of small industries might aim at getting statistical information regarding (1) the number of persons engaged in these industries distinguishing (a) workers on their own account, (b) employers, (c) employees, (2) the quantity and value of raw material used, (3) the quantity and value of finished products, (4) the quantity and value of products sold, (5) total wages paid to employees, and (6) hours of work of employees.

The chief needs of the rural industries in general are the stimulus of new ideas, and the provision of adequate instruction and advice on the commercial side. Education in India has not progressed with due regard to the magnitude of its importance. The expenditures for education are absurdly small. The importance of general education on industrial efficiency has not been adequately recognised. General educa-

Correlation of education to the trade and the industry of the country.

¹ Indian Economic Enquiry Committee-Report 1925, Vol.I.

tion up to a certain stage is necessary to train the mind to use its faculties. In European countries, general education has been made compulsory, but in India even elementary education has not yet been developed on a satisfactory basis. The absence of compulsory elementary education for the mass of the people has been detrimental to economic progress in various ways. The charge of conservatism usually levelled against the Indian farmer would not stand, if government had done their duty by education. Rural education must precede any sound scheme of rural reconstruction. As regards technical education, its importance has not been appreciated both by the government and the people. The annual statement of the Government of India regarding material and moral progress recognises the urgent need for establishing technical schools, and revising the educational programme, in the primary and secondary classes, so as to enable boys to receive manual training, and instruction in industrial crafts. The importance of technical education i.e., education which is necessary to develop specialised ability for business is coming to be more and more recognised in Western countries. A recent report of an enquiry into the relationships of technical education to other forms of education in England emphasises, not only the desirability, but the absolute necessity of an adequate technical education. Technical education will have to vary in nature, and importance according to the trade concerned. It may also be pointed out that, if the utmost value is to be obtained from the money spent on technical education, it is essential that an intimate liaison should be established between those responsible for technical education, and those responsible for the direction of industrial life of the country. Agriculture is India's premier industry, employing the great majority of the Indian population, but there is no scientific scheme of rural education. It is too early to say anything about the success of the instruction in elementary agriculture in rural middle schools that has been attempted in the Punjab and the United Provinces, but the true solution of the problem is to be found only in the direction of

relating the instruction given in schools in rural areas to their environment. In the case of large-scale industries, India has few technological schools and colleges. There are practically no facilities for workshop training. Technical education in the handicrafts and rural industries has been supplied from generation to generation by the caste organisation and the workshops. It has been well observed that 'the caste system viewed in the light of a trade guild is a great lever for industrial improvement in this country, and any system of technical education, that may be introduced into the country should fully utilise the existing system'. There are only a few technical institutes in some provinces for the training of artisans, and it is on this education, general or particular, that the greatest emphasis, should be laid. As regards the methods of teaching handicrafts the ideal that should always be kept in view cannot be put better than in the words of Kropotkin¹. "In each trade one must know. . . . how to transform one kind of motion into another. This is the foundation of all mechanical handicrafts. . . . he must grow accustomed to conceive the subject of his thoughts in a concrete form, to draw it, or to model, to hate badly-kept tools and bad methods of work, to give everything a fine touch of finish, to derive artistic enjoyment from the contemplation of gracious forms and combinations of colours, and dissatisfaction from what is ugly. Be it handicraft, science or art, the chief aim of the school is not to make a specialist from a beginner, but to teach him the elements of knowledge and the good methods of work, and, above all, to give him that general impression which will induce him, later on, to put in whatever he does a sincere longing for truth, to like what is beautiful both as to form and contents, to feel the necessity of being a useful unit amidst other human units, and thus to feel his heart in unison with the rest of humanity." Above all, it is of the highest importance to instil into the minds of the people the rights and duties of citizenship and the principles and methods of co-operation. Such education in citizenship

* Kropotkin-Fields, Factories and Workshops. P. 247, et seq

and co-operation will minimise the conflicts between capital and labour which disfigure the industrial life of the western countries and will greatly extend the sphere of co-operative production.¹

The Indian Industrial Commission recognised the necessity for financial assistance to small industries, and pointed out that small industries have to be helped by the organisation of co-operative credit, the granting of small loans by government, and supplying tools and plant on the hire-purchase system².

In some provinces as Madras, Bombay, Bengal, Bihar and Orissa, the Punjab, and the United Provinces, separate departments of industries have been formed, and the supervision of rural industries is one of their functions. Madras, Bihar and Orissa have passed State Aid to Industries Acts and these Acts enable the provincial governments to allot funds from provincial revenues to private enterprise for starting new industries. The Madras State Aid to Industries Act has remained a dead letter ever since it was passed and it has been criticised as not being sufficiently simple and liberal to enable the cottage industries to avail themselves of the provisions of the Act. There are several reasons why state aid is a strong necessity for the industrial development of India. Perhaps the foremost reason is the ignorance and the consequent helplessness of the people. The responsibility therefore for quickening the minds of the people falls primarily on the State. The development of the key industries of India by the government, by starting pioneer factories on a large scale, is, at present, hampered by the want of adequate funds, and so the provincial governments, under such conditions, will be justified in diverting their spare funds to the grouping and revivifying of cottage industries, preferably those which, if well-organised, would offer employment to a large number of people. The Departments of Co-operation in the various provinces are doing something in this direction, but no appreciable success will be achieved until local governments concentrate

¹ Royal Commission on Agriculture in India,—Report, Chapters II and 13.

² Indian Industrial Commission-Report. Chaps. 17 and 18.

on cottage industries, reserving the projection of large scale enterprises until adequate funds are in sight. The Royal Commission on Agriculture in India observe, "The main lines on which assistance can be given to the smaller industries to encourage them to hold their own in the intensive competition of modern times are co-operative organisation, and the provision of facilities for technical education. For a long time to come, government will have to be prepared to make suggestions for the development of these industries, and to assist them by advice. In some instances, they may have to make themselves responsible for running a pioneer enterprise."¹

There are several cottage industries in India which, by a system of co-operative grouping and efficient control assisted by raw materials and small machinery, could thrive exceedingly well, and yield better results than pioneer factories. The cottage industries could be grouped and worked, not on the factory system, but on the basis of industrial co-operation. The cottage worker, as he is circumstanced today, is not only handicapped by want of funds, but also by want of small and useful machinery. Working on co-operative lines under the guidance and control not only of government, but also of industrialists who have the necessary capital, most of the difficulties of the small industries could be easily overcome.

One of the most pressing problems in connection with small industries all over the world is the provision of markets for their products². It has been well observed that "small industries do not perish because a substantial economy can be realised in the factory production—in many more cases than is usually supposed, the fact is even the reverse—but because the capitalist who establishes a factory . . . emancipates himself from the buyers of his produce and can deal directly with the wholesale buyer and exporter; or else he concentrates in one

¹ Royal Commission on Agriculture in India, Abridged report p. 71.

² Indian Industrial Commission—Report, chap. 17; Wolff (H. W.)—Rural Reconstruction, Chap. XI.

concern the different stages of fabrication of a given produce the great concern would thus find its advantages, not in such factors as are imposed by the technical necessities of the trade at the time being, but in such factors as could be eliminated by co-operative organisation ”.¹

The rapid progress of Japan in her small industries is due not only to the education and technical training of her cottage workers but to the building up of business organisations which have successfully advertised Japanese goods in the world markets. The promotion of small industries has been systematically done, and the Japanese study the markets, and produce goods which are generally useful and saleable. In the words of the Indian Industrial Commission Report, ‘the toy industry of Germany, the straw-plaiting of Luton, and the many cottage industries of Japan are few examples of what can be done when enterprise and organisation take in hand the marketing of goods’. The achievements of co-operation in the development of small industries in countries like France, Belgium, Italy, Switzerland serve as an inspiration, and a guide to the Indian small scale production. The small industries in India are badly handicapped by want of capital, and guidance for effective organisation in marketing the products. It is largely by means of co-operative organisation that the needs of the small producers could be largely met. Little or no attempt has been made in this direction. Again, in the field of industrial co-operation, credit societies in India have attained some degree of success especially among urban artisans. Weaver’s societies can do a great deal to put the handloom weaving on sound foundations.

The Indian government have now adopted a policy of discriminating protection to Indian industries. Indian opinion is already overwhelmingly protectionist, and a strong sentiment in favour of the indigenous industries on the part of the people will help them to secure a better market for their products. A central trading organisation is necessary to connect isolated and unrelated cottage industries, to popularise cottage wares, and to

¹ Kropotkin—*Fields, factories and Workshops*, p. 209.

secure for them suitable markets both at home and abroad. In the words of the Royal Commission on Agriculture in India, "the development of village industries on a co-operative basis is essential, if they are to survive increasing competition. The question of organising them on such a basis should receive the attention of the departments of co-operation and industries in all Provinces".¹ Co-operation can help artisan classes, (a) by giving loans on small interest, (b) in the purchase of raw materials used in handicrafts, and also (c) in the sale of finished article. In fact, co-operation on these lines is the great hope of the small industries in India.

¹ Royal Commission on Agr. in India, Abridged Report, p. 71.

IV

SMALL SCALE PRODUCTION IN INDIAN AGRICULTURE

Even in the most advanced countries to-day agriculture, unlike manufactures, 'furnishes at once the best illustration and the most fertile source of economic individualism'. In Western countries like the United States, Germany etc., where industrial combinations have made great progress, agriculture has shown little tendency to become a large-scale industry. Statistical evidence tends to confirm the steady increase in the number of small farms in agricultural industry in several countries.

The movement towards small holdings in Western Countries. In recent times practically every European country has attempted by legislation to increase the number of small holdings. Historical evidence shows clearly that from the beginnings of the last century small occupying ownership under favourable legislation is more than holding its own in countries like Germany, France, Denmark, Ireland, etc.¹ The course of land legislation in some of the states of modern Germany has been in the direction of encouraging small farmers. In France the prevailing type is the comparatively small self-sufficing farmer. In Denmark as a result of legislation practically the whole country is occupied by small owners cultivating anything up to 70 acres. In Switzerland, a country of peasant proprietors, the average holding is 5 to 7 hectares. Even Belgium, a country where tenancy is the usual form of land occupation, has developed in favour of the small holder. Even in England which has been regarded as the country of comparatively large farming, the consensus of opinion seems to favour the encouragement of small farms². Many English economists, no

¹Fay—Co-operation at Home and Abroad. 1920, pt. II Chap. XI.

²Interim and Final Reports of the Agricultural Tribunal of Investigation and Rural Report of the Liberal Land Committee in England.

doubt, maintain that a mixed system of large and small farms is the ideal condition, but that, at present, emphasis should be placed on intensive farming. As early as 1889 a British select committee on the subject recommended unanimously that the extension of a system of small holdings is a matter of national importance. In 1892 Parliament passed the Small Holdings Act, empowering the county councils to purchase land and sell or lease it in small holdings. In 1907 a new Small Holdings and Allotments Act was passed with a view to encourage the increase of the number of small holders, and since the passing of the Act, new co-operative and small holdings and allotments associations were formed. In an able study of English agricultural economics Dr. Herman Levy points out that in relation to all departments of agricultural enterprise except corn-growing, sheep-farming and pedigree stock-breeding, the small holder can successfully compete with the large holder. In vegetable and fruit growing, cattle-breeding, dairying etc., the advantages are economically on the side of the small holder. These industries enjoy what Dr. Levy calls 'a qualitative intensity of labour'. So it would appear that it is possible in British agriculture to secure a permanent place for the distinctively small farmer¹.

This general survey of agricultural development in the European countries shows that cultivating ownership by comparatively small farmers is making steady progress. The more intensive the cultivation, the greater is the scope for small-scale farming. In England, and some countries of the continent, wool, food-grains, and other raw products are being imported from other countries and their place is being taken by the small farm specialities.

Agriculture, the most important industry of India, is in the hands of small producers. While, in some parts of India, the land is owned by large proprietors, the cultivating unit is far from large, and is, in some parts of the country, excessively small.

India, a country of small farms.

¹ H. Levy—Large and Small Holdings, Chap. IX.

Though India possesses vast stretches of cultivated land, the country knows little or nothing of large farms, and farming on a large scale is still the exception rather than the rule. In some parts of the country, as Oudh, Lower Bengal and Zamindari areas, the proprietary unit is quite large, but even in these parts the bulk of the property is held on lease by quite a large number of small tenants. The size of the agricultural holdings differs from province to province according to the character of the soil, the facilities for cultivation, and other similar considerations. In the ryotwari areas of Madras, the average size of the land held by occupants direct from Government is about 8 cultivated acres; in the Punjab, the average size of the cultivating unit is about 3 cultivated acres, and, in parts of Bihar, the tenants holding averages less than an acre. The constant subdivision of land is brought about by the laws of inheritance of the Hindus and Muhammandans enforcing succession to immoveable property amongst all heirs in equal shares.

We may now consider the proper size of a farm. Would the prosperity of the agricultural classes and general welfare be increased by expanding or reducing the size of the average farm, and by more or less intensive farming? No simple answer can be given to this question. The value of the land, the amount of capital that an agriculturalist will command, the kind of farming in which he is most skilled, the character of the labour available, the proximity of markets and transportation facilities—all these must be considered in determining how large a farm a farmer can manage and the kind of cultivation (extensive or intensive) he will adopt. In every country the question of the proper size of the farm depends upon conditions economic and social. It is always difficult to draw a hard and fast distinction between large and small holdings. The acreage of the farm is no test. As Devas remarks ‘size is not measured by area; the more intensive the cultivation, the smaller the area needed for a large farm’¹.

The farm and the question of its proper size.

¹ Devas—Political Economy, p. 104.

Some modern writers have endeavoured to define what may be called a typical economic holding in India. Keatinge, in his *Rural Economy in the Bombay Deccan*, says that 'an economic holding is a holding which allows a man a chance of producing sufficient to support himself and his family in reasonable comfort after paying his necessary expenses. In the Deccan an ideal economic holding would consist of, say, 40 or 50 acres of fair land in one block with at least one good irrigation well and a house situated on the holding. The desirable area would vary in different parts according to circumstances . . . Between the ideal economic holding and obviously uneconomic, there are many gradations, but it would be difficult to fix a standard for any tract.' According to Dr. Harold Mann the size of an economic holding in India may be said to be about 20 acres¹. Stanley Jevons fixes the size of a model economic holding between 29 and 30 acres.

It is necessary to point out in this connection that the conception of an economic holding is relative, and not absolute. Speaking generally, both large and small farms have certain advantages. In the first place, large farms are useful in raising the standard of cultivation by adopting agricultural improvements. Small farms, on the other hand, are better suited to special classes of agricultural products which require a good deal of care and supervision. In India, large-scale farms by wealthy classes may set a good example in raising the standard of agriculture. But Indian agriculture still persists to be one of small farming.

Let us consider briefly some of the advantages of large-scale farming. As regards Land itself, the chief advantages of a large farm are the proper rotation of crops, the due proportion of arable to pasture land, a good drainage system etc. As regards Labour, a man is more likely to find ample scope for skilled work all the time in a large farm than on a small

The advantages of
large farms

¹ H. Mann—*Land and Labour in a Deccan Village*, Vol. 2 p. 43.

farm. If the farmer is a skilled manager, a number of men could work under his direction on a large farm, and thus the full advantage of his skill would be secured. There are, however, comparatively few opportunities for the economy of skill in large-scale farming beyond the full utilisation of the skill of the head of the business. This particular kind of skill is undoubtedly economised by large-scale farming.

As regards the application of Capital, large farms have undoubtedly some great advantages in the form of buildings, implements and transport facilities. Economy of equipment is thus brought about by the introduction of labour-saving appliances on large farms.

As regards organisation, large-scale production in agriculture enables farmers to utilise by-products, and make experiments which are beyond the reach of the small farmer. Economy of buying and selling is claimed to be one of the advantages of large farming. If a farmer is growing agricultural specialities *viz* fine stock, choice fruits etc., the large producer can advertise more effectively and economically than the small producer but it may be noted that this is of no advantage to the grower of a staple crop which sells generally at the regular market-price ¹.

While large scale farming has undoubtedly certain advantages, it is necessary for us to recognise some of the limitations to large-scale production in agriculture. The advantages claimed for large-scale farming are economy of skill, economy of machinery and the economy of management. The economy of skill resulting from extensive division of labour is very much limited. The economy of machinery has also definite limits. Agricultural machinery cannot be used for more than a limited period of the year. In many parts of Europe farm machinery is much less used than in the United States, as labour is comparatively cheaper in Europe. This is even more so in a country like India, where

General limitations
to large-scale produc-
tion in agriculture.

¹ Fay—Co-operation at Home and Abroad, 1920, 2nd Edn. p 211.

labour is so cheap that it does not usually pay to employ expensive kinds of agricultural machinery.

As regards economy of management, it may be noted that agricultural operations, unlike manufactures, are spread over a large area. Again agriculture is an occupation which depends on the seasons, and the nature of the work often changes with the seasons so that agricultural operations cannot be reduced to a fixed routine. Even in those places where climatic conditions are stable and monotonous, large-scale farming is successful only where agriculture is of a very low grade. The economies of machinery and organisation generally claimed for large farming can for the most part be secured by the small farmers through co-operative organisations.

It may also be added that the absolute economies of large-scale farming necessarily fall short of those of the large-scale industry. In the words of Marshall, "The work which he (the large farmer) ought to do is as difficult as that of a large manufacturer. . . but there are not many farms which give scope for this, and there is, therefore, very little inducement for really able men to enter the business of farming"¹

In a country, like England, where large-scale farming is the rule, an increase in the scale of agriculture is prevented by certain circumstances. Men of first rate business ability are attracted to manufacturing industries in preference to agriculture on account of the larger scope for higher business earnings. Great extremes of poverty and wealth in a country, and corresponding difference in social standing, the lack of independence on the part of a large proportion of the agricultural population, the uncertainty of employment in the case of hired labourers who are dependent on the farmer for employment, and above all, the absence of a vital community life—all these are too likely to characterise the prevalence of large-scale farming.

¹ Marshall—Principles of Economics 8th Edn. p. 652.

We may next consider some of the special conditions favouring small as against large-scale farming in Indian agriculture. Besides the general limitations of large-scale agriculture, there are certain peculiar conditions which limit the scale of production in Indian agriculture.

I The system of small holdings. India is a land of small farms. The land holdings of cultivators are minutely subdivided in a manner which is highly prejudicial to good cultivation and the true interests of agriculture. Keatinge points out that this process of subdivision and fragmentation of land has been going on continuously from one generation to another in several parts of the Bombay Presidency. Gilbert Slater in his *South Indian Villages* gives some interesting figures of the tendency to excessive sub-division of holdings in the Madras Presidency.¹ Calvert in his *Wealth and Welfare of the Punjab* points out that the total cultivated area of the Punjab is between 29 and 30 million acres and this is divided into over 10 million holdings.² In Mysore, holdings of the cultivators are minutely subdivided and scattered as in British India³. According to the seasons and crop reports of 1921-22, the number of holdings is as follows:—

Holdings	below	1	acre	93,412
„	between	1 and	5 acres	481,238
„	„	5 „	10 „	262,877
„	„	10 „	50 „	196,475
„	„	50 „	100 „	19,546
„	„	100 „	500 „	2,780
„	„	above	500 „	96

These figures show that about 80% of the holders of land own less than 10 acres.

Harold Mann remarks that it looks almost as if we had

¹ Slater—*South Indian Villages*. pp. 57-58.

² Calvert—*Wealth and Welfare of the Punjab*. p 74.

³ A. K. Yegyanarayana Ayyar—*A Note on the Consolidation of holdings in Mysore 1926.*)

reached the limit of subdivision below what it is not worth while to divide.¹ It can safely be affirmed that the process of subdivision and fragmentation of land has been showing a marked increase in a manner which is hardly conducive to efficient agriculture. The risks of consolidation of holdings by Government action are so great that the Government will have to minimise these evils more by a process of education than by compulsion.²

2. The system of inheritance. The increase in the number of small holdings in India is partly due to the laws of inheritance and succession. The social and economic institutions of India have been essentially communistic, and the laws of inheritance and succession emphasise this communistic spirit. Some modern writers suggest that the law of inheritance should be modified by legislation in such a manner as to prevent the creation of uneconomic holdings. An attempt to alter the law of succession was made in the Bombay Presidency in 1916, but it failed. In an agricultural country like India, land is highly valued and there is a great attachment to landed property on the part of every man. Those who seek a remedy by legislation seem to under-rate the magnitude of the difficulties involved in this complicated question. The Hindu laws of inheritance and succession are too deeply rooted in the social life to be reformed even by careful legislation. The laws of inheritance and succession cannot be altered without interfering drastically with the present Hindu customs and introducing a new principle into the land policy of the country.³ The true remedy for the evils of excessive subdivision and fragmentation of holdings lies not in compulsory legislation but in education and co-operation.

3. Lack of suitable agencies for supplying cheap agricultural capital. The chief needs of the Indian cultivator are more capital, better advice regarding crops to be grown and methods of cultivation, and improved arrangements for obtaining pure

¹ H. Mann—Land and Labour in a Deccan village,—Vol. 2, p 42.

² Royal Commission on Agriculture in India (1928) Chap. V.

³ H. Mann—Land & Labour in a Decan Village Vol. 2. p. 48-49.

seed, manures etc. The cultivator is too poor to buy the cattle and other necessary equipment for efficient cultivation.¹

4. The absence of a capable class of farmers having the knowledge of scientific skill, capital and markets necessary to make large-scale cultivation a success. The cultivators are thrifty and industrious, but are mostly uneducated, and have no capital and organisation for marketing the produce. The prosperity of agriculture on a large scale depends upon the increasing knowledge which will be brought to bear upon it by the farmer. The average Indian farmer does not follow the movements of agricultural science and practice in other countries. Nor does he possess 'the trained and versatile mind . . . which could find time to direct the general course of the management of several hundreds, or even of several thousand acres.'²

5. The custom and sentiment of the people. The Indian farmer is conservative and has no inclination for new methods. But those farmers who are sufficiently enterprising are too poor to make experiments which can only be undertaken by joint-stock companies or co-operative associations, and if the average farmer fails in his pioneer efforts he would be less able to bear it.

From the foregoing considerations, it may be affirmed that Indian agriculture persists to be a small-scale industry, and most of the defects in Indian agriculture could be overcome largely by co-operative methods.

Co-operation is the only instrument which has enabled the small farmer to come into line with modern methods. Small farmers, by forming co-operative associations, may combine the economies of production on a large scale with many of the joys and the social gains of small properties.³ C. R. Fay, in his interesting book on Co-operation at Home and Abroad, points out that statis-

Ag-ricultural co-
operation in western
countries.

¹ Indian Industrial Commission-Evidence Vol. V. p. 662.

² Marshall-Principles of Economics. 8th Edn. p. 652.

³ Marshall-Principles of Economics. 8th Edn. p. 655.

tical evidence proves the vitality and steady development of small-scale farming and that the future expansion of small scale production in agricultural industry is directly stimulated by the trend of international agriculture. Many shrewd and able writers have emphasised the crucial importance of co-operation in agriculture in achieving individual and national success¹. The chief aim of agricultural co-operation is to eliminate the middleman and secure the profits to those who work together in agriculture. Though agricultural co-operation has been a later growth than industrial co-operation in western countries, the achievements of co-operation in agriculture since the middle of the last century are marvellous. Agricultural co-operation has made great progress in European countries in the organisation of credit, the purchase of raw materials and implements required for cultivation, the marketing of the produce, the forming of associations for improvement of live-stock, the manufacture of agricultural products, mutual insurance against agricultural risks etc. In tracing briefly the growth of co-operative movement in respect of agriculture, we may begin with Germany, the home of agricultural co-operation. The earliest form of agricultural co-operation is the credit society, and the bulk of the German rural co-operative societies consists of agricultural credit societies. The great development of agricultural co-operation in Germany is said to be due to the remarkable power of organisation of the German people and the predominance of small holdings. In 1913 there were 5 million holdings varying in size from 1 to 45 acres, while those exceeding 45 acres in area totalled only about 286,000². Other continental countries like France, Belgium, Italy and Switzerland are rich in interest and instruction to the student of agricultural co-operation. Denmark and Ireland have led the way in a movement which seems to be full of promise for organised co-

¹ R. Haggard—*Rural Denmark and its Lessons* (1911); H. Levy-Large and *Small Holdings* (1911).

² Mathai—*Agricultural Co-operation in India*, Introduction p. XXIV.

operation in the handling of dairy produce, in buying farmer's requisities, and in selling farmer's produce. In Denmark, as in the case of Germany, the immense success of agricultural co-operation is due to the sound system of rural education and the existence of small free-holders. In fact, agricultural co-operation in its various aspects has helped the small farmer in Western countries to become a scientific and specialised producer.

As India is a country of small farms, it is possible to organise such farms on a co-operative basis. The cultivators, being mostly tenants with secure tenure, can be more easily organised than farmers, who move about from district to district, and have little practical ownership of the lands they cultivate. The paramount necessity for agricultural co-operation in India needs no great emphasis. In India more than three fourths of the people live by agriculture. The agriculture of the country is in the hands of small men who are illiterate and who do not command the capital necessary for efficient cultivation, and so the peasant in India works on borrowed capital supplied by local money-lenders ¹. The poor equipment of the Indian peasant is due quite as much to defective organisation as to lack of capital ². Agriculture, like other industries is supported on credit. As the Famine Commission of 1901 has pointed out, the aid given by the Government in the shape of takavi loans will go but a small way towards improving the position of the cultivators. In the establishment of mutual credit associations lies a large hope for the future of Indian agriculture.

It may be observed that agricultural co-operation is by no means uncommon in India. Coparcenary cultivation of joint owners or tenants, and certain other forms of mutual assistance for ploughing, harvesting etc., have been practised from very early times, but agricultural associations of the modern type for

¹ Sir F. A. Nicholson-Report on Land and Agricultural Banks, para 5.

² Keatinge-Agricultural Progress in Western India, p. 80.

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operation in India

the purchase of seed and machinery, the improvement of cattle, the sale of the produce are practically new to the country.¹

Co-operative societies in India have until recently been organised only to supply cheap credit to their members, but there are various other fields of work to which they may extend their activities. Grain Banks have been started in some provinces receiving deposits in kind which are distributed to the members in times of need. Such banks have been started in Bihar, Orissa, Bengal, Mysore and Coorg. Societies on a similar basis have been started in Baroda for the storage of fodder which is a most important problem in the rural economy of India. Another important aspect of agricultural co-operation in India is the starting of societies for purchase and distribution among members, of pure seed. Small societies for the supply of seed and seed unions have been organised in the Bombay Presidency, Central Provinces and Behar. Another direction in which the co-operative principle may be developed is the formation of societies for the cooperative purchase and sale of manure. In the Punjab and in Madras the supply of agricultural requisities has been undertaken either by the credit societies or special supply unions. Joint sale of produce is one of the most interesting aspects of agricultural co-operation, and Burma has led the way by starting societies for the joint sale of paddy. Societies for the sale of agricultural commodities, as cotton and jaggery, have been organised in some parts of Bombay. Other directions in which agricultural co-operation in India needs further development are cattle-breeding, milk-supply, silt clearance, and reclamation of waste-lands. Co-operative societies for joint farming will be a great boon to Indian agriculture, and an interesting experiment has been made in the Punjab in the forming of societies for the consolidation of small and scattered holdings; if this experiment succeeds, one of the serious defects of Indian agriculture will be solved without governmental action. Agricultural co-operation is still in its very

¹ Imp. Gaz. of India vol. 3 p. 93.

beginnings in India, but there are indications that the benefits of agricultural associations on a co-operative basis are becoming more clearly recognised, and it is true of India, more than any other country, that co-operation is the corner-stone in the development of Indian agriculture.

What is the future of small-scale production ? The question is more easily raised than answered. As

The future of small-scale production.

regards agricultural production in the future, it is said that the tendency to agricultural progress is from extensive to intensive cultivation, and that agriculture should assume more and more the form of small farms organised on a co-operative basis. It is only by a process of intensive cultivation that sufficient food can be raised for the growing population of the world. The intensive cultivation of small farms is also regarded as desirable from the point of view of general welfare.¹ Professor Seligman observes that large-scale production must soon give place to small-scale production in agriculture ; he says, " The conclusion is that large-scale production is, even in the United States, far less applicable to agriculture than to industry, chiefly because the lower cost resulting everywhere from machinery is, in the case of agriculture, partly counterbalanced by the increase in land values and the consequent change in cultivation".

As regards the future of production in manufactures and commerce, small-scale businesses are not free from defects but many of the defects of small scale industries, wherever social and economic conditions are favourable to them, can be overcome by organising them on a co-operative basis. While large-scale enterprises are numerous and show a tendency to increase, it is also evident that the small producer still holds his own in certain important and useful branches of production.

¹ R. Haggard—Rural England. Kropotkin-Fields, Factories and Workshops, Chaps and II.

Appendix A

¹ *A Scheme for Survey of Small-Scale Industries*

- (1) Name, location and population of the taluk.
- (2) What are the main products of the taluk or area and how are they utilized?
- (3) What are the chief occupations of the people?
- (4) What are the average wages of the workers employed in the occupations mentioned?
- (5) What are the existing cottage or rural industries of the taluk or area?
- (6) When were the industries started, and where are they carried on?
- (7) On an average, how many people are employed in each industry and what wages do they receive? Are they full-time or part-time workers? If the latter, is it of primary or subsidiary importance in the domestic economy of the household; for how long do they work at it and what other work do they do? Information should be given separately in respect of men, women and children employed.
- (8) To what class do they belong and in what way do they obtain training in the industry? Are female workers employed in it and if so, in what proportion?
- (9) What raw materials are utilized in the cottage industry and what are the sources of their supply? Give the average price for the last five years, including the current year, of the raw materials used, and state any difficulties which are felt in obtaining them.
- (10) How is the raw material procured by the worker? Is it supplied by a sowcar or bought by the worker in the market?
- (11) In what manner is the industry carried on? In groups or in a workshop attached to the house of a master-artisan, who

¹ Questionnaire issued by the Department of Industries, Madras.

personally supervises the work of a few fellow-artisans or does each artisan work by himself with his family? Are they financed by any co-operative organization? If not, does the industry lend itself to co-operative effort, and do the economic and other conditions of the local area afford facilities for the establishment of co-operative society for the benefit of the industry?

(12) What sort of articles are being made? Why are these particular articles selected for manufacture? Is it because they sell best or because they are best suited to the workers?

(13) Does the artisan make his own implements or purchase them from the blacksmith or carpenter or from others?

(14) Where and how are the products of the various industries disposed of? Do they sell all the articles they manufacture and in what manner does the worker dispose of the finished articles, *i.e.*, is it handed to the sowcar or other middleman or sold direct by the artisan?

(15) If a wider market could be found for the products of the industry, could the producers (a) turn out a larger quantity or (b) turn out better articles? Is the industry organized to comply regularly and promptly with orders received? Are the articles durable and costly, or cheap and inferior? Could the workers be relied upon to supply goods according to approved samples?

(16) How is instruction in the manufacture of the products of each cottage industry imparted? Do the workers train themselves and acquire the necessary degree of personal skill as part of the family life?

(17) Where do the manufacturers obtain their designs or patterns from? Do they ever evolve new patterns or designs or do they adhere rigidly to old ones? Has any attempt been made to introduce new designs or patterns, and, if so, by whom?

(18) Are there any special difficulties which have to be overcome in connexion with any particular cottage industry in the area?

(19) If the industry has shown a tendency to decline, either

in quantity or quality, the reasons for such a decline should be given as far as possible.

(20) Can you offer any suggestions by which the industry or the conditions of the artisans can be improved?

(21) Could you offer, as a result of your enquiries or local knowledge, any suggestions in regard to the starting of new cottage or rural industries in the area with reference to such factors as the availability of suitable labour and raw materials?

Appendix B*Number of Handlooms in use in the Towns and Villages*

Province, State or Agency				No. of Handlooms in existence
Ajmere-Merwara	...	...	...	1,587
Assam ...	...	...	...	421,367
Bengal ...	...	...	...	213,886
Bihar and Orissa ...	...	...	...	164,592
Burma ...	...	...	...	479,637
Delhi ...	...	...	...	1,067
Madras...	...	...	...	169,403
Punjab ...	..	...	...	270,507
Baroda State	...	...	...	10,851
Hyderabad State ...	...	...	...	115,434
Rajputana Agency.	...	...	...	89,741

Appendix C*Yarn Consumed and Cloth Produced by Indian Handlooms*

Year	Total yarn available for consumption in India	Mill con- sumption of Yarn	Yarn avail- able for handlooms	Cloth produced on handlooms
1	2	3	4	5
	Mill Lbs	Mill Lbs	Mill Lbs	Mill Yds
1896-97.	270	74	196	784
1897-98.	312	81	231	924
1898-99.	328.2	91	237	948
1899-1900.	308	87	221	884
1900-01.	261	88	173	692
1901-02.	326	106	220	880
1902-03.	349	109	240	960
1903-04.	341	123	218	872
1904-05.	348	141	207	828
1905-06.	417	146	271	1,084
1906-07.	435	148	287	1,148
1907-08.	445	168	277	1,108
1908-09.	450	171	279	1,116
1909-10.	428	204	224	896
1910-11.	446	219	227	908
1911-12.	499	238	261	1,044
1912-13.	514	254	260	1,040
1913-14.	511	244	267	1,068
1914-15.	543	247	296	1,184
1915-16.	586	314	272	1,048
1916-17.	526	322	204	816
1917-18.	543	340	203	812
1918-19.	574	312	262	1,048
1919-20.	483	342	141	564
1920-21.	615	328	287	1,148
1921-22.	657.5	360	297.5	1,190
1922-23.	697.3	362	335.3	1,341

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