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ALL INDIA HANDLOOM BOARD

A SURVEY OF HANDLOOM INDUSTRY IN MADRAS STATE

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SURVEY OF HANDLOOM INDUSTRY

IN MADRAS STATE 1955-56

Conducted by

THE RESEARCH UNIT FOR THE SURVEY OF HANDLOOM INDUSTRY
IN MADRAS STATE, UNIVERSITY OF MADRAS.

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ALL INDIA HANDLOOM BOARD, BOMBAY
1959

PREFACE

It was the Fact Finding Committee appointed by the Government of India in 1941 which, for the first time, brought out an authoritative report on various aspects of the Indian Handloom Industry. Since then, the size of the industry increased substantially, and the industry had to face new problems. While some surveys have, in recent years, been conducted departmentally, mainly with a view to assisting the formulation of Government policies relating to the handloom industry the need for comprehensive surveys of all aspects of the industry was keenly felt, and it was thought that the services of independent agencies like the Universities should also be availed of. The University of Madras, which was the first to be entrusted with this work, has completed the survey of the handloom industry in Madras State and submitted its report, which is now being published under the auspices of the All India Handloom Board. The views expressed in the report are those of the Research Unit for the Survey of the Madras University and do not represent the views of the All India Handloom Board or the Government of India.

A survey of the Handloom Industry in Assam, Manipur and Tripura is being conducted by the University of Gauhati, and another survey in Karnataka and Sholapur by the National Council of Applied Economic Research, New Delhi.

Bombay:
1st September, 1958.

D. S. JOSHI,
Chairman.

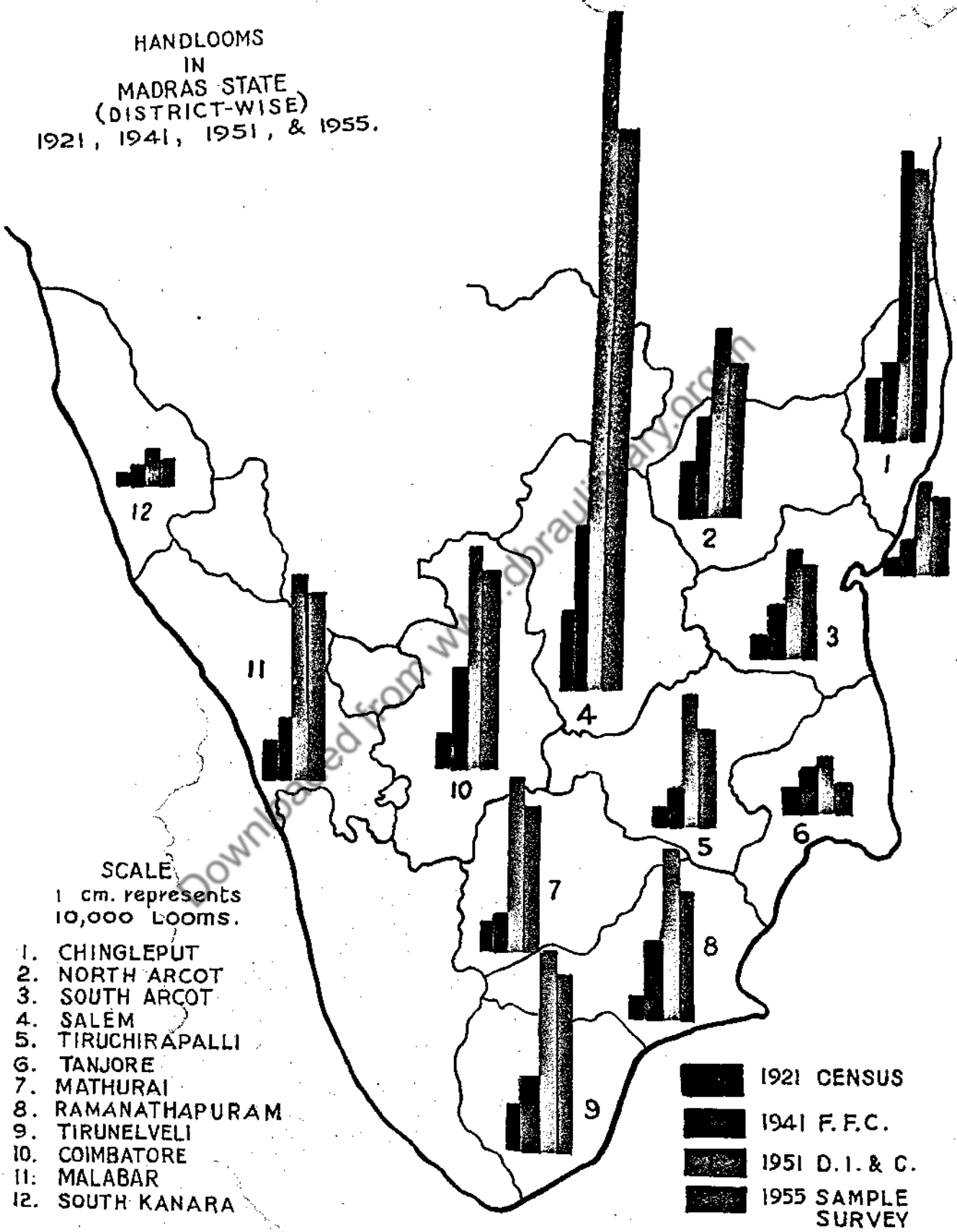
CONTENTS

TABLES AND STATEMENTS

MAPS, CHARTS AND DIAGRAMS

APPENDICES

HANDLOOMS IN MADRAS STATE (DISTRICT-WISE) 1921, 1941, 1951, & 1955.



PART I

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CHAPTER I

INTRODUCTION

FORMATION OF THE RESEARCH UNIT :

The origin of the RESEARCH UNIT FOR THE SURVEY OF HANDLOOM INDUSTRY IN MADRAS STATE may be traced to Letter No. HB/17-54(3)-2253 of the Secretary, All India Handloom Board, Government of India, Ministry of Commerce and Industry, Bombay dated 3rd August 1954 addressed to the Registrar, University of Madras. In this letter, the former desired to know whether the University of Madras could undertake a Survey of the Handloom Industry in Madras State. In the ensuing correspondence (*vide* Appendix-I) it was decided that the University Professor of Economics should be in-charge of this project as the (Honorary) Director and that he would be assisted by a Research Unit consisting of one Assistant Director, one Statistical Assistant, eight Investigators, four Tabulators, one Clerk-cum-Typist and a Peon. A nucleus of the Research Unit with the Assistant Director, Statistical Assistant, Clerk and Peon was set up on 27th April 1955 for attending to the preliminary work, and the full complement of the staff came into position on the 11th May 1955.

TERMS OF REFERENCE :

1·2. The present scheme for the Sample Survey is designed to estimate the number of active and idle looms and to investigate into the economics of the Handloom Industry in Madras State in consonance with the broad objectives laid down by the All India Handloom Board for the Survey. These two lines of enquiry may be further broken down into the following terms of reference :—

(1) estimation of the total number of active and idle looms in Madras State by a Sample Survey ;

(2) a study of the demographic trend of the weaving communities and its projection into the near future ;

(3) determination of the order of priorities in which the various types of cotton yarn, silk and other fibres are consumed by the handlooms to figure out the proportion of looms engaged in the weaving of each of these categories ;

(4) investigation into the various types of weavers' organizations and an assessment of their special merits and demerits ;

(5) a study of the main and ancillary processes of the industry in order to understand the existing pattern of employment of the weaving population ;

(6) an enquiry into the intensity of employment and productivity in relation to various types of fabrics and yarn as also the earnings of the weaving population ;

(7) an investigation into the methods of financing and marketing prevalent in the industry;

(8) an enquiry into the costs of production of various types of fabrics with particular reference to the counts of yarn, domestic and export sorts ;

(9) a general assessment of the output of handloom cloth, present levels of employment and levels of living of the weaving population ; and

(10) a general appraisal of the attitudes of the weaving communities to the existing methods of production and new techniques and the future of the industry.

PREPARATION OF SCHEDULES AND QUESTIONNAIRE :

1·3. The nucleus staff was first engaged in framing the sample design and the preparation of the questionnaire and schedules. The draft questionnaire and schedules were discussed at a Conference held on the 5th May 1955 in which the Director, Central Marketing Organization, All India Handloom Board, Madras also participated. Finally one questionnaire and three sets of schedules (*vide* Appendix 2) were adopted for this Survey which consists of two Parts : (1) The Sample Enumeration Survey is concerned with the enumeration of the looms and weavers in selected centres with the object of estimating the total number of active and idle looms. One set of schedules is designed for this purpose. (2) The Economic Survey, undertaken to study the economics of the Handloom Industry in this State has two sets of schedules ; one of which is to cover households for collection of data relating to (i) household composition, employment and output ; (ii) methods of financing ; (iii) marketing systems ; (iv) cost structure ; (v) types of fabrics produced ; (vi) investment on looms and the auxiliary equipment and (vii) wages for weaving and the ancillary occupations. The other set of schedules are prepared in respect of factories and karkhanas for collecting data relating to (i) classification of looms ; (ii) capital structure ; (iii) raw materials; (iv) labour; (v) wages and salaries and (vi) types of fabrics manufactured.

QUESTIONNAIRE :

1·4. The purpose of the questionnaire is to elicit the opinion of the weavers about the various problems of immediate and direct concern to the handloom industry and the population dependant on it: e. g. the effects of the recent Government measures to rehabilitate the industry, the yarn position, the latest techniques and improved tools invented and the new institutions set up to help the industry, the general conditions of work, wages, levels of living, the careers for children etc. The answers to the various questions on these subjects, albeit qualitative, would furnish useful information to study the social attitudes of the weaving population with special reference to the technical and organizational revolution that the industry is now undergoing under Government sponsorship. This questionnaire, in short, is intended to carry out an opinion survey among the affected interests on the live issues of the handloom industry.

ORIENTATION AND TRAINING OF THE INVESTIGATORS :

1·5. The eight Investigators appointed to do the field work had first an orientation for a fortnight. During this period, the terms and concepts used in the schedules and questionnaire were defined and explained to them. As a practical acquaintance with the various tools and equipment used by the weavers was deemed necessary, a field trip was organised for the Investigators to the homes of weavers in Saidapet. They were shown the weavers at work and they acquired a practical knowledge of not only the apparatus of production but also the various processes involved in handloom weaving. The Investigators also tried in an experimental way to collect data and fill in the schedules under the guidance of the Assistant Director.

FIELD WORK :

1·6. After this training was found to be adequate to enable them to conduct the investigation independently, they were sent to their respective zones. (*Vide* next Chapter for details of the scheme of the present Survey). The field investigation was completed in 104 centres covering 121,509 looms in 12 months according to time-schedule.

TABULATION AND ANALYSIS :

1·7. Even as the field investigation proceeded, the summary tabulation of the data collected in the filled-in schedules and questionnaires received at the Headquarters

commenced. On the completion of the field work, four out of eight Investigators were retained to complete the cross-tabulation and processing of the data for analysis.

ACKNOWLEDGEMENT :

1·8. The basic data relating to the Handloom Industry for designing the sample were obtained from the Office of the Director of Industries and Commerce, Madras. The Madras State Handloom Weavers' Co-operative Society also furnished useful data on the distribution of Societies and looms in the co-operative fold etc. Acknowledgement is due to the help and co-operation ungrudgingly offered by the officers of the Co-operative Department and Weavers' Co-operative Societies and leaders as well as members of the Weaving Communities in various centres to the Investigators during their field work.

CHAPTER II

THE PROBLEM STATED

Significance of Handloom Industry :

2·1. The Handloom Industry in India to-day presents a many-sided and profoundly complex problem which is all the more complicated in view of its socio-economic importance. It is a much used, yet a valuable cliche which says that it is the largest single industry, next only to agriculture. On it depend for their livelihood a population of no less than 10 millions in the whole country. Further this industry has all the merits of a time-honoured, traditional and highly skilled home industry. In the milieu of the Second Five Year Plan with its heavy accent on labour-intensive methods and development of home and hand industries, it acquires a fresh aura of significance. It is again not an industry confined to any region but it is ubiquitous and spread over the entire country. The click and clack of the handloom is heard all over the country from the Naga hills in Assam to the plains of Kanyakumari district at the tip of the peninsula. Hardly is there a village of any importance without handloom weavers in its corps of village artisans and craftsmen. The industry is both rural and urban. It transcends sectarian, linguistic and communal barriers. Hindus as well as Moslems, Christians as well as scheduled castes ply this hoary trade. Hereditary or otherwise, large numbers of people in all regions have been in or have recently taken to this occupation. Thus the problem of the handloom industry is that of the premier home industry, national in its significance and cosmopolitan in its range.

Unprecedented Growth in a Period of Crises :

2·2. Notwithstanding these points of merit and significance in its favour, it is too well known that this industry has experienced a series of crises in the past three decades and more acutely since the World War II. It has faced shortage of yarn, stagnation of stock, low wages and unemployment, all of them cumulatively bringing about a declining curve of the incomes and standards of living of the weaving population. Logically the socio-economic consequence of these adverse factors should have been a large scale exodus of the population from the occupation of weaving to something else. But strangely enough there has been a remarkable increase in the weaving population and a tremendous increase in the number of handlooms all over India and particularly in Madras State. This abnormal behaviour of the industry as well as population has tended to aggravate the problem of the handloom industry. Crises caused by low wages and accumulation of stock are usually curative in one sense because generally the affected industry tries to readjust itself to the changing environment in many ways like improving the tools, increasing productivity, introducing new varieties and rationalising in all possible directions to raise the employment, output and earnings of the industry. If such a rationalisation had taken place the industry being a labour-intensive one, it would have raised the wage-income of the weavers. But the industry has so far been almost quite innocent of any such efforts.

Government Intervention for Rehabilitation :

2·3. No doubt the unemployment and distress of a large section of the population pursuing a hoary traditional industry have led to government intervention of various kinds. Yarn shortage has been sought to be remedied by yarn rationing, accumulation of stocks by ban on mill production of certain varieties of cloth as well as by rebates on sales, financing and marketing difficulties by expansion of the co-operative movement in the handloom sector. The general situation was sought to be assessed by a Fact Finding

Committee and the emergence of ghost looms by a system of licensing. The question of under-employment and low earnings had been the subject of study by a Court of Enquiry. Most of these efforts were of a palliative character and the basic cause yet remains to be probed into.

OBJECTIVES OF GOVERNMENT POLICY : FULL EMPLOYMENT FOR WEAVERS OR LOOMS ?

2.4. The policy of the Government in all its efforts has had the clearly defined objective of eliminating all the ills the handloom industry has been beset with and placing it on a sound economic footing. Although the main policy has been throughout flawless, a scientific study of the relevant issues was lacking. Several diverse issues require careful consideration. Is it the existing weaving population or the existing number of looms which should be guaranteed full employment ? If it is the former, as it should be in a welfare state concerned with the material well-being of every section of its population, is there not a need to prevent further increase in the population by the influx of other communities following at present other occupations ? If the present day weaving population is registering a natural increase at a rate higher than the rate of the total population of the country, should there not be provision to siphon off the excess population over the present to other occupations ? If the policy is that all the existing looms should be fully employed, what is the reason behind such a policy ? For one thing, capital invested on a loom is so small and most of the looms have had a fairly long working life that scrapping them out is not going to inflict any great loss to the community. If all the existing looms are to be fully employed, should there not be distinction between the ghost and the real, the idle and the active looms, to mete out justice to the honest weaving population ? If all the existing looms, idle as well as the active, are to be harnessed for augmenting the cloth output of the country, is it the most economic way ? Is the human being behind the loom or the loom itself to be deemed important for policy making ? If it were the human being, there is no case for activising the chronically idle looms which are scarcely distinguishable from the ghost looms. It is decided that the existing weaving population should be guaranteed full employment, it is essential to know their number and the demographic trend among them. This is the first objective of the present enquiry. To this problem is closely linked the proportion of idle to active looms which forms the second objective of the enquiry.

TYPES OF LOOMS :

2.5. Handloom Industry at present uses various types of looms, pit and frame, throw and fly shuttle looms. There is a universal desire to step up the efficiency of handloom both for augmenting their output and increasing the earnings of weavers. This desire frequently takes the form of over-zealous reforms which propose to convert all the pit looms into frame looms and all the throw shuttle into fly shuttle looms. An investigation into the raison d'etre of the survival of pit looms and throw shuttles is necessary before making any sweeping condemnation of their use. Is the pit loom inferior to frame loom in productivity ? Is it possible to install a frame loom in the place of a pit loom without re-designing the house ? Is the fly shuttle capable of weaving all the fabrics for which this State is legitimately famous ? These are some of the issues on which relevant data should be collected to take a balanced view about the apparently primitive equipments.

PATTERN OF PRODUCTION :

2.6. Next important question regarding the future of the handloom industry is whether the age-long pattern of production of the handlooms should remain petrified or undergo a change in conformity with demand, cost and efficiency of production. This question naturally leads to an investigation of the proportions of the various types of fabrics to the total cloth production correlated to the accummulation of stocks. Which types of fabrics

are easy to weave on the handloom ? Which are not possible to weave in the mill sector ? The answers to this question should be correlated to the order of priorities in the consumption of the various counts of yarn. Is the common belief true that handlooms weave lower counts of yarn and the mill sector the higher ? If it were not true, what are the respective schemes for assuring the handloom adequate supply of yarn of required counts ?

COSTS OF PRODUCTION :

2·7. With the determination of the types of cloth and counts of yarn most suitable for handloom industry the enquiry could not end. How far are the costs of manufacture of these fabrics competitive with similar ones produced by the mill ? If there is disparity, what are the reasons ? Is it due to lower output per day per weaver, or higher wages per day. If it were either way, what could be done to step up output and earning power of weavers ?

METHODS FOR STEPPING UP EARNINGS :

2·8. There are several means of raising the weavers' earnings. Firstly he may be provided with better equipment. This means improvement of the loom. The first great revolutionary improvement of the present century is of course the introduction of the fly shuttle. The average output with the fly-shuttle, according to an estimate made as early as 1908, is three times as much as that of the throw shuttle. Its popularity is shown by its rapid and extensive adoption which incidentally proves that weavers are not so impervious to new tools and techniques as generally assumed in certain quarters. Are the recent inventions like pedal loom, take up motion attachment and semi-automatic looms popular among the weavers ? If not, what is the kind of publicity that is required ? Is a more widespread use of them dependent on more financial aid in the form of grants or loans ? Secondly should not the weaver be prevented from dissipating his time and energy on doing inferior types of jobs like winding, warping and sizing ? Thirdly will not the weaver's earnings increase if yarn is made as cheap as it is for the weaving departments in composite spinning-cum-weaving mills. Is there not a need for business finance at low rates of interest ? At present, except for the small percentage of weavers in the co-operative fold, are not the weavers at the mercy of master-weavers and money lenders for their finance ? What is the average amount that a weaver borrows, from whom and at what rate ? These are some of the questions that the present enquiry seeks to answer.

EARNINGS OF A WEAVER'S HOUSEHOLD :

2·9. With the question of weaver's earnings is tied up a kindred one, *viz.*, the earnings af the weaver's household. Should the policy of rehabilitating the handloom industry aim at maximising the earnings of the weaver or those of a weaver's household ? The distinction between these two is of cardinal significance in this industry where more members of the household, men and women, young and old, participate in productive processes. They are in some way or other gainfully employed if not in the chief occupation of weaving atleast in the subsidiary processes like winding, warping and sizing. Should the policy be directed to provide full employment to all the members of the household irrespective of age and sex or full employment only to the actual weavers, allowing the rest of the members of the household to attend to other normal duties of the household, the women to cooking, nursing and house-keeping, the children to study and health-giving and play outdoor games and the old to well-earned rest ? The latter decision will be inescapable if the welfare state should stick to its ideal and prevent sweating of the women, children, the old and the infirm for long hours of work at extremely low rates of wages. Obviously this decision requires factual support regarding sweating. What is exactly the standard of living the weavers desire at present ? Do they want their women to continue as family helpers ? Do they want their children to work at home and not go to schools ? What level of earnings

do they want to reach ? How is it possible to attain it ? Do they want their children to pursue their own occupation ? If not what do they want their children to do when they are grown up ? To answer these questions, it is essential to investigate into the existing level of income and earnings, employment and leisure of men, women and children. The present enquiry is again designed to collect and analyse the necessary data relating to the earnings of the entire household as well as those of the weaver *per se*.

STANDARDISATION AND RATIONALISATION :

2.10. At present apart from the numerous types of fabrics like sarees, dhoties, towels, kailies, bed-sheets, shirting and gada, the various counts of yarns and the diverse types of fibres—silk, cotton, artsilk and mixed—the variations in width and length of each fabric are almost a legion. Will it not be possible to standardise the size, counts of yarn etc., for different types of fabrics, deemed essential to satisfy the consumer preferences and conventions ? Will not this rationalisation lead to large-scale production and the economies associated with it in the sphere of production as well as marketing ? Closely akin to this question is that of reservation of fabrics to handloom and mill sectors. Economies of large scale production could also be realised if certain ancillary processes including calendering and finishing are separately done in easily accessible central units. There is also the other problem of educating the weaving population in new techniques, new lines of design and production.

MARKETING PROBLEMS :

2.11. The level of earnings of the weavers, it is well known, is very much affected by the difficulties of marketing. The co-operative production and sale societies do help those weavers who belong to them. But with regard to the majority of the weavers outside, the master-weavers, who are also wholesale dealers, have a definitely upper hand. To what extent are the independent weavers really independent in the sphere of marketing their products ? What is the proportion of the handloom output that is passing through other channels of marketing ? What is the profit of the middle men ? How much is the loss inflicted on the weavers by the various systems of marketing ? What is the position in the special case of export fabrics ? What are the ways in which the weavers could be assured their legitimate share are some of the questions which also form the issues for the present enquiry.

PERIPHERAL ISSUES :

2.12. Besides the above central issues, any programme for rehabilitation of the industry should have reliable data and information regarding a number of peripheral issues. What are the merits of the frame loom ? Could they not replace the pit looms, in which case the weavers need not, as they are now, be buried hip deep in practically dark and illventilated pits. Is the adoption of power-loom possible ? Do the weavers satisfy all the other conditions for installing it, even if it were given on a hire purchase system with easy instalments spread over a long period ? More basically, what is the attitude of the weavers to the power-loom ? If it is against, what are the reasons ?

2.13. To sum up, the problem of the handloom industry is hydra-headed. There is a host of conflicting points of view in regard to the formulation of a sound policy which calls for conciliation : full employment of the looms *versus* full employment of the weavers, larger handlooms output *versus* larger mill output to meet the targets of the Second Plan. Again should it be generation of a growing natural demand for handloom cloth or artificial stimulation of demand by means of rebates, existing patterns unaltered or changing patterns to suit changing tastes, cloths of myriad types, designs, texture and size or fewer varieties rationalised on the basis of offtake, maximum efficiency and earnings of the

weaver *per se* or maximum income for the weaver's household keeping the weaver and his folks Jacks-of-all-trades, work-for-all spread out thinly or specialisation and concentration of work on the able bodied and the skilled, master-weavers credit or co-operative credit or own credit which is synonymous with no credit, efficient marketing methods or the age long exploitation by middlemen, last and most important, stagnation and depression or dynamic change and prosperous turn for the weaver—these are the horns of the dilemma which face the handloom industry. It is the purpose of the present Survey to contribute, as far as it is possible by a scientific and systematic collection and analysis of data, to resolve these conflicts and point out the proper path of progress.

PART II

ENUMERATION SURVEY

CHAPTER III

HANDLOOM SURVEYS – PAST AND PRESENT

3·1. The socio-economic significance of the handloom industry to the general economy, referred to in the preceding chapter, is much more pronounced in Madras for three reasons :— (1) The proportion of the population dependent on it is greater here than elsewhere. (2) The types of export fabrics of historical and contemporary importance are larger in number. (3) The vitality of the industry to survive here has been greater. Although Madras State could not boast of fabrics, rendered world famous by descriptions like "Evening Dew", "Textile Breeze", "Running Water" and "Shadow of a Commodity", this State has produced less luxurious but no less famous kailis, lungis, handkerchiefs, chintzes and calicoes which not only secured but have also preserved upto the present day wide overseas markets. It has been producing for a wide and relatively stable domestic market too a wide range of fabrics like utility cotton sarees, ornate silk sarees, common as well as aristocratic solid-bordered dhoties. It was in fact a realisation of these vital aspects of the industry that led to periodic enumeration of looms and weavers in the past three quarters of a century ; since 1871, no less than fourteen surveys have been made.

DECENNIAL POPULATION CENSUSES :

3·2. Seven of these fourteen surveys were associated with the Decennial population censuses and the rest were of an adhoc nature. Even in the first census of 1871, a handloom census was incorporated as a significant part of the major population census operations. This scheme of undertaking a handloom census along with decennial population censuses was continued upto 1931. The continuity was however broken in the censuses of 1941 and 1951 when the newly introduced scheme of industrial and occupational classification lumped together all the persons engaged in cotton textile industry whether they were handloom weavers or mere hands in the power-driven modern mills.

3·3. The statistics collected during the first seven censuses upto 1931 were not quite free from defects. One of them arose from the loose way in which the concept of "weaver" was used in the various censuses : the term "weavers" which covered all classes of weavers in 1871, left out in 1881 the so-called "cotton manufacturers", who were also really weavers, A new category called "spinners" was introduced in 1891 and the subsequent two censuses. although they were part-time weavers. Comparability was therefore a little vitiated but not rendered impossible as the following table will show :—

III–1.

Description		1871	1881	1891	1901	1911
Cotton Manufacturers	.. ..	..	188,157	..	..	.. ..
Cotton Spinning and Weaving Mill	..	..	..	..	6,851	16,615
	Hand ..	..	..	7,306	6,414	..
Weavers	Hand ..	376,561	196,610	365,112	383,132	368,509

Source : Census of India 1911, Vol. XII, Part I. P. 208.

Analysing the above data with due reference to their conceptual significance, the author (later Sir) Alfred Chatterton (then Director of Industries, Government of Madras) concluded

"that in the last forty years the number of handloom weavers has remained practically stationary. The conclusion is that between 1871 and 1911, the number of handloom weavers in Madras Province remained more or less the same, about 375,000."

THE 1931 CENSUS :

3.4. According to the census of 1921, the total number of weavers was 304,000. The next census of 1931, in which for the last time a handloom census figured, revealed that the number of weavers (persons shown as following the occupation of cotton spinning-sizing and weaving) was 486,248. Compared with 1921, it is evident that the number of, weavers has increased by about 60 per cent. The quantity of yarn consumed on the handloom appears also to have kept pace with the apparent increase in the weaving population. In the long history of handloom industry, the weaving population of the undivided Madras State is seen to have suddenly increased in the decennium ending 1931. This increase which was deemed to be reasonable and which was justified by the 1931 census report, appears to be the beginning of a sharp and spectacular rise in the next 25 years.

ADHOC SURVEYS :

3.5. Another important source for the total count of looms was the Statistical Atlas of the Presidency of Madras, a decennial publication for which data are furnished by the district officers. The Atlas of 1901 records the number of handlooms (not weavers) in Madras Province as 167,806 in 1901. The first in point of time among the *ad hoc* surveys was the Report of the Special Officer for the Survey of Cottage Industries. According to this the number of looms was 259,451 in 1928 which recorded an increase of 53 per cent over the figure of 1921 census. Since 1931, there have been four *ad hoc* surveys of handlooms. In 1931, the Tariff Board estimated the number of handlooms to be 225,000. In 1940, the Fact Finding Committee reported that the undivided Madras State had 340,451 looms. According to the Report of the Court of Enquiry into labour conditions in the Handloom Industry (1947) the number of handlooms was estimated at 541,878. In 1951, when yarn shortage was acute, the Director of Industries and Commerce made a survey of the number of handlooms in the Madras State for evolving a scheme for distribution of yarn. His estimate of the number of looms was 560,704.†

III-2. GROWTH IN THE NUMBER OF LOOMS

S. No.	Source	Number of weavers	Number of looms	
			Undivided Madras	Madras State from 1st October 1953
1	1871 Census	376,561		
2	1881 Census	384,767		
3	1891 Census	372,418		
4	1900 Statistical Atlas	..	167,806	98,856
5	1901 Census	389,546	167,806	98,826
6	1911 Census	385,124	..	..
7	1921 Census	304,000	169,403	92,558
8	1929 Report of Special Officer for Cottage Industries.	..	259,451	155,670*
9	1031 Census	486,249	193,474	130,987
10	1932 Tariff Board	..	225,000	135,000*
11	1941 Fact Finding Committee	..	340,451	191,801
12	1947 Court of Enquiry	..	541,878	355,061
13	1951 Director of Industries and Commerce	..	N.A.	560,704

† Another ad hoc survey, which was for the first time made on Scientific lines was the sample Survey conducted by the (Kanungo) Textile Enquiry Committee 1954. It has not however furnished breakdown figures for Madras State.

* Approximate figures based on 60 per cent of the number of looms in the undivided Madras State. In the 1921 census, the percentage was 58 % and the 1947 Court of Enquiry figures show 65%.

RESULTS OF THE PAST AD HOC SURVEYS :

3·6. Three points regarding the results of these *ad hoc* surveys deserve mention : (1) Unlike the handloom censuses upto 1931 these surveys have laid emphasis only on the looms. The number of weavers depending on the handloom industry is not generally given. This emphasis on the looms to the neglect of weavers has been misconceived. The disappearance from official records and of statistics relating to the weavers, auxiliary workers and dependents, working and non-working, is like Hamlet without the Prince of Denmark. (2) The sharp rise in the number of looms is a matter for serious thought. It has risen from 193,474 in 1931 (a rise of only 15 per cent over the 1921 figure) to 225,000 in 1932 or a rise of 16 per cent in one year. In 1940, the number of looms was 340,451 or a rise of 76 per cent in 9 years and in 1947, it was 541,878 in 1947 which meant a rise of 180 per cent in 20 years. (3) The earlier censuses collected interesting data relating to prominent communities engaged in the handloom industry which could be used for determining the proportion of persons continuing in the hereditary occupation. These data yielded the following results for 1921 compared with 1911 :—Out of 1,000 persons belonging to Devanga caste 540 engaged in spinning, weaving and dyeing in 1921 against 736 in 1911 ; in the case of Kaikolars, the corresponding figures were 480 and 538 (*vide* Census of India 1921, Vol. XIII Part I. P. 182). These data, necessary for estimating the trends of the movement of hereditary craftsman to other types of employment, are of course not available in the reports of *ad hoc* surveys, because such estimates of population and communities are outside their scope and competence. Yet this aspect of the problem needs to be studied in a planned economy working for greater mobility of labour in general and in the present situation of the handloom industry in particular.

3·7. Much reliance cannot be placed on the figures of the various censuses for the reasons already given. Nor could the data collected by the *ad hoc* surveys be fully correct. The Special Officer for the Survey of Cottage Industries covered a number of representative villages and centres and his figures appear to be mere estimates. The Tariff Board's estimate too errs in accuracy as well as in lack of scientific methodology. The Fact Finding Committee has chiefly depended on headman of each locality who is supposed to maintain a list of all the families and looms for collecting subscription to the guild on a loom or family basis. "Unfortunately such customs do not obtain everywhere and therefore in many places the numbers have to be estimated with the help of the headman". (*Vide* P. 27 Fact Finding Committee Report). For certain areas this committee has accepted the figures collected at the Handloom Census for 1921. The method adopted was one of tapping available agencies and sources of information. The Court of Enquiry into the Handloom Industry has made the estimate on the basis of the district yarn quota scheme for the administration of which the concerned department made a census of handlooms. The 1951 count by the Director of Industries and Commerce was a census count of all looms in existence. Due to yarn shortage and rationing, the figure includes a large number of ghost looms and hence it is an over-estimate. It may then be seen that while the censuses had their own defects of over or under-enumeration according to the concepts of weaver and occupation, the *ad hoc* surveys lack a scientific approach. However for all practical purposes of policy formulation like yarn ration, these figures have been adopted. Hence any examination of the trend of growth in looms may well be based on these data.

PRESENT SAMPLE SURVEY :

3·8. The problem of conducting a Handloom Survey, which is not a census enumeration, raises several issues. Even a sample survey with the single purpose of estimating the number of active and idle looms should pay due regard to the uneven distribution of looms in both villages and towns in the State. If the sample survey has plurality of purposes like the present one, the problem of sample designing has to take into account all the diverse

objectives and yet should be so devised as to yield results precise enough in relation to cost and time factors. The present Survey of Handlooms in Madras State consists actually of two sample surveys :—(1). an Enumeration Survey to estimate the number of active and idle looms in the State and (2) an Economic Survey, an enquiry into the economics of the handloom industry in the State.

SAMPLE FRAME FOR THE ENUMERATION SURVEY :

3.9. The sample frame for the first survey consisted of the 687 urban and rural handloom centres, furnished by the Director of Industries and Commerce. These centres accounted for 550,704 out of the 560,704 handlooms estimated to be at work in the State by the Director of Industries and Commerce, the remaining 10,000 looms being scattered in small villages, having less than 100 looms each. It was first decided to select a sample of 104 centres (on an average 8 centres for each of the 13 districts in this State) and from this frame enumerate all the looms in them. From the figures thus obtained it was proposed to make an estimate of the existing number of looms for the State by means of ratio-estimate.

STRATIFICATION OF CENTRES :

3.10. It was found from the sample frame that these centres or primary sampling units were of unequal size, including in some districts gigantic centres with several thousands of looms. The first step in designing the sample was to select one or more of these giant centres in order to avoid the possibility of their escaping the random sample. For the other centres, because of their extremely unequal size in respect of looms, the principle of stratified random sampling was adopted. The centres in each district were broadly classified into two or more Strata, e. g. the centres having 101 to 250 looms, 251 to 500 looms and 501 looms and above. The number of Strata and class intervals varied in the different districts to suit (a) the extreme values (disparity in size) found between centres and (b) the number of centres occurring in each district. For instance, where the centres were fewer and the difference in size less, as in the districts of Tanjore and South Kanara, the entire district was treated as a single Stratum. On the other hand, there were three strata in Chingleput, Salem and some other districts (*vide* Table in Appendix V).

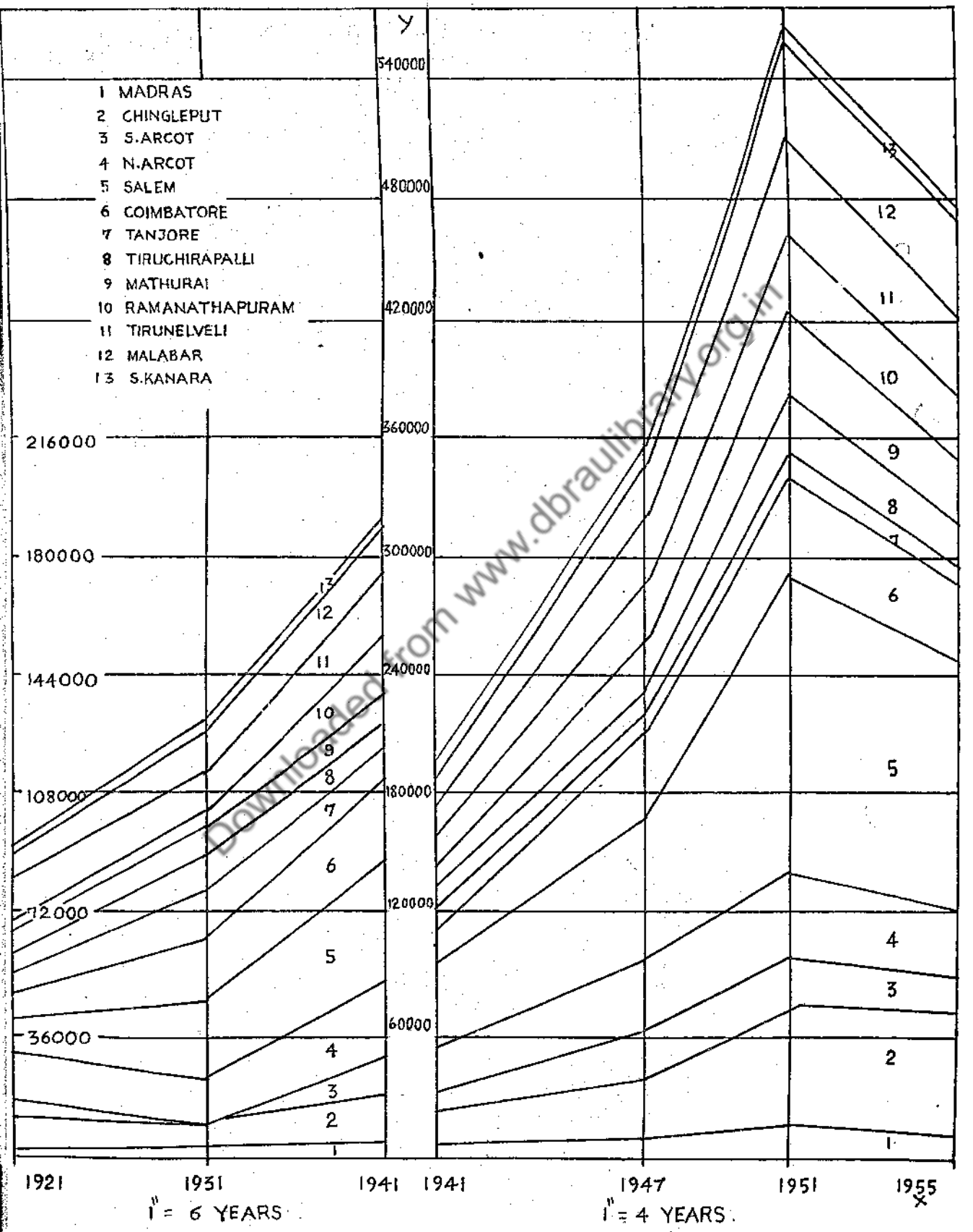
RANDOM SAMPLING OF CENTRES :

3.11. After this stratification was completed, two or more centres from each stratum were selected on the random sampling basis. All the sample centres from the various strata were so drawn as to have looms with probability proportional to the total reported number of looms in each district. Thus the number of selected centres in each district had approximately 10 per cent of the reported number of looms in it. This was done to give proper weightage to the districts according to their importance and had nothing more to do with the sampling procedure or methods of estimation. Another refinement introduced in drawing the sample centres was the adoption of a variable (or differential) sampling fraction for each stratum according to the concentration of looms in it so that a larger proportion of looms could occur in larger centres. The sample of 104 centres thus drawn had 151,686 looms according to the estimates made by the Office of the Director of Industries and Commerce.

SCOPE OF ENUMERATION IN SAMPLE CENTRES :

3.12. The field work for this sample Enumeration Survey was principally confined to a complete count of the looms in these centres. While counting, the looms were of course classified into active and idle, owned and hired, etc. Supplementary information about the number, community and sex composition of the weavers was also collected.

GROWTH IN THE NUMBER OF HANDLOOMS IN MADRAS STATE



III-3.—DISTRICTWISE NUMBER OF LOOMS

District	1901	1921	1931	*F. F. C. 1941	@B. V. N. 1947	†D. I. & C. 1951	Sample 1955
1. Madras	..	1,527	..	1,791	3,884	11,006	6,250
2. Chingleput	11,225	10,600	10,600	16,600	31,868	61,782	59,973
3. South Arcot	6,964	4,646	..	11,208	24,967	23,069	20,322
4. North Arcot	9,751	12,743	12,241	23,334	33,740	42,286	35,713
5. Salem	16,341	10,841	23,890	36,540	71,898	1,51,353	1,23,534
6. Coimbatore	15,040	7,714	17,899	23,415	44,173	49,309	39,959
7. Tanjore	9,598	6,299	14,858	10,161	9,652	10,793	6,831
8. Tiruchirapalli	4,515	5,898	10,001	8,407	14,397	29,761	23,270
9. Madurai	7,551	6,493	8,948	7,722	24,416	39,281	32,979
10. Ramanathapuram	..	4,989	5,472	18,167	29,775	40,190	29,329
11. Tirunelveli	10,196	11,394	13,038	17,013	29,981	48,884	40,587
12. Malabar	6,328	7,886	10,696	14,857	30,901	47,821	46,054
13. South Kanara	1,317	1,528	3,344	2,586	5,409	5,169	4,643 +10,000
State ..	98,826	92,558	1,30,987	1,91,801	3,55,061	5,60,704	4,79,444

* Fact Finding Committee.
@Court of Enquiry into Labour conditions in Handloom Industry.
† Director of Industries and Commerce, Madras.
+Estimated Looms in Centres with 100 looms and less.

III–4.—PERCENTAGE INCREASE OR DECREASE IN THE NUMBER OF LOOMS

District	1901-1921	1921-1931	1931-1941	1941-1947	1947-1951	1951-1955	1921-1941	1941-1955
1	2	3	4	5	6	7	8	9
1. Madras	..	..	..	+ 116·8	+ 183·3	— 43·2	+ 17·2	+ 248·9
2. Chingleput	— 5·6	same	+ 56·6	+ 91·9	+ 93·8	— 2·9	+ 56·6	+ 261·2
3. South Arcot	— 33·3	..	..	+ 122·7	— 7·6	— 11·9	+ 141·2	+ 81·3
4. North Arcot	+ 30·6	— 3·9	+ 90·6	+ 44·5	+ 25·3	— 15·5	+ 83·1	+ 50·7
5. Salem	— 33·6	+ 120·3	+ 52·9	+ 96·7	+ 110·5	— 18·3	+ 237·0	+ 238·0
6. Coimbatore	— 48·7	+ 132·0	+ 30·8	+ 88·6	+ 11·6	— 19·0	+ 203·5	+ 70·6
7. Tanjore	— 34·3	+ 135·9	+ 31·6	— 5·0	+ 11·8	— 36·7	+ 61·3	— 32·7
8. Tiruchirapalli	+ 30·6	+ 69·5	+ 15·9	+ 71·2	+ 106·7	— 21·8	+ 42·5	+ 176·7
9. Madurai	— 14·1	+ 37·8	+ 13·7	+ 216·1	+ 60·8	— 16·0	+ 18·9	+ 327·0
10. Ramnad	..	+ 9·6	+ 231·9	+ 63·5	+ 34·9	— 27·2	+ 264·1	+ 61·4
11. Tirunelveli	+ 11·7	+ 14·4	+ 30·4	+ 76·2	+ 63·0	— 17·0	+ 49·3	+ 138·5
12. Malabar	+ 24·6	+ 35·6	+ 38·9	+ 107·9	+ 54·7	— 3·6	+ 88·3	+ 209·9
13. South Kanara	+ 16·0	+ 118·8	— 22·6	+ 109·1	— 4·6	— 10·1	+ 69·2	+ 79·5
State ..	— 6·3	+ 41·5	+ 46·4	+ 85·1	+ 57·9	— 14·4	+ 107·2	+ 150 0

STATIONARY PHASE :

3.16. The history of the growth in the number of handlooms in the past half century shows three distinct phases. The first stationary phase extends from 1901 to 1921 when the number of looms has actually slightly fallen from 98, 826 to 92,558 or by 6·3 per cent. This period witnessed two significant phenomena the first impact of mill industry and the introduction of the fly shuttle. Whether the mill cloth was of domestic or foreign origin (it was more foreign than domestic) the handloom industry felt its impact on the market, the consumers being attracted by the mill goods. The fly shuttle came as a boon as it helped to increase production more than three-fold. As Sir Alfred Chatterton remarked, "owing to stress of competition.....the majority of them (weavers) have to work harder to make a bare living ". (Census of India 1911, Vol. XII Part I. P. 208).

STEADY GROWTH :

3.17. The second phase of steady growth is seen from 1921 to 1941. In each decennium in this period, the number of looms has grown by 40 to 45 per cent rising from 92,558 in 1927 to 130,987 in 1931 and to 191,801 in 1941. This should be ascribed to natural growth because the pains of transition from hand-spun to mill yarn and from throw to fly shuttle had been over before this period started. In these 20 years, it almost appeared that the mill and handloom were complementary to each other, the former supplying all the yarn the latter needed and each specialising in non-competitive fabrics. It had all the appearance of working in unison and harmony. The signs of approaching conflict and storm had been visible to the discerning eyes. It is apt here to recall the warning of Mahatma Gandhi to the hand weavers : " You, as weavers, should realise that this hand weaving which you are today controlling to a certain extent will in time slip away from your hands as soon as the mills in the world or the mills in India are ready to weave the pattern that you are today exclusively weaving. To make continuous improvements in its machinery and to make continuous encroachments upon the handicrafts of the world is really the objective and the ideal of these great industrialists ". (Young India dated 13th October 1927).

AMAZING GROWTH :

3.18. The third phase is one of startling growth which commences from 1941. By the year 1947, the number of looms has shot up to 355,061 or by 85.1 per cent compared with 1941. By the end of the decade, the number has reached the all time peak of 560,704 looms or a rise of 192·3 per cent since 1941. This extraordinary increase in the number of looms may be due to two causes : (1) During war years, most of the available installed mill capacity was diverted to military demands, which also spilled over in impressive volumes to the handloom sector. Thus the latter had not only its great rival removed from the field of civilian market but also had further orders to execute. (2) Simultaneously with and stemming from this huge war demand, there arose a shortage of yarn, leading to rationing. Yarn coupons led to the multiplication of looms, real as well as ghost. Thus in recent years, there has been an abnormal growth of handlooms, quite unjustified by the frequent doldrums into which the industry has been slipping. No one can say that this heavy growth in the number of looms is a sign of prosperity. Is it a symptom of the frantic attempts made by weavers to eke out their livelihood in the face of dwindling margin of profit even as increase in cultivated area during the Great Depression was one of distress among the agriculturists ? Or is it a great camouflage put up for purposes not quite honest in a period of great temptation and misery ? An answer to this question calls for an investigation into the economics of handloom weaving.

DISTRICT-WISE TREND IN LOOMS :

3.19. The overall growth in the number of looms for the State from 92,558 in 1921 to 479,444 in 1955 signifies a 5·3 fold increase. This is not however spread uniformly over

all the 13 districts. Madras, South Arcot, North Arcot, Tanjore, Tiruchirapalli, Tirunelveli and South Kanara have recorded an increase of less than the overall state rate. Even among these districts the four-fold increase in Madras district is greatly influenced by the inclusion of Saidapet and the same rate of increase in Tiruchirapalli by the newly established Karkhanas and handloom factories at places like Karur. But the rate of increase is more than 5·5 fold in Chingleput, Coimbatore, Ramanathapuram and Malabar reaching the highest over of 11 fold in Salem. The case of Malabar is easily explainable as due to growth of factories. While the other three districts call for a probe into the reasons for much rapid growth, the staggering increase in Salem looks almost enigmatic. The district-wise analysis of the growth in the number of looms thus underlines the uneven advance in the number of looms. A sudden spurt in the looms may be brought about by various causes - influx of new population from non-weaving communities into the industry, the system of yarn rationing, revivification of the idle and dormant weavers by the influence of co-operative movement, the stimulus given by the Cess Fund Scheme, the new fibres introduced by master-weavers, etc. It may be possible to indicate which of these causes have operated and in which order of priority to produce this phenomenal increase perhaps only after an analysis of the data collected in the second and third set of schedules for the Economic Survey, the second part of the present scheme.

A Correlation Study : Growth between 1921 and 1941 :

3·20. Before closing this chapter, it is however possible to find out whether any correlation exists between the number of looms in a district in the base year and the increase in the number within a given period. It is proposed to make this correlation study for the two phases of "STEADY" and "STARTLING" growth. To enable valid comparison, the increase in the number of looms in each district in the given period is reduced to a percentage. The relevant figures for the period of steady growth from 1921 to 1941 are tabulated below :-

III-5.

Serial No.	District	Number of looms in		Percentage increase in 1941 over 1921.
		1921	1941	
1	Madras	1,527	1,791	17·2
2	Chingleput	10,600	16,600	56·6
3	South Arcot	4,646	11,208	141·2
4	North Arcot	12,743	23,334	83·1
5	Salem	10,841	36,540	237·0
6	Coimbatore	7,714	23,415	203·5
7	Tanjore	6,299	10,161	61·3
8	Tiruchirapalli	5,898	8,407	42·5
9	Madurai	6,493	7,722	18·9
10	Ramanathapuram	4,989	18,167	264·1
11	Tirunelveli	11,394	17,013	49·3
12	Malabar	7,886	14,857	88·3
13	South Kanara	1,528	2,586	69·2
	Total ..	92,558	191,801	107·2

3.21. By plotting the number of looms in 1921 along the X axis and the percentage increase in the Y axis, the scatter diagram on page opposite is produced. This chart is carefully studied to see if the points fall at random over the surface or if they form some definite pattern. Do the districts with the smaller number of looms in the base year show a smaller percentage of increase and those with a larger number of looms a higher percentage thus establishing a positive correlation? Or do the former districts have a higher percentage increase than the latter, indicating a negative correlation? These are the questions for which the scatter diagram should be used to yield answers. The chart shows that the points do not tend to have any pattern at all. Hence there is no relationship between the original number of looms and the subsequent increase. The real causes for the respective increases have to be sought elsewhere.

GROWTH BETWEEN 1941 AND 1955 :

3.22. For studying the relationship in the phase of "Startling" growth, the relevant figures are tabulated as shown below :—

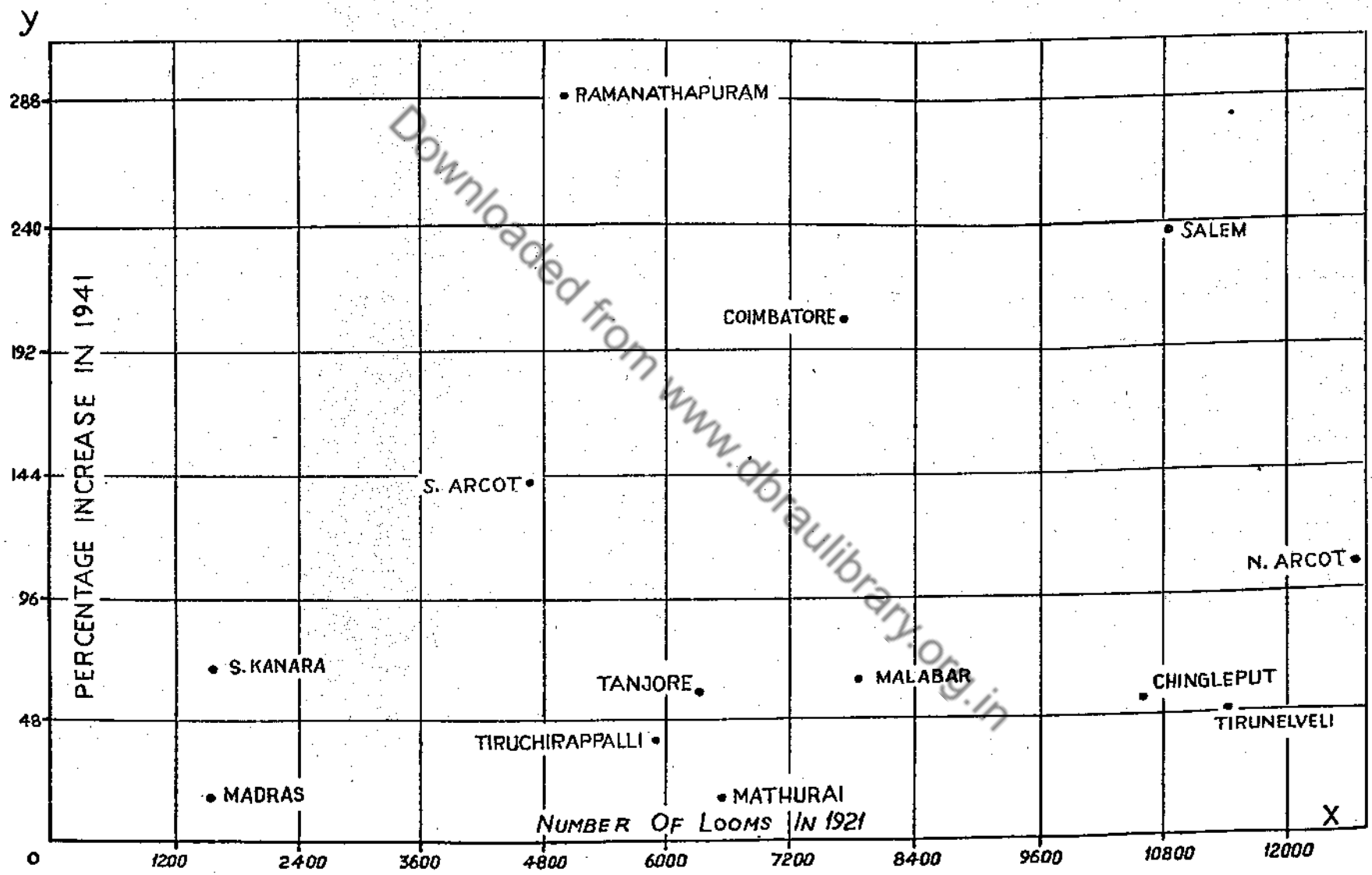
III-6.

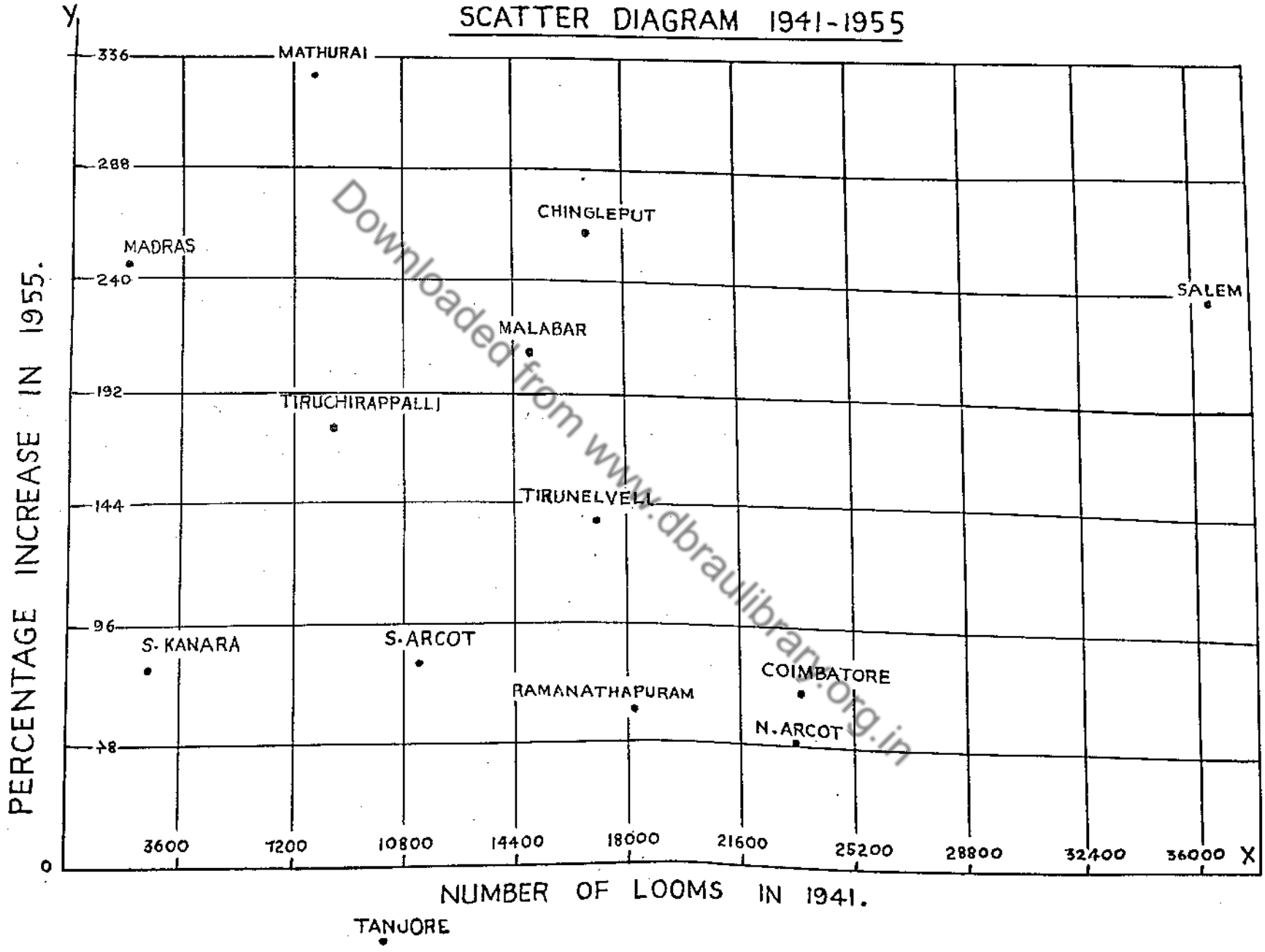
Serial No.	District	No. of looms in		Percentage increase in 1955 over 1941.
		1941	1955	
1	Madras	1,791	6,250	+ 248·9
2	Chingleput	16,600	59,973	+ 261·2
3	South Arcot	11,208	20,322	+ 81·3
4	North Arcot	23,334	35,713	+ 50·7
5	Salem	36,540	123,534	+ 238·0
6	Coimbatore	23,415	39,959	+ 70·6
7	Tanjore	10,161	6,831	— 32·7
8	Tiruchirapalli	8,407	23,270	+ 176·7
9	Madurai	7,722	32,979	+ 327·0
10	Ramanathapuram	18,167	29,329	+ 61·4
11	Tirunelveli	17,013	40,587	+ 138·5
12	Malabar	14,857	46,054	+ 209·9
13	South Kanara	2,586	4,643	+ 79·5
	Total ..	191,801	479,444	+ 150·0

With the number of looms in 1941 as X and percentage increase in 1955 as Y, the scatter diagram on the page opposite was drawn. This chart is also examined to find whether any positive or negative correlation exists between the two variables. Once again, it is seen that no definite relationship of any kind is noticeable. Hence the causes for increase have little to do with the number of looms in the base year.

1921-1941 COMPARED WITH 1941-1955 :

3.23. Another way of looking at these figures of looms is to compare the percentage increases in the two periods and find out whether there is any relationship between them :





whether the districts which registered a higher percentage of increase in the earlier period between 1921 and 1941 have recorded again a higher or a lower percentage in the later period between 1941 and 1955? For this study the percentage increases in both periods are tabulated as shown below :—

III—7. PERCENTAGE INCREASE IN LOOMS FROM 1921–1941 AND 1941–1955

Districts	Percentage variation 1921—1941	Percentage variation 1941—1955
Madras	17·2	248·9
Chingleput	56·6	261·2
South Arcot	141·2	81·3
North Arcot	83·1	50·7
Salem	237·0	238·0
Coimbatore	203·5	70·6
Tanjore	61·3	—32·7
Tiruchirapalli	42·5	176·7
Madurai	18·9	327·0
Ramanathapuram ..	264·1	61·4
Tirunelveli	49·3	138·5
Malabar	88·3	209·9
South Kanara	69·2	79·5
Total ..	1,332·2	1,911·7

3·24. The scatter diagram for the above tabulated data show a tendency for the points to fall in a rather wide and very mildly defined band running from upper left to the lower right. Tanjore is obviously a freak case showing a reduction in the number of looms in the second period. Salem and Madurai are extreme cases of an enormous increase in the second period, and North Arcot is an exceptional case where the percentage of increase in the second period has recorded a sharp fall from 83·1 per cent in the first to 50·7 per cent in the second period. These four districts out of the thirteen are found to fall outside the probable band. As this band slopes to the right, the correlation is negative and as the points show a considerable scatter, the relationship between the percentage variation in the number of looms from 1921-1941 and 1941-1955 is rather low. (For the regression equation and interpretation see the statistical note at pages 27-29. In other words, those

districts which had a larger increase in the first period have had a lower percentage increase in the latter period. This cannot however be stated as a common feature of all the districts because as already stated, the freak and extreme cases deprive this conclusion of much of its value. The major reasons for variations in the looms in the various districts may be elsewhere and it remains to be seen whether the more intensive Economic Survey will illumine them.

POPULATION PER LOOM, OUTPUT AND SURPLUS OF CLOTH :

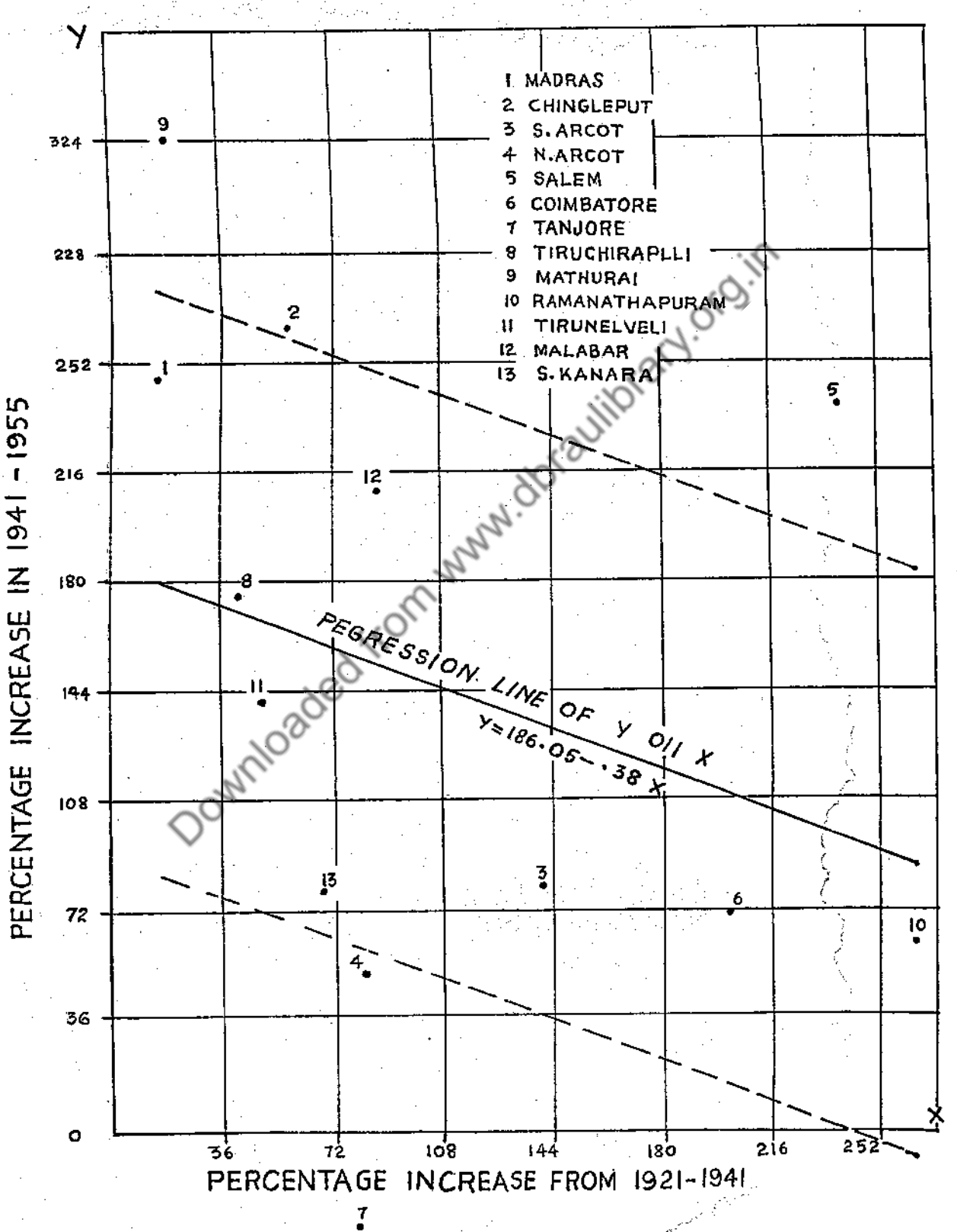
3.25. As the number of handlooms in Madras State is approximately 480,000 on the basis of the present Enumeration Survey, the original figure of 560,704 as estimated by the Director of Industries and Commerce stands deflated to the tune of nearly 14 per cent. This decrease is principally due to the fact that most of the ghost looms, brought into nominal existence by the yarn rationing system, were laid to rest in the present count. Even this deflated current estimate has profound implications which deserve to be understood in their proper perspective. Firstly despite this reduction, Madras State has nearly one-fourth of the number of looms in India although its population is but one-tenth of that of India. Madras State is thus the foremost in the Handloom Industry .

3.26. Secondly, if for a population of 35.22 millions (according to 1951 census) Madras State has 480,000 looms, there is one loom for every 74 persons in the State. The number of persons per loom varies from 27 in Salem district to 437 in Tanjore district (*Vide* Table III.8 as shown below). Assuming that one loom could produce on an average 5 yards of cloth per day of eight hours (see *infra* for average output), the total output of handloom cloth per loom working for 300 days in a year would be 1,500 yards or a little more than 20 yards each for its contingent of 74 persons. The average per capita consumption of cloth is reported to be 16 yards in India. It would be a little less in Madras State due to climatic conditions and sartorial habits. Even assuming the State average to be the same as the national average, under conditions of full employment, the Madras Handloom should be

III—8. POPULATION PER LOOM — DISTRICT-WISE

	District	Population 1951 Census	Estimated Number of looms (Sample Survey)	Number of persons per loom
1.	Madras ..	1,416,056	6,250	227
2.	Chingleput	1,853,619	59,973	31
3.	South Arcot	2,776,767	20,322	137
4.	North Arcot	2,859,157	35,713	80
5.	Salem	3,371,769	1,23,534	27
6.	Tiruchirapalli	2,943,882	39,959	74
7.	Tanjore	2,982,670	6,831	437
8.	Madurai	2,891,817	23,270	124
9.	Ramanathapuram	2,080,519	32,979	63
10.	Tirunelveli	2,445,967	29,329	83
11.	Coimbatore	3,293,204	40,587	81
12.	Malabar	4,758,342	46,054	103
13.	South Kanara	1,748,991	4,643	377
	STATE ..	35,422,760	4,79,444	74

REGRESSION LINE REPRESENTING PERCENTAGE INCREASE IN THE NUMBER OF LOOMS - 1921 to 1941 & 1941 to 1955



producing a surplus over requirements of 4 yards per head of the population *i. e.* 4 × 35·22 = 140·88 million yards of cloth which could be exported to other States or to foreign markets. The State population would (theoretically) have no need for mill cloth because their average consumption demands are adequately met by the handlooms. If the State population consume mill cloth, a corresponding quantity of handloom cloth will be added to the export surplus. This conclusion, no doubt, statistically correct, has of course practical limitations, set by the inability of handlooms to work for 300 days or at full employment level. These difficulties are however capable of being overcome, rather that is the end and goal of all the efforts of the Government through the agency of the All India Handloom Board. When this consummation to be worked for is attained, there will be full employment of the weavers with the benefits of larger earnings and higher levels of living. The entire State economy would also receive a stimulus on account of the full employment of the under employed or idle, equipment and skilled personnel.

3·27. Thirdly as a large percentage of the looms are engaged in weaving special varieties of export fabrics in this State, the surplus handloom production of the State constitutes an important foreign exchange earner. An impetus given to this production and trade will thus bring about the much needed foreign exchange and confer a beneficial effect on the national economy as well.

APPENDIX

Statistical Note on Regression Equation and Coefficient of Correlation :

Percentage variation in looms from 1921-1941 and 1941-1955

Districts	Per cent variation 1921-1941 X	Per cent variation 1941-1955 Y	XY	X^2	Y^2
Madras ..	+ 17.2	+ 248·9	4281·08	295·84	61951·21
Chingleput ..	+ 56·6	+ 261·2	14783·92	3203·56	68225·44
South Arcot ..	+ 141·2	+ 81·3	11479·56	19937·44	6609·69
North Arcot ..	+ 83·1	+ 50·7	4213·17	6905·61	2570·49
Salem ..	+ 237·0	+ 238·0	56406·00	56169·00	56644·00
Coimbatore ..	+ 203·5	+ 70·6	14367·10	41412·25	4984·36
Tanjore ..	+ 61·3	— 32·7	2004·51	3757·69	1069·29
Tiruchirapalli ..	+ 42·5	+ 176·7	7509·75	1806·25	31222·89
Madurai ..	+ 18·9	+ 327·0	6180·3	357·21	106929·25
Ramanathapuram ..	+ 264·1	+ 61·4	16215·74	69748·81	3769·96
Tirunelveli ..	+ 49·3	+ 138·5	6828·05	2430·49	19182·25
Malabar ..	+ 88·3	+ 209·9	18534·17	7796·89	44058·01
South Kanara ..	+ 69·2	+ 79·5	5501·40	4488·64	6320·25
Total ..	+ 1332·2	+ 1911·7	164295·73	218609·68	413536·84

$$M_x = \frac{1332 \cdot 2}{13} = 102 \cdot 5$$

$$M_y = \frac{11 \cdot 7}{13} = 147 \cdot 1$$

The line of Regression of Y on X is—

$Y_c = a_{yx} + b_y \times$ where a is the intercept of the line on the X axis and b is the slope of the line with respect to X axis.

$$b_{yx} = \frac{\Sigma XY - NM_x M_y}{\Sigma X^2 - NM_x^2} = \frac{N\Sigma XY - \Sigma X \Sigma Y}{N\Sigma X^2 - (\Sigma X)^2} = \frac{xy}{\Sigma x^2}$$

where the subscript yx indicates the Regression of Y on X.

$b_{yx} = -.38$

$a_{yx} = M_y - b_{yx} M'_x$

$= 186.05$

$Y_c = 186.1 - .38 \times$ is the Regression line of Y on X (a)

Putting $X = 17.2$ in equation (a)

$Y_c = 179.6$

Putting $X = 262$ in equation (a)

$Y_c = 85.8$

Plotting these 2 calculated points [17.2, 179.6] and [264,85.8] we get the Regression of Y on X.

A measure of the goodness of fit of the Regression line $Y_c = 186.1 - .38\ X$ is given by the following formula for the Standard Error of estimate.

$$S_y = \sqrt{\frac{\Sigma Y^2 - a\Sigma Y - b\Sigma XY}{N}} = 96.25$$

Adding and subtracting

96.25 in $Y_c = 179.6$ at $X = 17.2$

and again 96.25 in $Y_c = 85.8$ at $X = 264$

gives a range of [83.35 to 275.85] at the small end of the scale.

and a range of [−10.45 to 182.05] at the large end. The Pearsonian Coefficient of correlation is found from the following formula :—

$$\sqrt{\ } = \frac{\Sigma XY - NM_x M_y}{\sqrt{(\Sigma X^2 - NM_x^2)\ (\Sigma Y^2 - NM_y^2)}} = -.304$$

Since the data in the graph had fallen along the X scale a negative relationship is indicated (*i. e.*) there is a tendency for the percentage increase from 41-55 to decline with the increase in percentage from 21-41.

The Regression line of Y on X is $Y_c = 186.1 - .38\ X$.

A measure of goodness of fit of the Regression line is given by the Standard Error of estimates. This is shown graphically by plotting the range $\pm S_y$ from the Regression line. Adding and subtracting the Standard Error gives a range to [83.35 to 275.85] and [−10.45 to 182.05] at the 2 onds. Only 4 districts *viz.* Tanjore, North Arcot, Madurai, and Salem out of 13 are found to fall outside the range $\pm S_y$ (*i. e.*) 30 percent of the cases exceed the range.

Correlation is negative. Since the dots show considerable scatter the co-efficient of correlation is not high (– ·3) indicating rather low relationship between the percentage variation in the number of looms from 21-41 and 41-55.

SIGNIFICANCE OF THE OBSERVED CORRELATION. :—

$Z = \frac{1}{2} \log_e \frac{1+r}{1-r}$ is normally distributed with a Standard Error $= \frac{1}{\sqrt{n-3}}$.

A significant correlation indicates with reasonable certainty that the direction of the correlation in the population ($+^{ve}$ or $-^{ve}$) is the same as the direction of correlation in the sample when taken in conjunction with the corresponding value of Z.

If the ratio of Z to its Standard Error exceeds the value 3 correlation is significant, the limit of fluctuation being 3 times the Standard Error.

$r = -·3$

$Z = \frac{1}{2} \log_e \frac{1-·3}{1+·3} = -·37$

Standard errors $= \frac{1}{\sqrt{n-3}} = \frac{1}{\sqrt{10}} = \frac{1}{3·5}$

$\frac{Z}{S.E.} = -1·29$

Since $\frac{Z}{S.E.} < 3$, correlation is not significant.

CHAPTER IV

LOOMS CLASSIFIED

4·1. A glance at Schedule I will indicate that the Enumeration Survey was not merely a count of the looms in the selected 104 centres. It was also designed to collect data relating to the variety of looms with special reference to (a) their types and priority of disposition in respect of various counts of yarn and (b) the communal, sex and economic status of the weavers plying them. The present chapter is concerned with the analysis of the data relating to looms and the next with weavers.

ACTIVE AND IDLE LOOMS :

4·2. The comprehensive count of the looms undertaken in the selected centres covered 38,781 households, 60 master-weavers' karkhanas and 454 factories. The total count recorded 121,509 looms of which 104,136 or 85·7 per cent were found in households, 1,712 or 1·4 per cent in karkhanas and 15,661 or 12·9 per cent in factories. The first question to which the details recorded could furnish an answer is whether all the looms are actively engaged in weaving. It is well known that a number of looms remain idle at times for legitimate reasons like yarn shortage and sickness or death of weavers. A more important reason is the ownership of more looms than warranted by the number of adult weavers in the household or establishment. This excess number of looms, it is widely admitted now, was deliberately brought about by weavers and occupiers of factories and karkhanas during the period of yarn rationing which provided for the supply of yarn only to owners of licensed looms. This even led to the gross abuse of non-weaving communities purchasing looms not to ply them but to use them as a pass port to get yarn which could be made a lucrative source of profit in the black-market. The present survey aimed at making a distinction between active looms and idle looms. The latter may be genuine or spurious. It is not possible for investigators at the time of interview to assess the bonafide character of idleness without rubbing the respondents on the wrong side. Hence they were instructed to record those looms as idle which had not been in use for more than a month. Emphasis on this concept is important and in actual investigation this did not create much difficulty because the idle pit looms were folded and kept in mantel shelf and idle frame looms usually betrayed by their appearance their long desuetude.

4·3. The present survey registered 14,748 looms or 12·2 per cent of the total count as idle. In 1940, the Fact Finding Committee reported that 13 per cent of the looms were idle. The number of active and idle looms in the households, karkhanas and factories are tabulated below :—

IV–1.

Group	No. of units surveyed	Total count of the looms	Idle looms	Per cent of 4 to 3
1	2	3	4	5
Households	38,781	104,136	10,298	9·9
Karkhanas	60	1,712	144	8·4
Factories	454	15,661	4,306	27·5
Total ..	39,295	121,509	14,748	12·2

IDLE LOOMS IN HOUSEHOLDS :

4.4. One significant discovery in the household sector was that only a small proportion of the looms were generally idle due to legitimate reasons like the illness or the absence of the head of the household or any other adult member and lack of finance to harness them. Yet the percentage of idle looms in the household was nearly 10 ; in other words one in 10 looms in this sector was unused. It was but a fraction of these idle looms that were kept idle for financial or health reasons. The rest of them should be considered surplus, if not superfluous to the households. During the period of investigation, complaint of yarn shortage was hardly heard and the enforced idleness of looms due to this factor could therefore be ruled out. In most of the households where the head was sick or recently dead, hired weavers were employed ; it is therefore safe to conclude that the persistence of idle looms was not accompanied by idle hands. A considerable number of looms were found to be idle because the hands that operated them had gone out of the centres and probably out of weaving occupation. As the life of the looms is pretty long, these looms are stacked somewhere, like old grand-father clocks in disrepair, without being disposed of due to sentimental reasons. Hence the bulk of the idle looms in the household sector, about 6 or 7 per cent may be deemed to be superfluous stock. The current value of this fixed capital is negligible. If the primary objective of policy formulation is the provision of employment to unemployed weavers, as it should be, this number of looms should have little relevance.

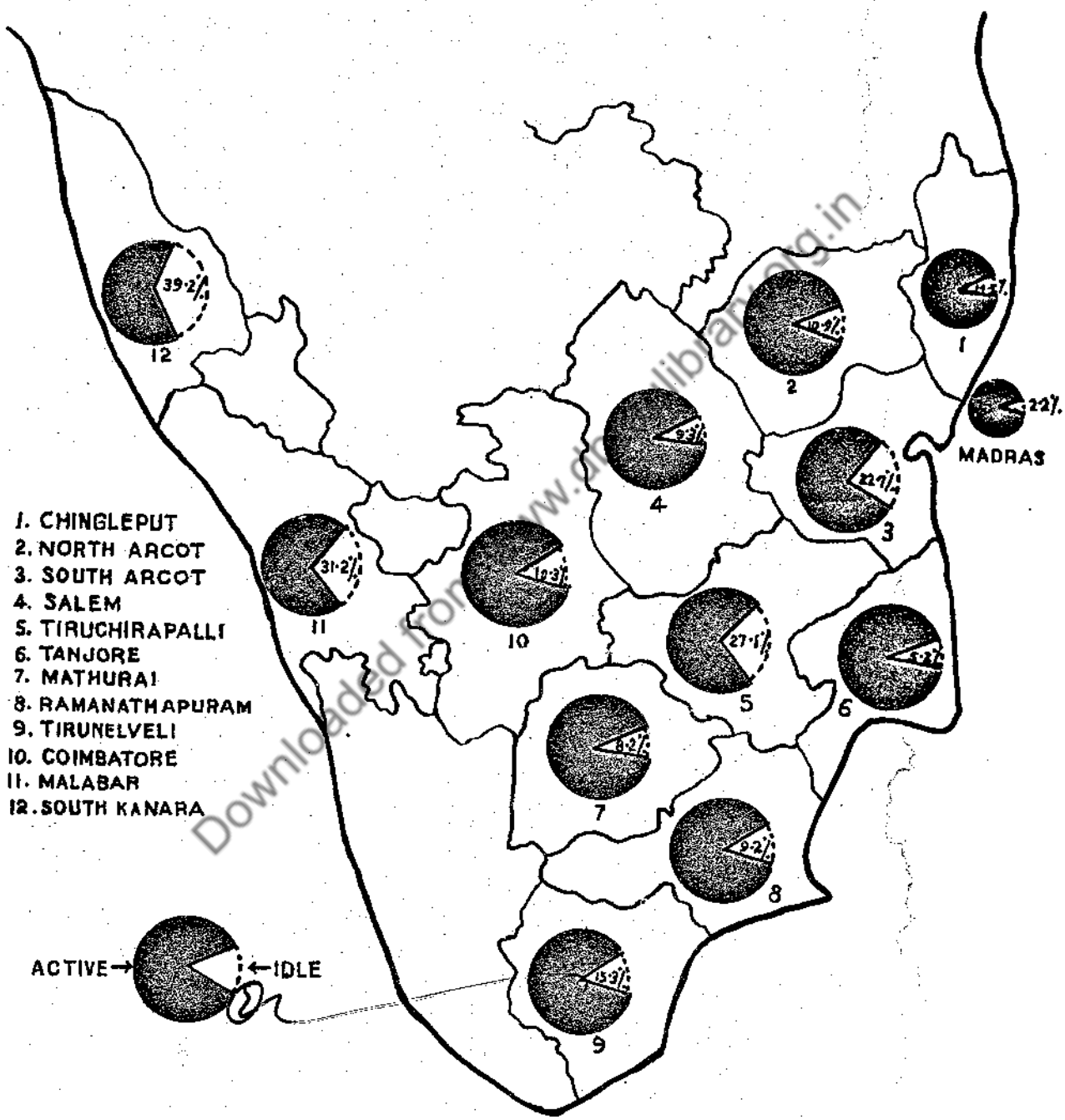
IDLE LOOMS IN MASTER WEAVERS' KARKHANAS :

4.5. The percentage of idle looms in the master weavers' karkhanas is 8.4, being the lowest among the three sectors. This is perhaps due to the greater organizing capacity of the master weavers. With fairly comfortable financial resources, they are able to keep the major portion of the looms at work. The hired weavers too prefer these karkhanas to households, as in the former warps are kept ready for them to start work and they could distribute their period of work and leisure according to their choice. In the households, the hired weaver has also to attend to odd jobs like warp making, ends joining etc. Above all conditions of service in karkhanas are relatively more congenial than in households. It is therefore small wonder that the proportion of idle looms is least in the master weavers' establishments.

IDLE LOOMS IN FACTORIES :

4.6. The factories present a contrast to the karkhanas, the idle looms being 27.5 per cent of the total. This situation is caused by several factors. Among them war-time expansion of factories and the post war slump should be accorded the top rank. The frequent occurrence of labour disputes, as a result of the general nation wide tempo of labour's demands for better conditions of service and higher wages, is also an important factor. On the part of the occupiers, the latest trend of reforms of the Factories Act for a strict enforcement of the labour welfare provisions acts as a disincentive to the attainment of full employment. In some factories inadequacy of working capital has kept a certain number of looms idle. The problem of idle looms in the factories as well as master weavers' karkhanas is not of immediate significance to the rehabilitation of the handloom industry which is guided by the principle of affording maximum encouragement to independent weavers to earn a decent income and improve their earnings and conditions of work by joining the Co-operative Societies. The idle looms in these large establishments will however become a matter of significance, if further increase in the number of idle looms brings about increase in the number of idle weavers. Even then, the situation can be saved if the policy of setting up industrial co-operatives, already inaugurated, could be given priority in such areas.

PERCENTAGE OF ACTIVE AND IDLE LOOMS
(DISTRICT WISE)



4.7. However a distinction should be made between the master weavers' karkhanas and the modern type handloom factories. The former are generally ramshackle sheds, more often thatched than tiled, with no amenities provided for the workers. The expenditure on their maintenance is always kept at the rock bottom. They do not contribute in any way to augment social capital of the country. On the other hand, most of the factories in the west coast and Tiruchirapalli are pucca buildings with all modern amenities, just like power driven textile mills. Any cause that brings about a reduction in the scope of their operation or a closure will have to be nipped in the bud. The owners of these factories are genuine entrepreneurs and their enterprise has led to the introduction of new varieties like furnishing fabrics, bed sheets and shirting cloth. Apart from the employment provided by them, these factories should be reckoned as social assets to the nation which could not be allowed to decay for want of proper and sympathetic Government attitude. The total number of looms in such factories is about 40,000 in the west coast districts and 6,000 in Tamilnad districts. Their preservation at a high level of employment and efficiency will add material to the strength and stability of the handloom industry.

IDLE LOOMS DISTRICTWISE DISTRIBUTION :

4.8. Since the factories are concentrated in a few districts and the number of master weaves' karkhanas is not sufficiently large, a districtwise analysis of the figures of idle looms is not deemed necessary as in respect of households. The number of households surveyed in the various districts with the active and idle looms enumerated in them are tabulated below :—

IV–2.

District	Number of Household	Number of looms			Per cent of (5) to (3)	Per cent of (5) to (4)
		Total	Active	Idle		
1	2	3	4	5	6	7
1. Madras	804	2,479	2,425	54	2·1	2·2
2. Chingleput	6,094	13,465	12,923	542	4·0	4·2
3. South Arcot	1,284	3,777	2,916	861	22·8	29·5
4. North Arcot	4,057	10,240	9,122	1,118	10·9	12·2
5. Salem	9,742	28,647	26,760	1,887	6·5	7·1
6. Tiruchirapalli	1,012	2,613	2,085	528	20·1	25·2
7. Tanjore	791	1,350	1,254	96	7·1	7·6
8. Mathurai	3,874	13,322	12,247	1,075	8·1	8·8
9. Ramanathapuram ..	2,904	7,443	6,741	702	9·4	10·4
10. Tirunelveli	4,649	9,826	8,318	1,508	15·3	18·1
11. Coimbatore	2,483	7,016	6,234	782	11·1	12·5
12. Malabar	876	2,659	1,975	684	25·7	34·6
13. South Kanara ..	210	1,299	838	461	35·4	53·5
STATE ..	38,781	104,136	93,838	10,298	9·9	11·0

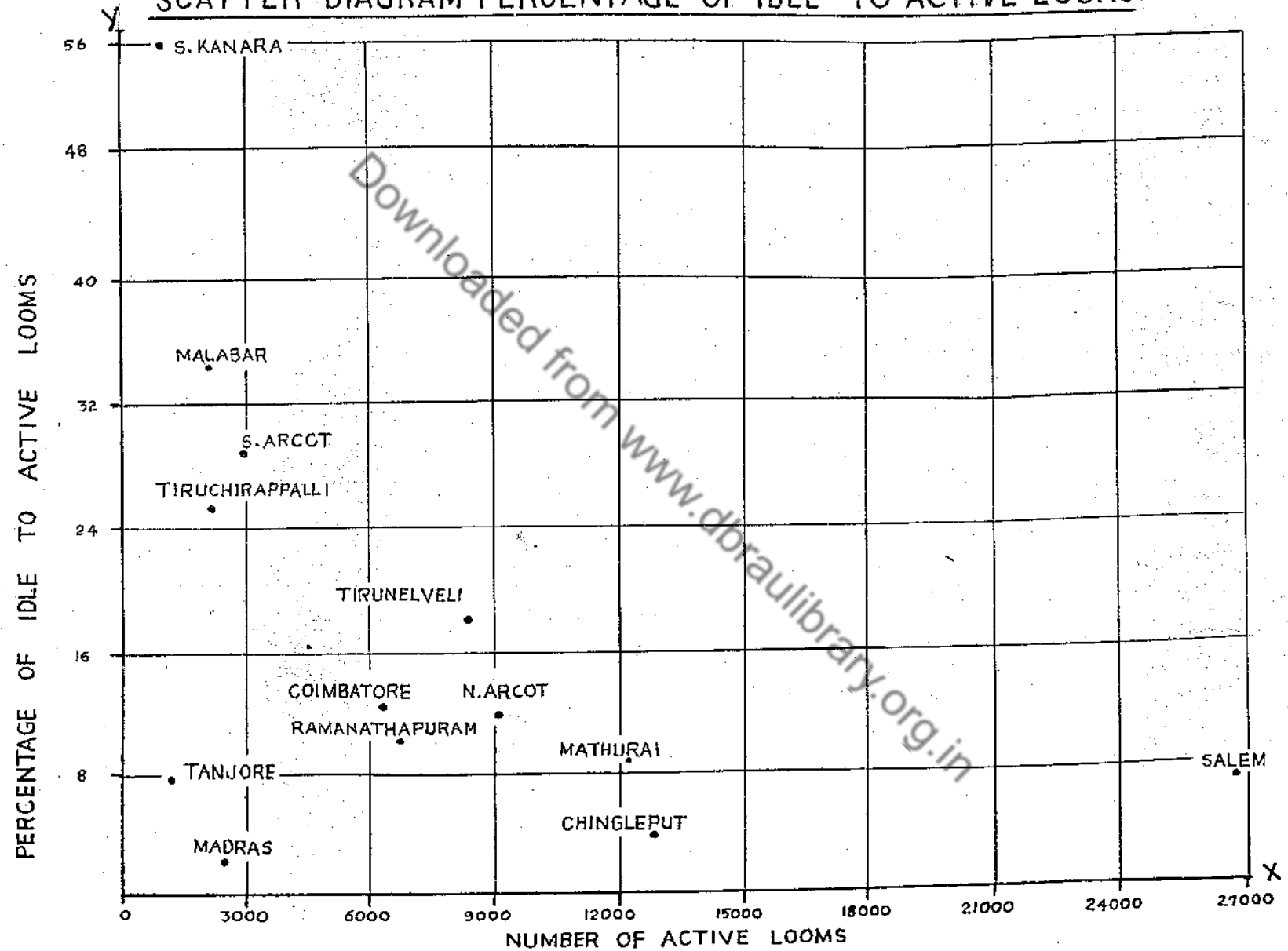
4.9. As the handloom centres in the various districts were sampled to yield looms with probability proportional to size, the districts with larger number of looms in the frame have yielded larger number of looms in the sample enumeration. Salem is the largest District in respect of looms in Madras State the sample from which consists of 28,647 looms. Madurai and Chingleput come next with more than 13,000 looms, followed by North Arcot, Tirunelveli, Ramanathapuram and Coimbatore with looms declining from 10,000 to 7,000. The other districts have also yielded sample looms which fairly represent their order of importance in the State. This order of significance is reflected too in the number of households covered in the various districts, Salem occupying the first place with 9,743 households followed by Chingleput with 6,094 households. There are of course minor deviations from the order as in the case of Tirunelveli having more households surveyed than Madurai. These deviations are significant in indicating in a broad manner the household-loom ratio. A comparison of the households covered and looms counted in Tirunelveli and Madurai will show that the households in the former district have on an average a lesser number of looms than those in the latter district. This is only broadly true. The findings of the Economic Survey designed to study this relationship more intensively will enable us to have a better appreciation of the position. (Vide Chapter VI infra).

4.10. The percentage of idle looms in the various districts in the household sector is not uniform. It varies from 2.1 per cent in Madras district to 35.4 per cent in South Kanara district. The number of idle looms in the households may be caused by shortage in yarn of required counts and fibre. The percentage of idle looms could be correlated to the communities to which weavers belong. It is possible that in certain communities there is a larger exodus of adults and non-adults from weaving occupation. The community-wise significance of the various districts will be studied in the next chapter. To find out whether the districts, as geographical entities, have any influence on the magnitude of idle looms, a scatter diagram with the data in column 4 (Table IV-2) as X and the data in column 7 as Y was prepared. (Vide page opposite). The dots in this chart are widely scattered and no trend is discernible. Hence the geographical area as a causative factor could be eliminated from those influence on the existence of idle looms.

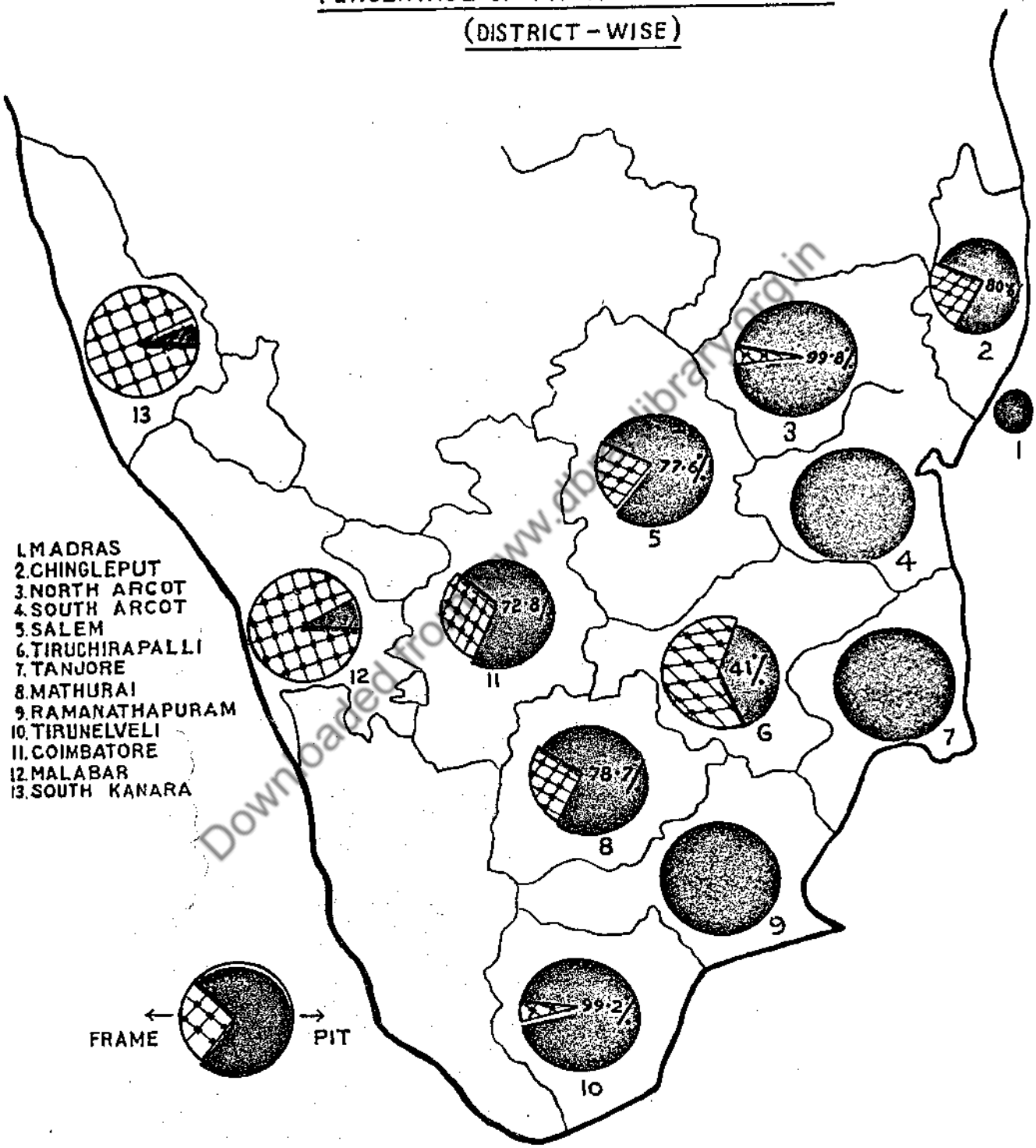
PIT AND FRAME LOOMS :

4.11. The handlooms used in Madras State may be classified into two broad groups :— (1) Pit looms and (2) Frame looms. This classification is based on the structure of the looms. The former is installed in a pit about 2½ feet deep and contains the essential components like the beam, heald, reed and shuttle. It occupies less space and the windows are placed very low, almost on a line with the plinth level of the house enabling maximum light to be shed on the loom. The design of the weavers' house is based more on this requirement than on considerations of ventilation to the occupants. This type of loom is the cheapest contraption, yet capable of being fitted with fly or throw shuttle and of weaving as finest fabrics as any other loom. The latter, frame loom, is a woodon structure, carrying all the components of a loom. It stands on the floor two and a half feet high upto the weaver's seat. Above this level, it is the same as fly loom but jutting further up to another couple of feet. This is a costlier contrivance and occupies more volume of space in the house. To install this loom, the old type of weaver's house will have to be redesigned. These differences merit attention in the present context when the air is thick with several suggestions for improving the loom. It is necessary to bear in mind three factors in respect of improved types : (1) the replacement cost of loom ; (2) the suitability of its installation in the existing homes of weavers and (3) the volume of space it will occupy besides the technical merits regarding the physical strain involved, cheap and easily adjustable spare parts etc. At present the new types like pedal looms and semi-automatic looms are being popularised. It is therefore essential to know the basic position in regard to the types of looms in use at present. To this end an analysis of the data collected relating to pit and frame looms is made.

SCATTER DIAGRAM-PERCENTAGE OF IDLE TO ACTIVE LOOMS.



PERCENTAGE OF PIT AND FRAME LOOMS
(DISTRICT - WISE)



4·12. A classification of the total number of looms counted in this survey into pit and frame looms in the various districts is given below :—

IV–3.

District	Pit		Frame	
	Number	Per cent to total	Number	Per cent to total
Madras	2,479	100·0	..	0·0
Chingleput	11,049	80·6	2,658	19·4
South Arcot	3,805	100·0	..	0·0
North Arcot	10,216	99·8	24	0·2
Salem	22,877	77·6	6,591	22·4
Tiruchirappali	2,263	41·0	3,251	59·0
Tanjore	1,856	100·0	..	0·0
Madurai	11,954	78·7	3,224	21·3
Ramanathapuram	7,608	100·0	..	0·0
Tirunelveli	9,869	99·2	71	0·8
Coimbatore	6,345	72·8	2,368	27·2
Malabar	998	9·3	9,774	90·7
South Kanara	21	0·9	2,208	99·1
Total ..	91,340	75·2	30,169	24·8

4·13. The interpretation of the data in the table above calls for the utmost caution. That they relate to a sample and they would indicate only the broad situation in the Universe should not be overlooked. This is particularly so at the district level. For the State as a whole, the sample is big enough to yield a fairly close approximation to the real situation. It is erroneous to imagine that pit looms which look primitive will be found mainly in rural areas and the frame looms which look more modern in urban centres. A clear proof of this fallacy is afforded by the fact that all the sample looms counted in the metropolitan city are pit looms and almost all the looms in an upcountry district like South Kanara are frame looms. For one thing floor space in urban centres being more difficult to get, the space-saving pit-looms are preferred there. Factories do not generally have pit looms. This is confirmed by the data collected from Malabar and Tiruchirapalli where factories are highly concentrated. In the former district, 7,347 out of the sample of 9,774 frame looms enumerated are found in factories and in the latter district 2,901 out of 3,251. This survey tends to show that pit looms are the rule in households as frame looms in modern type factories. Two-thirds of the frame looms occurring in the sample of the Enumeration Survey are found in the four districts of Malabar, South Kanara, Salem and Tiruchirapalli, where the factory system of handloom industry is in greatest evidence. It is also seen that both householders and master-weavers heavily plump for pit looms. Once the earlier misconception that frame looms alone are suitable for fly-shuttle equipment was dispelled, weavers have stuck to the pit looms while changing over from throw to fly shuttle.

WHOLESALE CHANGE OVER TO FRAME LOOMS :

4·14. As already indicated, the percentages worked out for districts are but indicative and not exact portrayal of the position of pit looms. They do show a very high preponderance of pit looms. The percentage worked out for the State has a higher degree of precision. If nearly 75 per cent of the estimated number of 480,000 looms as it is revealed by

the data, happen to be pit looms, a huge expenditure will have to be incurred for converting them into frame looms or pedal looms. Construction of the wooden stand for the former would roughly cost Rs. 20 per loom at current cost of wood and making charges; and for 75 per cent of 480,000 the capital outlay would be of the order of Rs. 90 lakhs. Such a conversion at this huge cost would not be improving the technical efficiency of the handloom either. Because pit looms fitted with fly-shuttle are no less efficient than frame looms. Without stepping up productivity an endeavour of these dimensions would be merely putting in the hands of the weavers an improved equipment for which they do not care. Introduction of frame looms in the present day dwelling-cum-working place of the weavers would be very much like getting the camel into the tent and ousting the Arab out. This idea of changing pit into frame looms, encouraged in certain quarters, deserve to be viewed as nothing short of being chimerical.

PEDAL LOOM :

4.15. Of the latest improvements, the pedal loom has undoubtedly certain merits. Although it has a wooden stand like the frame loom, its height is not more than three feet, and it has no superstructure above the warp level as the shuttle is plied with the pedal. It occupies less space. There is work for only one foot, even a one legged handicapped indvidual can operate it. Both the hands being free, snapped ends of threads could be joined quickly with less strain than in frame looms. But the cost factor is as formidable, if not more than in the case of frame looms. This would also require partial redesigning of the weavers' home atleast so far as the position of the windows is concerned. If the pedal loom is capable of being fitted on to a pit loom it can certainly improve the lot of the weaver. The pedal loom, that is now demostrated, is not capable of weaving cloth above 42″ width. It requires further improvements for weaving such fabrics like dhoties and kailies of greater width. Even if this is technically feasible, the cost of installation would still be a factor that could not be easily ignored.

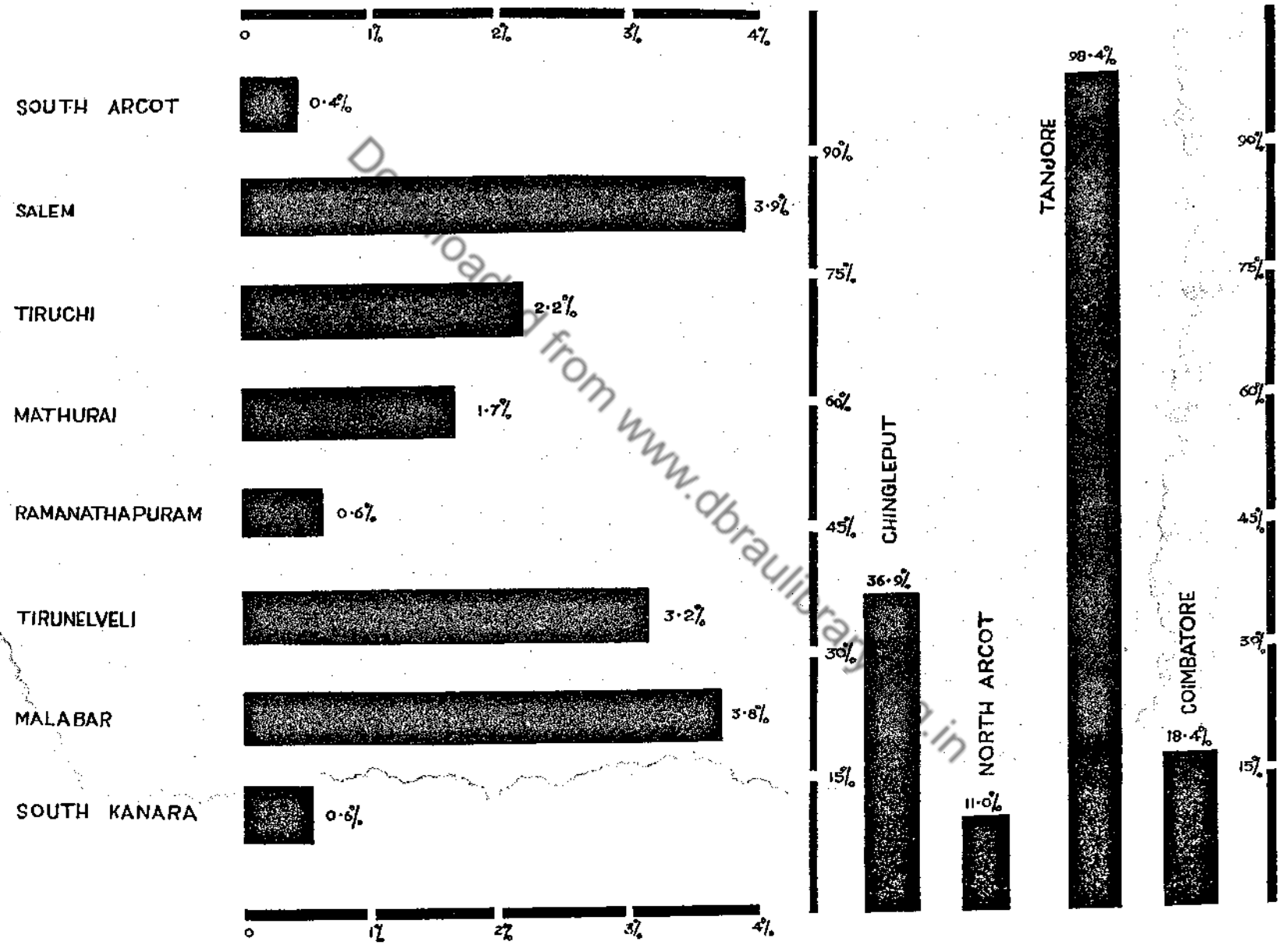
THROW AND FLY-SHUTTLE :

4.16. In the long history of the Indian handloom industry there has never been a greater technical revolution than the introduction of the fly shuttle about fifty years ago. It was a simple yet a highly valuable invention which raised the productivity of the handloom more than three fold. The Enumeration Survey has aimed at collecting the necessary data for proper assessment of the role and utility of the fly-shuttle. Fanatical admirers of fly-shuttle advocate a sweeping reform that would bring about a wholesale substitution of throw with fly-shuttles. The data relating to the throw and fly-shuttle collected during the survey are tabulated below :—

IV–4.

District	Throw-shuttle		Fly-shuttle	
	Number	Per cent to total	Number	Per cent to total
1. Madras	..	..	2,479	100·0
2. Chingleput	5,052	36·9	8,655	63·1
3. South Arcot	15	0·4	3,790	99·6
4. North Arcot	1,118	11·0	9,122	89·0
5. Salem	1,145	3·9	28,323	96·1
6. Tiruchirapalli	116	2·2	5,398	97·8
7. Tanjore	1,827	98·4	29	1·6
8. Mathurai	245	1·7	14,933	98·3
9. Ramanathapuram	47	0·6	7,561	99·4
10. Tirunelveli	314	3·2	9,626	96·8
11. Coimbatore	1,604	18·4	7,109	81·6
12. Malabar	411	3·8	10,361	96·2
13. South Kanara	12	0·6	2,217	99·4
STATE ..	11,906	9·8	109,603	90·2

PERCENTAGE OF THROW SHUTTLE LOOMS



4·17. It is evident from the above data that the fly-shuttle dominates the industry to the extent of 90 per cent ; yet the throw-shuttle seems to have a strong raison d'etre for its survival. Once the utility of the fly-shuttle was realised by the illiterate yet discerning weaver, its adoption was quick and very extensive. But this high tide of change that swept over the industry since the opening of the present century could not dissolve a hard core of throw-shuttles. They have continued despite the proven higher efficiency of the fly-shuttle because silk sarees of " cunningest pattern " as well as solid bordered dhoties could be woven only by throw-shuttles. This deductive statement is amply borne out by the data in the above table (IV-4). There are five districts which have more than 1,000 throw-shuttle looms. They are famous for the weaving of either silk sarees or solid bordered dhoties. Conjeevaram in Chingleput, Kumbakonam in Tanjore, Arni in North Arcot, Kollegal in Coimbatore are great centres for silk sarees and Salem is a great centre for solid bordered dhoties. In major parts of South India, there is an inelastic demand for these sarees and dhoties because convention decrees their use in all important ceremonies like marriage and festivals like Deepavali and Pongal. It is obvious that the percentage of throw-shuttle looms which have survived upto the present day are there to satisfy a real demand. Hence any scheme for stream-lining shuttle equipment throughout the State, lured by the higher rate of productivity of the fly-shuttle, is not desirable. Stepping up handloom production seems to be the slogan for the industry during the Second Plan period. A blind adherence to it is bound to injure the industry irreparably. Throw-shuttle looms satisfy in a greater measure the claims put forward on behalf of the handloom industry : (1) it is more labour-intensive and it should appeal more to the planners with a slant in favour of hand industry and (2) it is specialising in the production of commodities which present hardly any marketing problem, a veritable bugbear in the case of many other fabrics. This is so because the consumers are enjoined by custom and convention to buy them, and they have also developed by long tradition an inelastic demand for them which imply an assured market for them.

LOOMS RELATED TO TYPES OF YARN :

4·18. So far, looms have been classified on the basis of (1) intensity of employment (active or idle) ; (2) structural details (pit or frame) and (3) shuttle equipment (throw or fly). Another classification based on the kind of yarn generally consumed by them is of vital significance to plan and regulate the flow of required counts of yarn in adequate quantities to the various districts or centres. The absence of such a planned supply of yarn has brought about a greater dislocation of work and distress among weavers than all the other causes of disturbance to their continuous employment. It is of course technically possible for a loom to weave all kinds of yarn and fibres. But owing to a natural long-term evolution of preferences and specialisation, the various centres tend to show an order of priorities in their demand for different types of yarn. In the schedule for the Enumeration Survey, provision was therefore made to record the answer to the question relating to the yarn that is mostly used on the given looms.

4·19. The problem of yarn supply to handlooms has for long been complicated by certain misconceptions. The oldest of them was that the handloom had a preference for coarse yarn whereas the modern textile mills for fine yarn. In the early days of the advent of power mills, it was even imagined that on account of these natural preferences, the handloom and mill sectors will be complementary to each other and that there would be no conflict between them. How this kind of notion came to be entertained particularly when the Indian handloom from early times had been world famous for its superfine muslins and calicoes it is hard to comprehend. But this notion had so strongly persisted at one time that the matter came to be seriously studied by a reference to the data of Indian and imported yarn available for handloom consumption. For the first decade of the present century, the position was summed up thus : "Between the periods 1901-3 the increase in foreign yarns consumed in Madras Presidency which is mostly of counts of higher than those spun

in Indian mills amount to 52 per cent." (Madras census of 1921, Part I, P. 207). Although in the past 30 years this myth of a preference for coarse yarn has been exploded, opinions in recent years regarding the proportions of looms weaving medium and fine counts have been conflicting. Unless this proportion is fairly correctly estimated, maldistribution of yarn is bound to recur. The data relating to this live issue collected as a part of the Enumeration Survey are tabulated in the statement IV-5 on the page opposite.

4·20. These data refer to 106,761 active looms in the selected 104 centres covered by the Enumeration Survey. Idle looms, having no data to furnish, do not figure in the table. Although there are numerous counts of cotton yarn, they were broadly grouped into 3 categories viz. (1) coarse yarn consisting of all counts upto 16s; (2) medium yarn consisting of all counts from 17s and 33s and (3) fine yarn consisting of all counts 34s and above. Besides these three broad categories, data relating to (4) silk, (5) art silk, (6) mixed fibres and (7) staple fibres were also collected and the total number of looms classified into seven corresponding groups. It is note-worthy that the number of looms utilising coarse yarn is 4,728, or 4·4 per cent in the sample of 106,761 active looms. Coarse yarns are mostly used for weaving carpets, bedsheets and towels. More than half the number of looms in this group, 2,478 using coarse yarn, are found in Tiruchirapalli district mainly due to the factories at Karur specialising in these fabrics. Coimbatore district comes next with 1,548 looms particularly because of Bhavani, a famous carpet weaving centre.

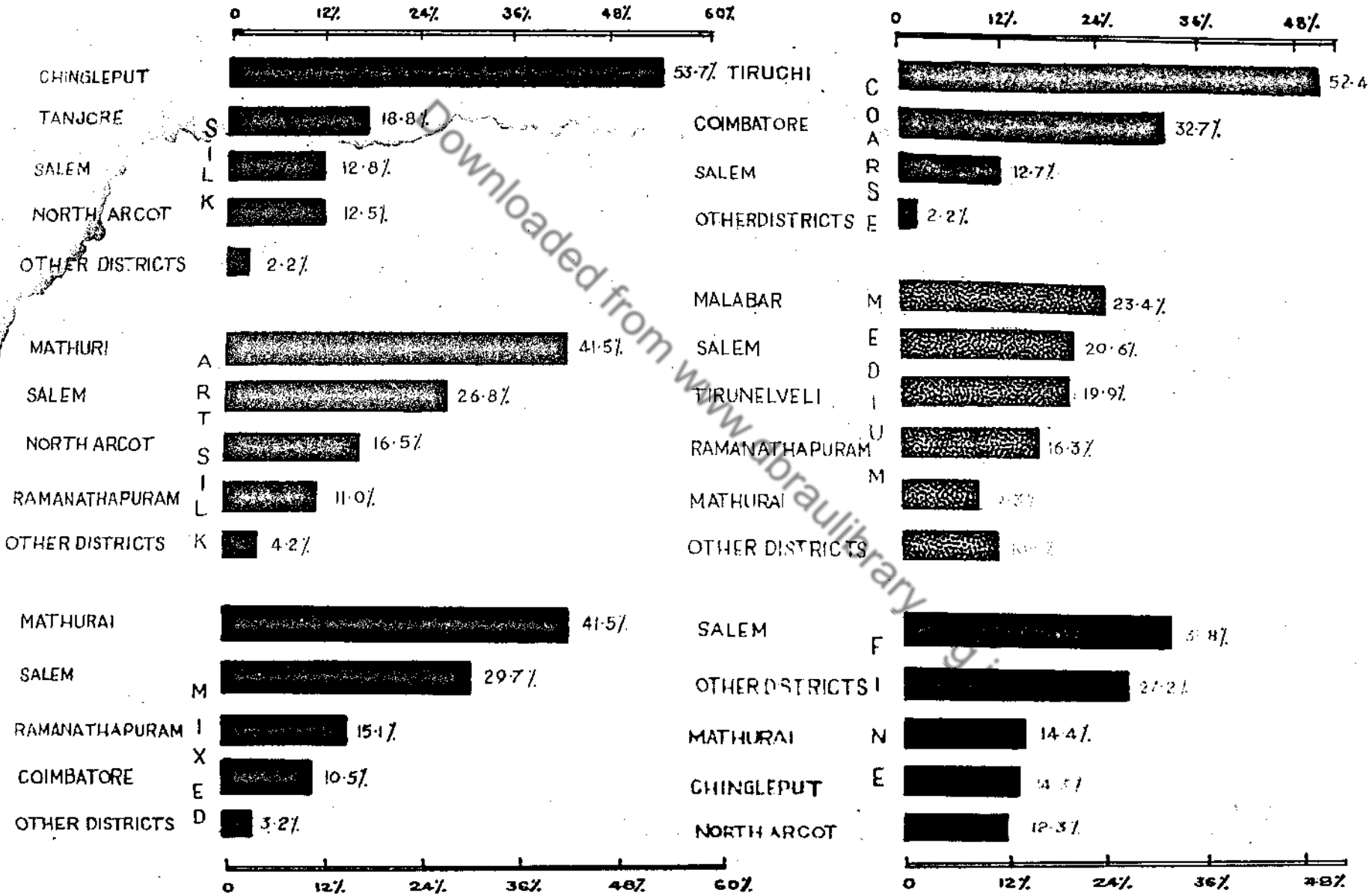
4·21. Staple and mixed fibres have come into the market so recently that they are not significant in the table, accounting for 0·2 per cent and 1·6 per cent respectively. Next in the ascending order is art silk with 5·7 per cent of the looms in the sample chiefly concerned with its weaving. This percentage may be on the low side because it does not include the consumption of art silk yarn for making borders and designs of sarees and dhoties in normally cotton yarn weaving looms. Silk weaving looms form 8·6 per cent of the total. This is particularly significant as silk weaving is of ancient origin and highly developed in this State. The non-cotton fibres in the aggregate are woven on 16·1 per cent of the sample looms or roughly on one in 6 looms.

4·22. In respect of cotton yarn, the most noteworthy feature is the large share of fine yarn, accounting for a little more than half the total number of looms. This preeminence of fine yarn is of cardinal significance for two reasons : (1) the opinion that the medium yarn is mostly used by handlooms is erroneous. It might have been the case years ago when consumers were not fastidious about quality. But at present since a relatively larger share of the national income is flowing into the lower income groups who are susceptible to Duesenberry's " demonstration effect ", there may be a great demand for cloth of higher counts and it is quite possible that the handloom industry has readjusted itself to the demands of the sovereign consumer. (2) It is this expansion of the output of cloth of fine and super-fine yarn which has aggravated the competitive struggle between the handloom and mill sectors.

4·23. The pattern of distribution of looms among these six types of yarn that has emerged from the analysis of the collected data underlines a few significant points. Although custom and convention even to-day exert considerable influence over the weaving population, they have never been impervious to new ideas and new demands on them. The trend towards a greater use of fine yarn will gather momentum along with rising per capita incomes under the Five Year Plans. With increasing supplies of art silk yarn and staple fibres and growing demand for fabrics made of them, the handloom weaver will be quickly adapting to changing conditions in his market. Just as coarse yarn looms have declined to

PERCENTAGE OF ACTIVE LOOMS CLASSIFIED ACCORDING TO TYPES OF YARN

PERCENTAGE OF LOOMS ACCORDING TO TYPES OF YARN USED.



IV–5. DISTRICT-WISE PREDOMINANCE OF TYPES OF YARN ENUMERATION SURVEY

District	Coarse	Per cent to total	Medium	Per cent to total	Fine	Per cent to total	Art silk	Per cent to total	Silk	Per cent to total	Mixed	Per cent to total
1	2	3	4	5	6	7	8	9	10	11	12	13
Madras ..	..	..	..	..	2,357	4·4	..	..	68	0·8	..	..
Chingleput ..	..	..	477	1·5	7,702	14·3	..	..	4,943	53·7	..	..
South Arcot ..	..	..	163	0·5	2,760	5·1	..	..	..	..	20	1·4
North Arcot ..	..	..	302	1·0	6,669	12·3	1,005	16·5	1,146	12·5	..	..
Salem ..	602	12·7	6,434	20·6	17,135	31·8	1,628	26·8	1,182	12·8	544	29·7
Tiruchi ..	2,478	52·5	50	0·2	1,379	2·5	28	0·5	86	0·9	..	..
Tanjore ..	..	..	11	0·1	18	0·1	..	..	1,731	18·8	..	..
Madurai ..	4	0·1	2,893	9·3	7,753	14·4	2,514	41·5	..	..	760	41·5
Ramanathapuram.	1	..	5,079	16·3	880	1·6	668	11·0	..	..	278	15·1
Tirunelveli ..	13	0·3	6,194	19·9	2,213	4·1	2	..	..	..	..	..
Coimbatore ..	1,548	32·7	2,190	7·0	3,631	6·7	213	3·5	46	0·5	193	10·5
Malabar ..	82	1·7	7,266	23·4	52	0·4	4	0·2	..	..	..	..
South Kanara.	..	..	35	0·2	1,280	2·3	..	..	..	..	34	1·8
STATE ..	4,738	100	31,094	100	53,827	100	6,062	100	9,202	100	1,829	100

almost an irreducible minimum percentage, in the coming years looms using medium yar will register a downtrend. Because, apparel or wearing cothes will be progressively mad of fine yarn leaving gada pieces and other furnishing fabrics alone to be made of mediu yarn. The pattern of yarn consumption by the handloom industry is no longer (perhap never was) rigid and petrified but flexible and dynamic. This is a conclusion of no litt importance to policy formulation in regard to assured supply of yarn in required count A vigilant watch has to be kept to detect changes the pattern is undergoing. This ma need periodical surveys of this aspect to keep the policy making authority duly informed the changes that are taking place in a steady, though not in a spectacular manner.

IMPORTANCE OF VARIOUS TYPES OF YARN - DISTRICT-WISE :

4.24. The table IV-5 shows not only the over-all State position but also the region importance of the different fibres. The advent of staple fibres is being felt in two district only – Malabar and Madurai. Mixed fibres are in greater evidence in Salem and Madur districts having 544 and 760 looms out of the State sample of 1,829. As for art silk, Madur seems to be the biggest stronghold, accounting for about 30 per cent of the looms belongin to this group in the State, another 30 per cent being found in Tiruchirapalli and Sale together. The spread of these new types of fibres is mostly evident in Mathurai, Salem Tiruchirapalli and Malabar. Is this due to the enterprise of the weaving communities o these districts or to other adventitious causes ? An answer to this question may be give after a study of the distribution of the various prominent weaving communities in the nex chapter.

4.25. The use of coarse cotton yarn shows a tendency for regional concentration i Salem, Tiruchirapalli and Coimbatore. This, as already stated, is chiefly due to the weavin of carpets and bedsheets. Consumption of medium yarn is more widely distributed: ye more than five-sixths of the looms in this group are found in the four districts of Malaba Salem, Tirunelveli and Ramanathapuram arranged in the order of their importanc Malabar leads this group because of the large scale manufacture of furnishing fabrics mad of medium yarn in the factories. The place of Salem in this group is not really significan because its share of 6,434 looms forms only 24.1 per cent of the total number of 26,72 looms occurring in that district in the enumeration. (Vide Table IV-5). In Tirunelve and Ramanathapuram districts, the number of looms consuming medium yarn form 73. per cent of the sample looms. In these two districts, dhoties and sarees for ordinary wea and for lower income groups as also lungies for export are woven with medium yarn. Madur and Coimabatore having 20.8 per cent and 28 per cent respectively of the sampl looms and less important in respect of medium yarn keep up the rear almost. Othe districts are still less significant from the standpoint of medium yarn.

4.26. Fine yarn, which is in greatest demand by looms, is used for weaving high clas sarees, dhoties, kailies etc. Its importance has got to be assessed from two standpoints (1) Relative significance of the looms using fine yarn in a district compared with loom using other types of yarn and (2) Absolute number of looms engaged in weaving fine yarn For evaluation of the first order, the percentage of looms using fine yarn will be a usefu indicator. In South Arcot, South Kanara and Madras districts more than 93 per cen of the looms in the sample use mainly fine yarn. In terms of absolute numbers, Salem o course leads once again and Mathurai is also important.

LOOMS AND FABRICS :

4.27. The Madras handloom is justly celebrated for its range and variety of fabrics their name is legion. In the Enumeration Survey, an attempt has been made to find ou the proportion of looms engaged in weaving the principal varieties which were listed int 24 classes. The total number of looms covered for this purpose is 106,761 active looms

The various classes of fabrics and the looms engaged in weaving them are given in Table IV-6 as shown below:—

IV–6. VARIOUS CLASSES OF FABRICS AND THE NUMBER OF LOOMS ENGAGED IN WEAVING THEM

Serial No.	Description of fabrics	No. of active looms	Per cent to total
1	Cotton sarees	36,017	33·6
2	Lungis, choli pieces, etc.	20,410	19·2
3	Dhotics (ordinary and kundanji) ..	9,703	9·2
4	Silk sarees, pavadai and choli pieces ..	9,202	8·5
5	Towels	7,295	6·8
6	Art silk sarees, pavadai and choli pieces ..	6,062	5·7
7	Shirting and coating	5,781	5·4
8	Gada pieces	4,525	4·2
9	Bed spreads	2,737	2·6
10	Carpets	2,189	2·2
11	Tapes	1	..
12	Giltam	472	0·4
13	Khadi	344	0·3
14	Bukidi	335	0·3
15	Pudava	111	0·1
16	Turkey towels	105	0·1
17	Angavastrams	1,321	1·26
18	Dupatta	51	0·05
19	Kerchiefs	31	0·03
20	Bachikana towel	23	0·02
21	Bandange cloth	19	0·02
22	Kindan	14	0·01
23	Sports dress	10	0·01
24	Mosquito net	3	..
	Total ..	106,761	100·00

COTTON SAREES :-

4·28. This table brings into bold relief the pattern of handloom cloth output. By far the most important fabric is the class, described as " cotton sarees ", which accounts for 33·6 per cent of the loom surveyed. A considerable portion of these sarees is made of medium yarn to cater to the needs of women of the lower income groups. They are usually

8 yards long as they are worn without any undergarment. The sarees of fine and superfine yarn are generally in demand from urban and educated women who, wearing underlinen, do not go in for more than 6 yards sarees. With improvement in designs, the latter class of womenfolk are buying more and more handloom instead of mill sarees which they had for long patronised. The nice texture and laundering qualities of the mill sarees are no longer their monopoly. Further the puritanic turn of the educated women of the early twenties of the present century who went wholehog for white sarees with extreme simplicity of borders seems to be less in vogue to-day, fortunately for the handloom, always celebrated for its colourfulness. Since approximately one-third of the looms are engaged in producing these cotton sarees, patrons of them, particularly of medium counts usually worn by the lower income brackets, have constituted a bulwark of the handloom industry in its worst days assuring them a steady and assured market. Another 5·7 per cent of the looms are to-day engaged in weaving art silk sarees and choli pieces. The emergence of this class of sarees has greatly fortified the position of handloom industry as they are tending to wean away increasingly even the fashionable section from the mill sarees. Cotton and art silk sarees together account for nearly 40 per cent of the employment of active looms.

LUNGIS GROUP :

4·29. Next in importance is the "lungis group" which consists of various sub-classes known to trade as kailies, thombu, sarongs and pattu kamboys. To this group has been added Madras handkerchiefs although they are somewhat different in design. Of the 20,410 looms belonging to this group Madras handkerschiefs account for 1,313 looms, Kailies 654, thombu 185 and sarongs 106. All these fabrics have another common trait of great significance : they are mostly produced for overseas markets. In trade they are called "export sorts". Most of them are worn by men and women in Burma, Cylon, African and Far East countries. The commercial importance of this group can be appreciated from the fact of its employing nearly 20 per cent of the looms, or one in five looms in the State.

DHOTIES AND TOWELS :

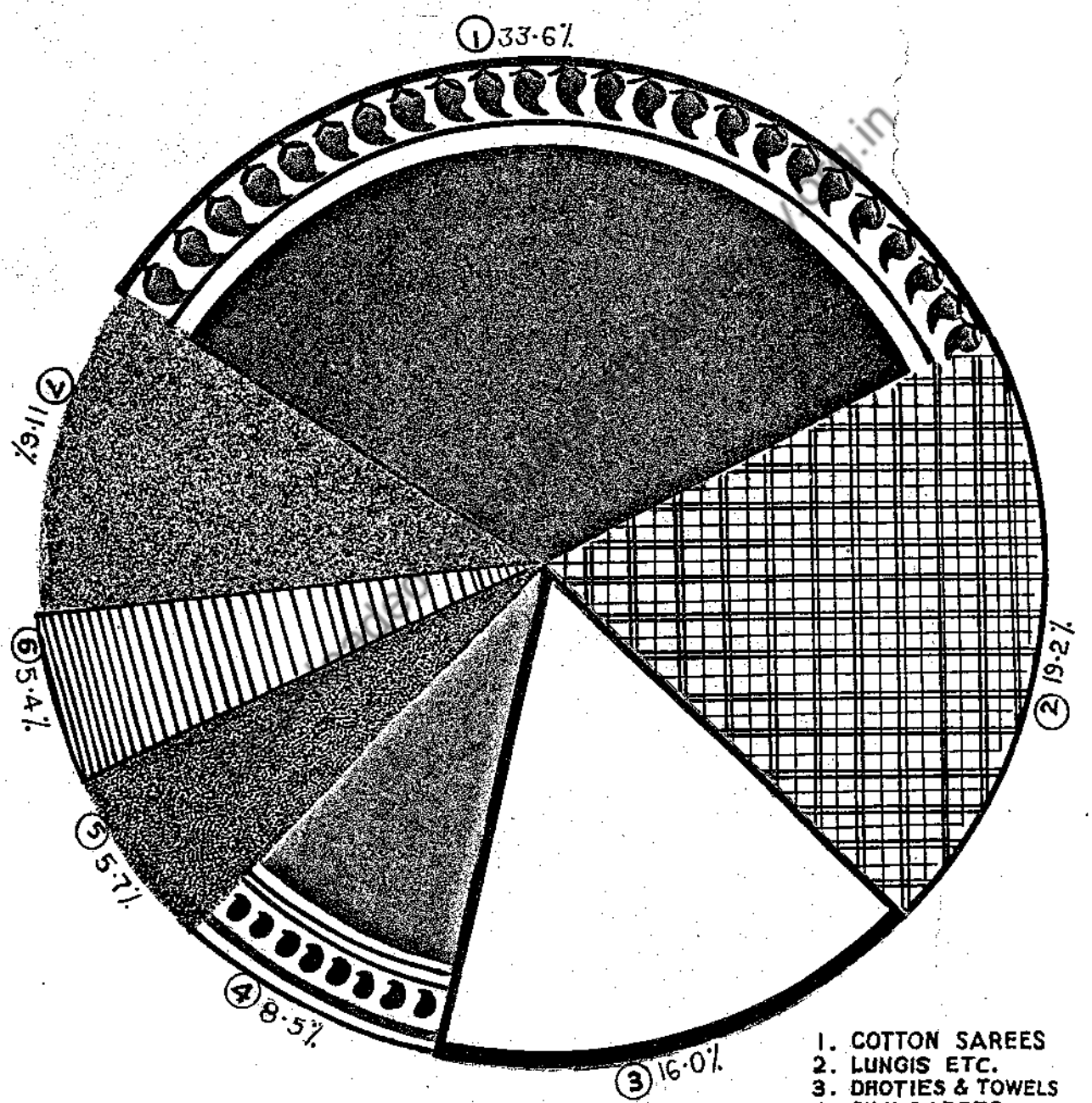
4·30. Dhoties occupy the third place and account for 9·2 per cent of the looms enumerated. To them my be added towels representing 6·8 per cent of the sample looms. Together their production provides employment to 16 per cent of the looms. Two broad types may be distinguished among the dhoties produced in Madras State according as the medium or fine yarn is used. The medium yarn dhoties have always had an assured market, again from the lower income groups in which men, like their womenfolk, prefer them to mill dhoties for their wearing qualities.

FINE YARN DHOTIES :

4·31. The fine yarn dhoties have had a chequered career. When mills first introduced superfine dhoties, the upper classes fell prostrate before them. The broad bordered dhoties like Kancheepuram and Kundanji came to be scoffed at. Extra-fine dhoties with a shadow of a thin border and in some cases borderless pieces, like the well known Glasgow 9,000 gave the stamp of modernity. The age of khadi visibly dampened this rage of the ultra-fashionable. (The Swadeshi movement produced no change as the Indian mills were not *VIDESHI*). It is only in recent years after Independence and the cultural renaissance, the prodigals have returned to adore the handloom dhoties. This does not mean that there was a period of complete desertion of the handloom by all people ; it indicates, in broad outline, the changes in popular tastes in recent times.

4·32. The future for the fine dhoties of handlooms looks brighter than ever. The swing of fashion is definitely for handloom dhoties from all classes and for broader borders

PERCENTAGE PRODUCTION OF IMPORTANT TYPES OF FABRICS



among the well-to-do.* No doubt this change has been partly due to the " rebates on purchases " granted to popularise the handloom fabrics and partly also due to the poor durability (real or fancied) of mill dhoties of late. These two reasons could at any time well cease to operate, rebates may be discontinued and the mill dhoties may gain a better reputation. In that event, there will be a set back in the demand for fine dhoties made on handlooms. This aspect of uncertainty deserves to be fully recognised by all those who have the interests of the handloom at heart. Because, the potential domestic market for handloom finer counts dhoties is vast and is ever on the increase in an era of rising per capita incomes (this point could well bear reiteration). Ways and means should be devised to exploit this market fully. The rebate system, on principle a short term remedy, could hardly be perpetuated. Even ban on mill dhoties of certain specifications should not be thought of as permanent. It is merely a protectionist device which in the interests of consumers will have to be lifted after a reasonable period during which the handlooms should learn to stand the mill competition unaided. Publicity and propaganda cannot succeed far among a population which is highly influenced by price differentials. Stepping up productivity per handloom hour and lowering cost of production appears to be the only course open in any sound constructive programme.

4.33. Towels have been clubbed with dhoties, those of medium counts. They enjoy as much as assured market as the latter due to consumer preference, well entrenched by traditional use and custom. The demand for towels is elastic in the lowest income groups. Any measure that contributes to increase their share in the national product will be reflected in a more than proportionate increase in the demand for towels. This is another fertile field for careful nursing and development.

SILK SAREES :

4.34. Silk sarees referred to here are collectively known in common parlance as " koranad " sarees which do not include georgette, chiffon etc. They are mostly produced at Kancheepuram, Kumbakonam, Arni, Kollegal, Koranad and Tanjore. Sarees are woven in different lengths ranging from 6 yards to 8 yards. Borders and headings vary from simple ribbon or " piping " variety to elaborately ornate lace designs worked on jacquard attachments. Their prices range from Rs. 35 to about Rs. 800 and for specially ordered sarees reaching even Rs. 1,000. They are artistic products of superb elegance and arresting beauty. In recent years weavers of silk sarees have shown extraordinary resilience to dictates of changing fashion. A great deal of originality in designs, borders, texture and colour schemes is exhibited every year and every season. There is a heavy inelastic demand for these sarees during the marriage, Deepavali and Pongal seasons. To this group of silk sarees belongs kindered varieties of pavadai and choli pieces. The same degree of skill in designing new varieties as in the case of sarees is shown in them as well. Those, who cannot afford to go in for costly sarees, do derive considerable satisfaction from the purchase of choli pieces and hence they have a good market. If adults are enamoured of these luxurious silk sarees, the teenagers insist upon pavadai pieces, which frequently appear to be costlier per square yard compared with sarees. The principles determining the prices of pavadai and choli pices need some detailed study. The Enumeration Survey reveals that the number of looms engaged in weaving these silk fabrics is 9,202 or 9.5 per cent of the total sample. Two significant points regarding them merit notice : (1) These silk fabrics enjoy a unique position regarding an assured market : the georgette and other flimsier varieties are hardly their competitors. The latter have made their debut in urban areas among the educated and the sophisticated while the rural and conventional women-

*The number of looms in the sample engaged in kundanji dhoties is 113. These dhoties with silk and lace borders are, by custom and convention, in great demand for festive occasions. To this class may also be added angavastrams, superfine cloth with silk and lace jacquard design borders. Angavastrams were more widely used in the Thirties. The World War II and the popularity of jibba have dispensed with their use on all except formal occasions.

folk will not even touch the georgette and the new-fangled stuff with a pair of tongs. (2) Certain varieties of the silk fabrics have impressed the fashion designers of U. S. A. and will have a growing market abroad if the current enthusiasm for them is maintained and they nurtured.

ART SILK SAREES :

4·35. Art silk sarees and pieces are a recent phenomenon, yet they have appealed to all income groups. That the demand has increased considerably is shown by the fact that the percentage of looms engaged in weaving them is already 5·7. Its demand will rapidly increase in the future because by now people have shed out their suspicion regarding their durability. The question then is whether its increase will affect the demand for cotton sarees or silk sarees. It is easy to predict that it will not affect the demand for medium counts sarees because the latter are utility clothes of the working woman. It is also safe to say that it will not affect the so called " koranad " silk sarees, used mainly for the distinction they confer. Logically the effects of increasing demand for art sik sarees will be felt on that for fine counts sarees. There is no need for regrets in this because the weavers and looms using finer counts of yarn could be easily switched on to art silk sarees. The overall position in regard to sarees in the pattern of output of handloom fabrics may continue to be the same as at present.

FURNISHING FABRICS :

4·36. Gada pieces, bedspreads and carpets account for nearly 10 per cent of the looms. Although gada pieces are the most important in this group, they are subject to serious competition from the mill sector. About their future, complacency would be highly detrimental. A careful investigation into its costs and texture compared with those of the mill variety should be made to explore the proper methods by which its production could be stabilised and expanded. The position of bedspreads is much better as the handloom has earned a good reputation. To-day the handloom bedspreads and door curtains appear to enjoy a hall mark of quality and distinction. Yet their local market is highly price-sensitive : their export market is highly allergic to quality. Hence even the consolidation of their domestic and foreign markets call for a continuous effort to curtail costs of manufacture and to improve " standards ".

SOME NEW LINES OF PRODUCTION :

4·37. Turkey towels, kerchiefs, bandage cloth, sports dress and mosquito nets (to this group " dinner mats ", although not occurring in the sample, may be added) are some of the new lines of production, the handloom industry has developed in recent years. The number of looms engaged in weaving these fabrics occurring in the sample enumeration is not large enough to make estimates, yet good enough to indicate their growing importance. Among these new varieties, kerchiefs are made in simple as well as elaborate designs and the latter are modelled on the pattern of high class imported mill products like pyramid and Tootal kerchiefs. With the retreat of angavastrams, the demand for ornamental and luxuriously designed kerchiefs is growing. As prices are competitive, quality quite satisfactory, and weaver's earnings relatively high, the manufacture of kerchiefs has every reason to prosper and policy making should take due account of the prospects of the handloom in this direction.

4·38. As for the other fabrics in this group, it cannot be said with confidence that they have crossed the experimental stage. Since all of them enter into direct competition with mill-made products, the economics of their production on handlooms deserve to be examined fully by an ad-hoc enquiry and encouragement may be given to the deserving sorts.

IV–7. IMPORTANT FABRICS

Percentage of Production District-wise

District	Cotton sarees	Per cent to total	Lungis	Per cent to total	Dhoties and Towels	Per cent to total	Silk	Per cent to total	Art silk	Per cent to total
1	2	3	4	5	6	7	8	9	10	11
1. Madras ..	196	0·5	2,208	10·8	..	..	68	0·8	..	..
2. Chingleput ..	1,344	3·7	6,131	30·0	701	4·1	4,943	53·7	..	..
3. South Arcot ..	209	0·6	1,938	9·5	70	0·4	..	..	..	..
4. North Arcot ..	954	2·7	5,939	29·0	24	0·3	1,146	12·5	1,005	16·5
5. Salem	11,525	32·0	1	..	6,790	39·3	1,182	12·8	1,628	26·8
6. Tiruchirapalli ..	955	2·7	..	..	1,214	7·1	86	1·0	28	0·5
7. Tanjore ..	29	0·1	..	..	..	..	1,731	18·7	..	..
8. Madurai ..	7,696	21·3	..	..	3,194	18·8	..	..	2,514	41·5
9. Ramanathapuram ..	3,428	9·5	136	0·7	2,602	15·2	..	..	668	11·0
10. Tirunelveli ..	4,494	12·5	3,121	15·2	568	3·3	..	..	2	..
11. Coimbatore ..	4,638	12·9	..	..	959	5·6	46	0·5	213	3·6
12. Malabar ..	..	..	1,004	4·8	988	5·8	..	..	4	0·1
13. South Kanara ..	503	1·5	..	..	12	0·1	..	..	..	..
STATE ..	35,971	100·0	20,478	100·0	17,122	100·0	9,202	100·0	6,062	100·0

4.41. One of the objects of the Enumeration Survey was to classify the looms organization-wise. Such an effort is confronted at the outset by a difficulty stemming from the fact that these three classes of looms are not, like Calpurnia, above suspicion, ever loyal to the categories to which they belong. Because an independent weaver could not leave his loom idle simply because he is too hard up to buy his own yarn. He would naturally for a while undertake to do some jobs for a master weaver, if any. If a member of a Co-operative Society wants to finish two or three warps in a week for some reason or other, he may pass on the extra warps to other weavers who may weave them on the so called independent or master weavers' domestic looms. It is quite possible for a loom, which, in the eyes of the Co-operative Society bye-law, is a Co-operative loom to be used for weaving a master weaver's warp. Thus a nominally Co-operative loom may be really functioning as a master weaver's domestic loom. In what manner are the looms to be classified in similar situations? The investigators were instructed to classify them on the basis of the ownership of the warp being woven on the loom at the time of investigation. If it was one's own, the loom is classified as an independent loom, if it was a master weaver's warp, as a master weaver's domestic loom and if it was a warp of Co-operative Society, as a Co-operative loom. This kind of definition was adopted advisedly to record a photostat situation, as it were, reflecting the real position. This may perhaps be helpful to find out to some extent the percentage of disloyal looms in the Co-operative fold.

DISTRIBUTION OF LOOMS - ORGANISATION - WISE :

4.42. The data collected on the lines described above are tabulated in Table IV-8 on page 47. The Enumeration Survey counted 104,136 looms in the households, of which 66,630 looms or 64 per cent are master weavers' domestic looms, 23,212 or 22·3 per cent independent and 14,294 or 13·7 per cent Co-operative looms. The dominant position of the master weavers in the State is borne out by these percentages. As between districts, there is a great deal of variation in the position of these three classes of looms. More than 75 per cent of the looms are working for master weavers in South Arcot, North Arcot, Tanjore, Mathurai and Tirunelveli districts. The percentage of Co-operative looms varies from 39·1 in Ramanathapuram to 2·7 in Tanjore. The State averages of 13·7 per cent for Co-operative looms is exceeded in eight districts (*Vide* Table IV-8). Ramanathapuram leads in Co-operative looms with 39·1 per cent followed by Tiruchirapalli with 24·9 per cent, Malabar with 22·1 per cent, Mathurai with 16·9 per cent, South Arcot with 16·7 per cent and Coimbatore with 16·2 per cent. The percentage of independent looms is higher than the State average of 22·3 in South Kanara (74·6), in Malabar (58·1), Salem (41), Madras (31·6) and Tiruchirapalli (30·0). This analysis yields two points of interest viz., the domineering position of the master weavers' domestic looms represented by 64 per cent of the total and the low percentage of 13·7 for Co-operative looms compared the claim with of 25 per cent by the Co-operative Department.

CONCLUSION :

4.43. From the above analysis and interpretation of the data relating to the looms covered by the Enumeration Survey, the following conclusions emerge : (1) The percentage of idle rooms in the State is 10 and it is less than what it was in 1941. The problem of the idle looms per se is not a grave one at all unless it is accompanied by idle weavers. The idle fixed capital in the handloom sector need not be viewed in the same as an idle mine in Kolar or Dhanbad or an idle factory at Sindri or Chittaranjan. The loss of output due to idle looms is not irreparable because output could be stepped up in the mill or power looms sector to a corresponding extent. The problem of idle human resources, be it reiterated, is the only real problem that should call for immediate redress.

4.44. The importance and practical utility of the pit loom has been brought out in the foregoing analysis. A large scale conversion of pit looms into frame looms is estimated to

involve a tremendous cost for the mere process of substitution and much more for redesigning if not rebuilding of houses. The proposal to introduce pedal looms is less doctrinnaire and more practical in its approach but its implementation too will involve an equal, if not larger, capital outlay.

4.45. The data also indicate the raison d'tre for the hard core of throw-shuttles still surviving for over half-a-century after the advent of the fly-shuttle. Their preservation and encouragement will be helpful in maintaining the supply of the famous and traditional types of silk sarees and cholies and cotton fabrics which so richly contribute to the variegated and luxurious output of the Madras handloom. That may also lead to a lucrative export trade earning the much needed dollars if this sector of the industry could be made alert and responsive enough to the Fifth Avenue fashion disigners of New York City.

4.46. The data relating to the pattern of yarn consumption have given a quietus to the controversy over the importance of medium and fine yarn. The latter has gained an immense precedence over the former. It will be safe to predict that this trend for increasing consumption of fine yarn by handlooms will be steadily gaining momentum. Even from now on careful planning is necessary to provide for supplies of fine yarn to meet an ever growing demand.

4.47. Five most important types of fabrics which employ more than 83 per cent of the looms in Madras State are (1) the cotton sarees, (2) the lungis group, (3) dhoties and towels, (4) silk sarees and (5) art silk sarees. Although cotton sarees and super-fine dhoties have to compete with mill products the handloom appears to have weathered the storm, thanks to changes in fashion induced by cultural renaissance and the system of "rebate on purchase" adopted for its goods. Discriminate aid to improve technique and output will go a long way to consolidate the position so far gained and set the stage for further conquests. The new lines of production like kerchiefs, turkey towels, bandage cloth, mosquito net and dinner mats, recently introduced bear testimony to the vitality of the handloom industry.

4.48. The data reveal a remarkable degree of regional specialisation in respect of the various types of fabrics. Tirunelveli is noted for medium count lungis, Mathurai for art silk sarees, Salem for fine yarn dhoties and Chingleput for finer counts kailies. As for silk sarees Kancheepuram, Kumbakonam, Koranad, Tanjore, Arni and Kollegal are the famous centres.

4.49. The looms in the households are distinguished into three organizational groups viz., (i) independent looms (ii) Co-operative Society looms and (iii) master weavers' domestic looms according to the ownership of the warps actually woven at the time of investigation. The percentage distribution of looms among these three classes is 22.3 for independent looms, 13.7 for Co-operative looms and 64 for master weavers' domestic looms from which may be seen the dominance of the master weavers and the poor progress of the Co-operative movement in the past two decades.

CHAPTER V

WEAVERS – THE HUMAN FACTOR

5·1. The paramount reason for the need to preserve and encourage the handloom industry is the human factor involved in it, the large population dependent on it for its livelihood. The handloom in the age of machinery has to be preserved not for its own sake but for the sake of the weaver even as the country plough, in an age of tractors, for the sake of the small ryot. All schools of opinion are agreed on this : the nation cannot afford to allow the handloom industry to decay rapidly and die a violent death in its struggle with the mill because of its evil effects on unemployment.

5·2. Although the handloom population is fairly large, it is confined to a limited number of the multitude of castes that is Indian society. Neglect of the industry pertaining to particular communities in a democratic set up might tantamount to a sacrifice of minority interests. Hence the entire problem of the handloom industry takes on the hue and complexion of a social issue with an accent on unemployment. The communal or minority aspect, or call it by any other name, of the problem is patent. It is this background that underlines the need for a human approach to the whole problem. Bearing this in mind, the scope of the Enumeration Survey was extended to cover some social aspects like community, sex and economic status. This chapter is concerned with an analysis of the data.

WEAVING COMMUNITIES :

5·3. Weaving is the traditional and hereditary occupation of certain communities in this State. They belong to all religions - Hindu, Moslem and Christian. The weavers of the latter two religious denominations are generally the descendants of the Hindu weaving communities who had been at one time or other converted to Islam or Christianity. Among the Hindus the most important communities are Kaikolars, Sowrashtras, Devangas and Sales.*

5·4. The Kaikolars or Sengunthars or Sengunda Kshatriyas belong to a Tamil caste, who claim to be the descendants of Virabhahu. They are found all over the Tamil districts. Their original home is believed to be Kancheepuram. They call themselves Mudaliars, distinct from the Vellala Mudaliars. The Sourashtras or Pattunulkarars, the most progressive among the weaver castes, " are believed to have migrated from Kathiawar or Gujerat and after some tarrying in the way, they settled down in Madura, some three hundred years ago ". The Devangas, who originally must have spoken Kanarese, to-day speak the language of the land they live in. The Sales are a Kanarese and Telugu speaking caste which has two important sub-division (a) the Patasale and (b) the Padmasale. The former speak Kanarese and the latter, who alone are mainly found in Madras State (1955), speak Telugu.

5·5. Apart from these chief communities there are also several others like Chettiars, Naidus, Padayachis, Gounders, Moopanars, Nattars, Seniars, Udayars and Saliers in which considerable numbers have taken to weaving as their occupation. On the Malabar coast, Chalians are the hereditary caste while the Thiyas, Ezhavas and Nairs are new entrants. It is also noteworthy that a number of weavers are also seen among the Harijans of the Tamil districts. It is not clear how these new communities, whose traditional occupation

* For the description of the hereditary weaving castes, given here, acknowledgement is due to Dr. K. S. Venkataraman. The Handloom Industry of South India (*vide* pp. 178–180) and the Report of the Fact Finding Committee pp. 298–299.

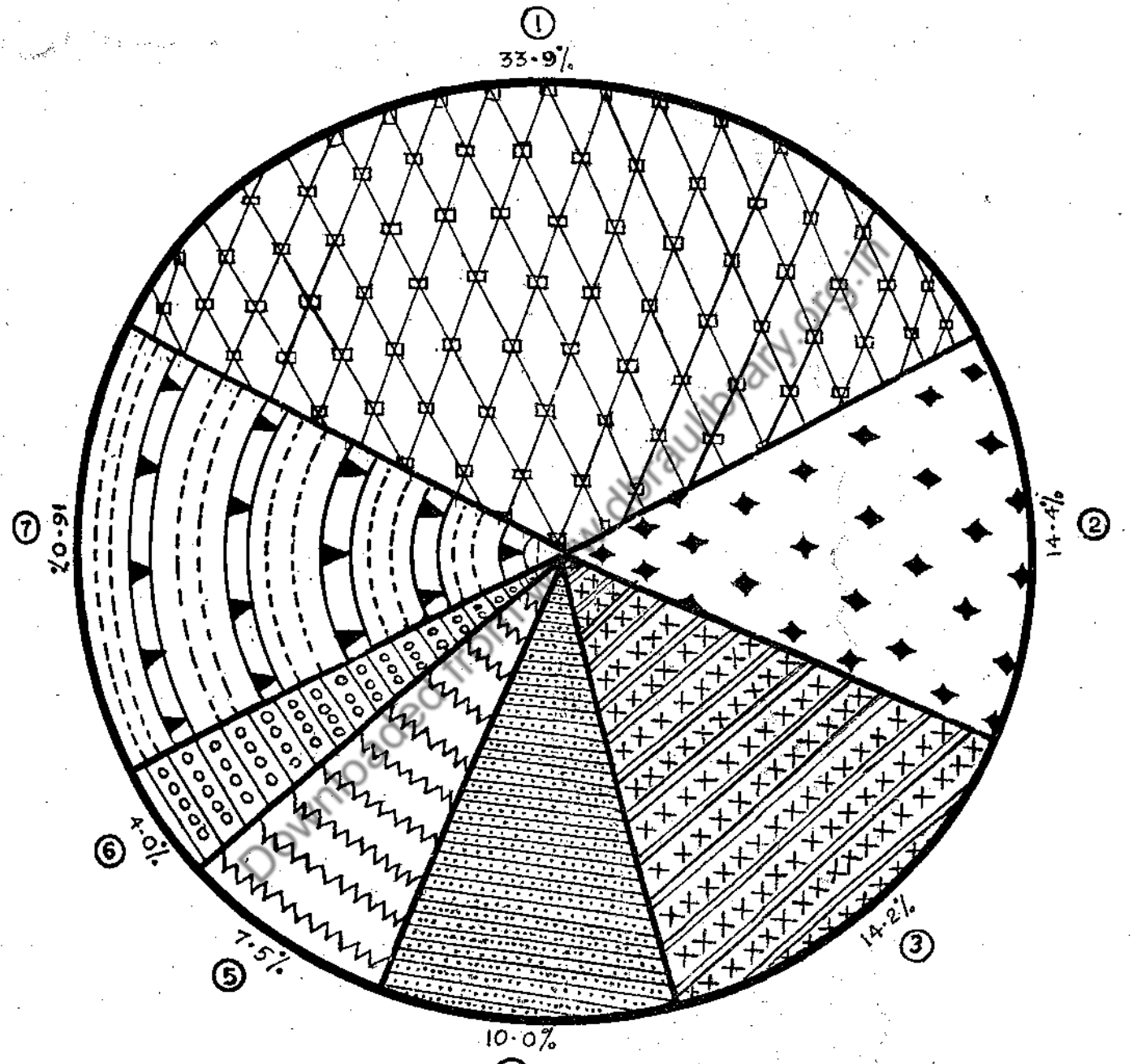
was something else, chose the weaving occupation. A common characteristic of these new communities offers a slight clue. All these are mainly communities other than those of the village artisans and craftsmen. They were preeminently agricultural labour castes or doing generally unskilled labour. Whenever conditions of employment in these sectors deteriorated, the more enterprising among them should have changed over to weaving. This transition was indeed not difficult since weaving could be learnt in about two months. It is important to remember this aspect of short and easy course of apprenticeship and age-long infiltration of other, non-traditional communities into this weaving occupation. In a society where other occupations were not as remunerative as weaving, the latter tended to attract the more enterprising from the other communities. Whenever artificial stimulus to weaving industry exceeds a reasonable limit, it is quite likely to attract outsiders into weaving occupation and every effort to improve the lot and material well-being of the traditional and hereditary weavers will be defeated by the swollen numbers of the new entrants. The enormous increase in the looms in the past 25 years is accompanied by an equally large number of weaving population. This is mainly attributed to the booming conditions that prevailed during the War years. It is essential that some efficient method should be devised by which such inflow of indigent yet venture-some folks into the weaving occupation could be stopped. To understand this aspect of the problem of growth in the numbers of weavers, data regarding the community were collected in the Enumeration Survey (*Vide* Table V-1 as below).

V–1. NUMBER OF SAMPLE HOUSEHOLDS CLASSIFIED ACCORDING TO COMMUNITIES

No.	Community	No. of households	Per cent to total	No.	Community	No. of households	Per cent to total
1.	Sengunthar ..	13,150	33·9	27.	Gramani ..	30	0·08
2.	Sourashtras ..	5,590	14·4	28.	Tambiran ..	29	0·07
3.	Devanga ..	5,506	14·2	29.	Nair ..	26	0·06
4.	Moslem ..	3,838	9·9	30.	Billava ..	26	0·06
5.	Saliar ..	1,728	4·5	31.	Yadhava ..	24	0·06
6.	Chettiar ..	1,557	4·0	32.	Harijan ..	22	0·05
7.	Padmasaliar ..	1,120	2·9	33.	Villiar ..	8	0·02
8.	Gounder ..	863	2·2	34.	Sah ..	8	0·02
9.	Naicker ..	617	1·6	35.	Thevar ..	7	0·02
10.	Padayachi ..	612	1·6	36.	Kshatria ..	4	0·01
11.	Pandaram ..	593	1·5	37.	Karnam ..	3	0·01
12.	Pillai ..	588	1·5	38.	Achari ..	3	0·01
13.	Naidu ..	575	1·5	39.	Iyer ..	3	0·01
14.	Chalian ..	478	1·2	40.	Devar ..	3	0·01
15.	Moopanar ..	354	1·0	41.	Gowda ..	3	0·01
16.	Christian ..	248	0·6	42.	Nayak ..	3	0·01
17.	Kannada Seniar ..	237	0·6	43.	Pagaya ..	2	0 005
18.	Bagavathar ..	167	0·4	44.	Mulia ..	2	0·005
19.	Nadar ..	163	0·4	45.	Oddar ..	2	0·005
20.	Thiya ..	139	0·3	46.	Talayari ..	1	0·002
21.	Parvatharajakulam.	113	0·3	47.	Thattar ..	1	0·002
22.	Reddiar ..	88	0·2	48.	Sattani ..	1	0·002
23.	Nattar ..	88	0·2	49.	Singh ..	1	0·002
24.	Shettigar ..	80	0·2	50.	Barber ..	1	0·002
25.	Pattusalar ..	41	0·1	51.	Kottari ..	1	0·002
26.	Udayar ..	33	0·08	52.	Bhant ..	1	0·002
					Total ..	38,781	100·000

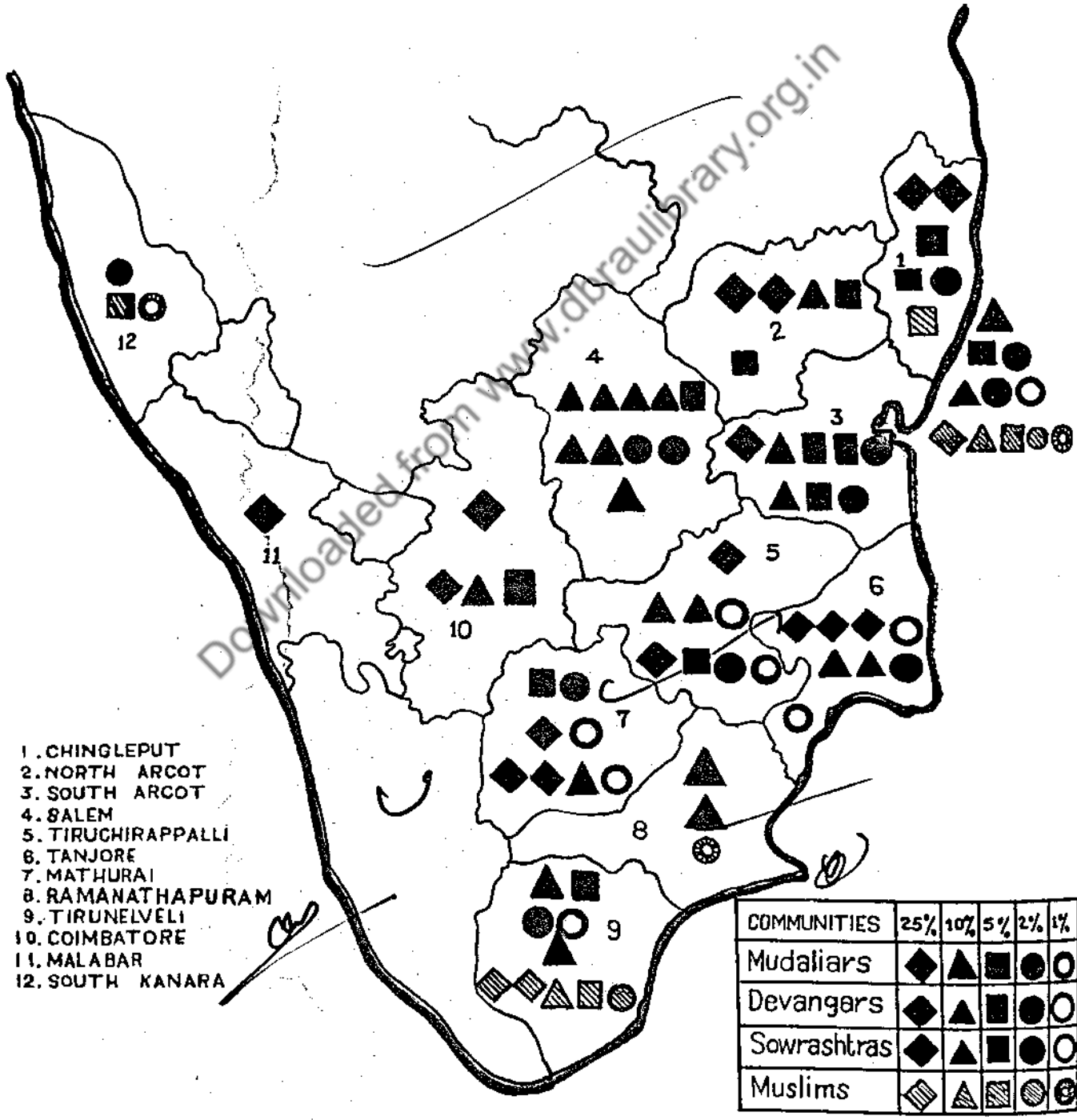
5·6. The number of households covered in the selected 104 centres is 38,781 and the number of communities 52. The Chief weaving communities are Sengunthars, Sourashtras, Devangas, Muslims, Saliars, Chettiars and Padmasaliyars, each of them having not less than 3 per cent of the sample, all of them combined account for nearly 84 per cent

PERCENTAGE OF WEAVING COMMUNITIES
(HEADS OF HOUSEHOLDS)



1. Sengunthars
2. Sourashtras
3. Devangars
4. Muslims
5. Saliars
6. Chettiars
7. Other Communities

PERCENTAGE DISTRIBUTION OF MAJOR WEAVING COMMUNITIES (DISTRICT-WISE)



of the total sample households. These traditional communities are of the Tamil districts. Except for the chaliyars of Malabar district, all the other communities are comparatively new to weaving occupation.

DISTRICT-WISE DISTRIBUTION OF THE WEAVING COMMUNITIES :

5·7. The district-wise distribution of the various weaving communities is shown in Appendix VI. It shows a tendency for the communities to be localised in some districts. The greatest concentration of Sengunthars is seen in Salem, Chingleput and North Arcot districts, each having more than 2,500 households and in the aggregate having 10,120 or nearly 80 per cent of the Sengunthar households in the sample. Tirunelveli, Coimbatore and South Arcot have about 5 per cent of the Sengunthar households each. This is the most widely distributed community in the State ; no district except South Kanara is without this community. (Even South Kanara may have Sengunthars but the sample does not show any). Sourashtras are seen in largest numbers in Mathurai district with more than 40 per cent of the house-holds, followed by Salem and Tanjore with more than 10 per cent each. Tirunelveli, Chingleput and Tiruchirapalli are also important areas where Sourashtras have spread out. The natural home of the Devangas seems to be Salem ; they are also found in considerable numbers in Coimbatore and Madurai. Tirunelveli is the most important in respect of Moslem weavers, nearly 80 per cent of the households being located in this district. Saliers are found mostly in Ramanathapuram district which accounts for more than 90 per cent of the households. The largest cluster of Padmasaliar households, about two-thirds of the total, is found in Chingleput district. This community-wise analysis of the households in the sample brings to light an important fact. The problem of Salem district, having the largest number of looms and recording a very sharp increase in the number in the past 30 years, finds some explanation. This district shows the largest influx of other communities into the weaving occupation Naidus, Padayachis, Gounders, Pillais, Harijans, Nadars and Pandarams representing more than 16 per cent of the total number of sample households in Salem district.

WEAVER GROUPS AND LOOMS DISTRIBUTION :

5·8. The distribution of looms among weavers is as unequal as that of land among agriculturists. There are master weavers owning dozens and sometimes hundreds of looms. They are the handloom barons among whom are found also high-grade entrepreneurs, responsible for improvements and innovations. They are to handloom industry what Turnip Townshend and Jethro Tull were to agriculture. Independent weavers owning one or two or a few looms worked by members of the households are the next group. Lastly there are weavers, experienced and deft of hand but with no looms of their own The correct approach to solve the problem of the handloom industry is to bring about an even distribution of looms analogous to land redistribution but perhaps with better results, because while diminutive holdings, the consequence of re-distribution of land will prove to be uneconomic, one-loom-one-weaver would represent an optimum position. There is a large army of loomless weavers as there are landless cultivators, who should be made owners of looms and self-reliant. At present the reform takes the line of providing looms to loomless weavers by means of financial aid and the programme is oblivious of the fact that the total number of looms is being steadily increased. This increase is being brought about as the capital outlay on a loom is quite a small amount. In due course the increase on account of this policy may be as abnormal and prodigious as in the period of the ill-devised system of yarn rationing. Once again the problem of idle looms will raise its head and the total contribution to national cloth output will be estimated on the basis of a new census of looms, and a scheme for more aid for activising the idle looms will have to be inaugurated leading to a vicious spiral of more looms because of aid, and more aid because of more idle looms. The kernel of the problem, the human factor, will be relegated to the background and the loom will be receiving all the footlights. Any sound policy

for the improvement of the material well-being of the weaver could be formulated only on a factual basis relating to loom-owning and loomless weavers in addition to the data relating to total number.

LOOMLESS WEAVERS :

5.9. With this object in view, the Enumeration Survey provided for collection of data relating to hired weavers as distinguished from the household weavers. The former are the loomless weavers and the latter loom-owning weavers. The presence of an army of loomless weavers is not clearly noticed in most of the districts where handloom factories do not exist. But at Kozhikode, Cannanore, Tellicherry and Karur, the presence of the proletariat of the handloom industry, the loomless weavers, is visible even to a superficial observer. This does not mean that the districts where the factory system is not developed are free from this class of weavers. They will be seen in equally large numbers in the Karkhanas of master-weavers, which are extremely chameleon-like in unobtrusively operating by merging themselves with the environment and making themselves hardly detectable. The employment figures in the factories and karkhanas are a rough and ready measure of the magnitude of the problem of the loomless weavers. For a more precise estimate, it is necessary to get data relating to the loomless weavers seeking and getting employment in the households whenever there are looms to spare, because of the sickness, absence or death of the household weavers. This class of loomless weavers employed by households appears to be a significant number. The analysis of the data relating to the loomless weavers is divided into two parts dealing with (a) factories and karkhanas and (b) households.

(a) *Facories and Karkhanas* :

5.10. The sample of factories covered by the Enumeration Survey is 454 which employs 11,355 weavers. On an average, a handloom factory employs about 35 weavers. The units surveyed are found in large clusters in certain districts : Malabar has the largest number of 146 units out of the total 454, Tiruchirapalli 89, Coimbatore 71, Mathurai 68, Salem 51 and South Kanara 24. These figures indicate that the factory system is spreading from its stronghold in west coast districts to Tamilnad. The larger its growth, the graver is the problem of the loom-less proletariat. The number of master-weavers' karkhanas surveyed is 60 of which 33 are in Malabar, 10 in Tanjore, 9 in Chingleput and the rest in Tanjore and South Kanara districts. It should be admitted that the sample of karkhanas covered by the Enumeration Survey is not adequate to bring out their importance in the structure and organization of the handloom industry. It is however good enough to indicate the average size of a karkhana. The average number of weavers employed per karkhana is 26. The total number of karkhanas cannot be exactly estimated from this small sample. That will call for a special survey which could also investigate into the intensity of employment (number of employed days in a month and hours of work per day) and earnings of weavers. Official data relating to handloom factories show that there are about 700 factories employing about 25,000 weavers. A crude yet conservating estimate about master-weavers' karkhanas gives their number as 1,200 and the number of weavers employed as 31,000. Both types of establishments thus employ 56,000 weavers. They are the loomless weavers who should be provided with looms and employment in any sound scheme of rehabilitation of the handloom industry.

(b) *Households* :

5.11. As already stated, the number of households covered by the Enumeration Survey at the selected 104 centres is 38,781 which had 93,838 active weavers of whom 26,108 are loomless weavers. This would mean that 27.8 per cent of the weavers are loomless. Looked at another way, there are 39 loomless weavers for every 100 loom-owning

weavers. The number of loomless weavers belonging to this household sector in the sense of habitually seeking employment in households is estimated to be approximately 100,000 to which may be added the loomless weavers in the establishments (Factories and Karkhans) sector. The total number of loomless weavers in the State is therefore of the order of 100,000 + 55,000 or 155,000. It is these weavers who stand in greatest need of help and with them the rehabilitation programme should first begin in this State.

DISTRIBUTION OF LOOMLESS WEAVERS :

5·12. That there is a heavy concentration of loomless weavers in those districts noted for the development of factories is obvious. No attempt is made hereto estimate their distribution beyond what has already been indicated in paragraph 5·10. But a fairly good picture of the distribution of loomless weavers employed in the household sector is possible with the data collected. Relevant data are given in table V-2 on page 56. The number of hired *i. e.* loomless weavers per 100 household weavers is not uniform in all districts. It varies from 13 in Tirunelveli to 160 in South Kanara. (This figure for South Kanara cannot be taken as representative of the district in view of a very small inadequate sample containing extreme cases occurring there). In 6 districts including South Kanara this number is above the State average of 39 : it is 89 in Madras, 67 in Chingleput, 53 in Tiruchirapalli, 49 in Salem and 41 in North Arcot district. Among the districts having a figure lower than the State average, Tirunelveli has the lowest followed by Coimbatore with 17, South Arcot with 19, Tanjore with 21 and Ramanathapuram with 22 loomless weavers per 100 loom-owning weavers. This order of significance in respect of loomless weavers could be adopted as a working basis in a programme of rehabilitating the loomless weavers.

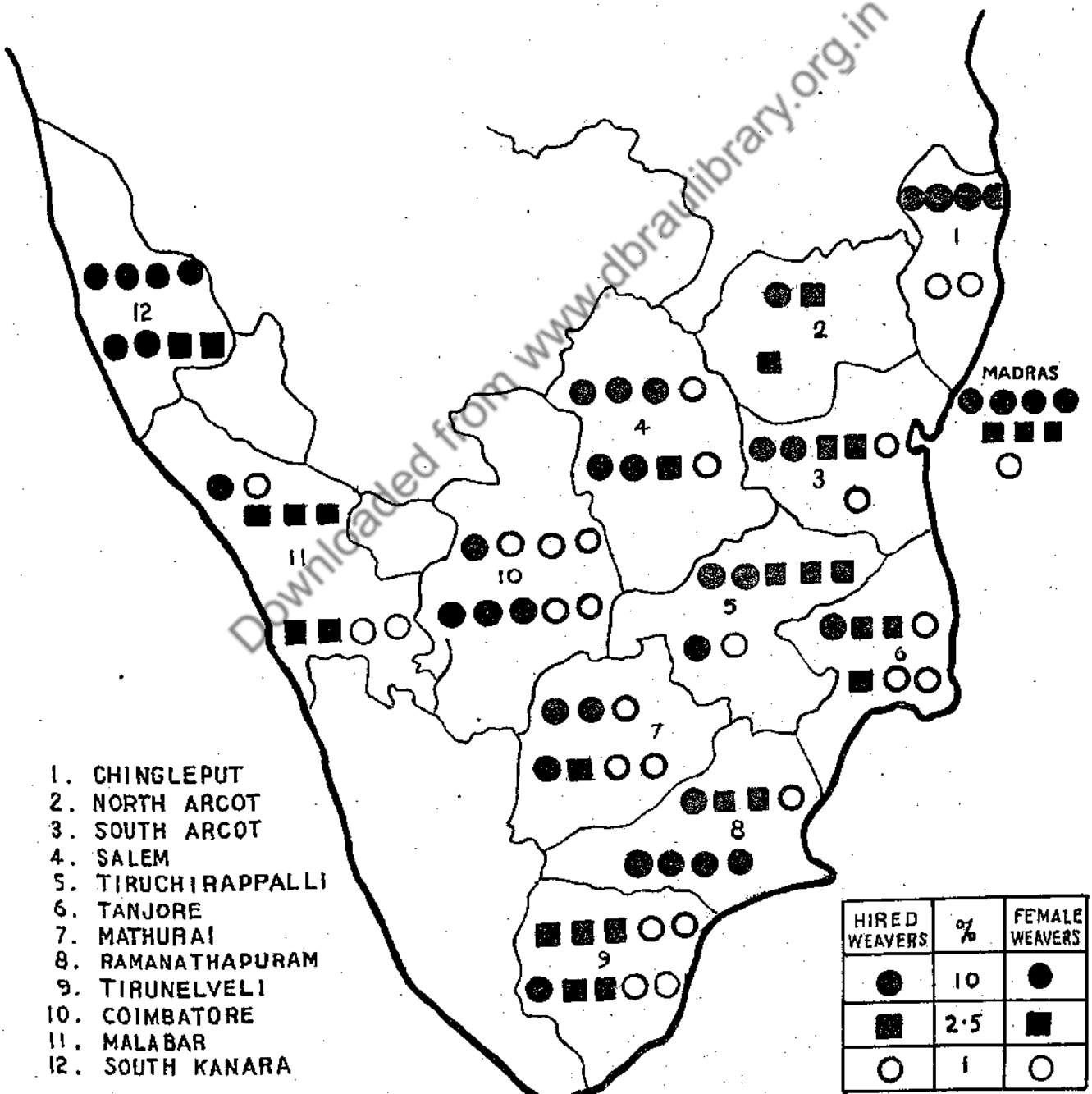
5·13. This programme is not so easy as it could be made out in theory. In practice, as the loomless weavers are provided with looms by Government through Co-operative Societies, they should cease to haunt the master weavers' karkhanas and households where they used to be employed. If they are reluctant to assume heavier responsibility of weaving on their own account, a rather irksome experience for the newly reclaimed, they would leave their new looms in idleness and seek employment for piece wages in their old haunts. To forestall this stultifying situation, the loomless weavers should be helped in various ways gradually to assume responsibility and develop into capable independent workers and loyal members of the Co-operative Societies. If the metamorphosis of loomless weavers is brought about successfully, its economic consequences will be unmixed good to them, but indisputably embarassing to the owners of facotries and karkhanas where the shortage of hands will be felt and the percentage of idle looms increased. If the objective of the rehabilitation of the handloom industry is not to victimise any section, the evil consequences of the withdrawal of loomless weavers on factories and karkhanas will have to be mitigated, if not avoided. This equity demands, because whatever may be their faults, factory owners and master weavers have played an invaluable role in the handloom industry by providing employment to vast numbers of weavers. There is no meaning in crying them down and in demanding for their liquidation without compensation. It would be a good compromise if they are prevailed upon to convert their factories and karkhanas, as the case may be, into industrial handloom Co-operatives. In that event, they may be retained as shareholders and their experience, skill and organising capacity will be available to the new Co-operatives.

5·14. The abnormally high proportion of hired weavers in certain districts presents a problem of a different order. Their rehabilitation will reduce the number of hired weavers in the household sector. It will do no harm because the household weavers, true to their name and description, should remain "own account workers" and not imperceptibly translate themselves into employers. The high percentage of hired weavers is symptomatic of a sinister development of master weavers in the innocuous guise of household weavers. No doubt looms in households in excess of the number of active household weavers will lie idle - and without regrets, if the human factor should be accorded its due recognition.

V–2. DISTRICTWISE NUMBER OF HOUSEHOLDS ACCORDING TO LOOMS AND WEAVERS

District	Number of households	Number of looms			Weavers			Per household		
		Total	Active	Idle	Household	Hired	No. of hired weavers per 100 household weavers	No. of looms	No. of household weaver	No. of looms per household weavers
1	2	3	4	5	6	7	8	9	10	11
1. Madras ..	804	2,479	2,425	54	1,280	1,145	89	3·1	1·6	1·9
2. Chingleput ..	6,094	13,465	12,923	542	7,758	5,165	67	2·2	1·2	1·7
3. South Arcot ..	1,284	3,777	2,916	861	2,439	477	19	2·9	1·9	1·5
4. North Arcot ..	4,057	10,240	9,122	1,118	6,468	2,654	41	2·5	1·6	1·6
5. Salem ..	9,743	28,647	26,760	1,887	17,944	8,816	49	2·9	1·8	1·6
6. Tiruchi ..	1,012	2,613	2,085	528	1,363	722	53	2·6	1·3	1·9
7. Tanjore ..	791	1,350	1,254	96	1,039	215	21	1·7	1·3	1·7
8. Mathurai ..	3,874	13,322	12,247	1,075	9,437	2,810	30	3·4	2·4	1·4
9. Ramanad ..	2,904	7,443	6,741	702	5,508	1,233	22	2·5	1·9	1·3
10. Tirunelveli ..	4,649	9,826	8,318	1,508	7,380	938	13	2·1	1·6	1·3
11. Coimbatore ..	2,483	7,016	6,234	782	5,320	914	17	2·8	2·1	1·3
12. Malabar ..	876	2,659	1,975	684	1,472	503	34	3·0	1·7	1·8
13. South Kanara ..	210	1,299	838	461	322	516	160	6·1	1·5	4·0
STATE ..	38,781	104,136	93,838	10,298	67,730	26,108	39	2·7	1·7	1·5

PERCENTAGE OF HIRED AND FEMALE WEAVERS TO TOTAL
(DISTRICT-WISE)



Weaver — Loom Ratio :

5.15. The problem of excess number of looms in households needs to be examined further. The total number of looms in all the 38,781 households covered is 104,136 and the total number of household weavers is 67,730 (*Vide* table V-2 on page opposite). Per household on an average, there are 2·7 looms and 1·7 weavers for the State as a whole. There is of course a wide variation in the number of looms per household in the different districts, South Kanara having 6·1 looms at one end and Tanjore having 1·7 at the other end. Similarly the number of weavers per household varies from 2·4 in Mathurai to 1·2 in Chingleput. Most important for determining the excess number of looms is the number of looms per household weaver. It varies from 4 in South Kanara to 1·3 in the three districts of Tirunelveli, Coimbatore and Ramanathapuram. The weaver-loom ratio for the State is 1 : 1·5. The higher this ratio, the greater is the likelihood of a wider spread of master-weaver system in the household sector. On the basis of the data analysed in the table V-2 on page opposite it may be seen that in Madras and Tiruchirapalli the ratio is 1 : 1·9, it is 1 : 1·8 in Malabar, 1 : 1·7 in Tanjore and Chingleput and 1 : 1·6 in North Arcot and Salem. All this means that one-third of the looms in the households is in excess of the number of household weavers.

Women Weavers :

5.16. Weaving is not exclusively a masculine occupation. Women are also found engaged in weaving in the State and their occurence is not uniformly spread in all the districts. The factories in Malabar and South Kanara employ women for preparatory processes in large numbers ; but the major process of weaving is done by very few women. On the other hand, the factories in Tiruchirapalli and Salem districts are found to employ women in larger numbers. There are 12 women weavers for every hundred men weavers in the factories of Tiruchirapalli district ; the corresponding number is 5 in Salem district. In the sample of karkhanas too, women weavers are found in Ramanathapuram and Tanjore districts, 12 and 8 women weavers respectively for every 100 men weavers.

5.17. There is a larger proportion of women weavers in households, much larger than is commonly supposed. Of the total number of 67,730 weavers in the sample of 38,781 households, the number of women weavers is 11,393 or 16·8 per cent. The districtwise distribution of male and female weavers is tabulated below :

V-3. MALE AND FEMALE WEAVERS IN MADRAS STATE — DISTRICTWISE

District	Weavers			Percentage of female weavers to total	No. of female weavers for every 100 male weavers
	Total	Males	Females		
Madras	1,280	1,265	15	1·2	1
Chingleput	7,758	7,607	151	1·9	2
South Arcot ..	2,439	2,383	56	2·3	2
North Arcot	6,468	6,415	53	0·8	0·8
Salem	17,944	13,657	4,287	23·8	31
Tiruchirapalli	1,363	1,218	145	10·6	12
Tanjore	1,039	994	45	4·3	4
Mathurai	9,437	8,079	1,358	14·4	17
Ramanathapuram	5,508	3,322	2,186	39·7	66
Tirunelveli	7,380	6,142	1,238	16·8	20
Coimbatore	5,320	3,638	1,682	31·6	46
Malabar	1,472	1,374	98	6·6	7
South Kanara	322	243	79	24·5	33
STATE ..	67,730	56,337	11,393	16·8	20

It may be seen from the table on page 57 that in six districts percentage of women weavers is more than the State average of 16·8 per cent. The most important district in respect of women weavers is Ramanathapuram where they account for 39·7 per cent followed by Coimbatore with 31·6, South Kanara with 24·5 per cent Salem with 23·8 per cent, Tirunelveli and Mathurai with 16·8 per cent and 14·4 per cent respectively. For every 100 male weavers, there are 66 female weavers in Ramanathapuram, 46 in Coimbatore, 33 in South Kanara, 31 in Salem, 20 in Tirunelveli and below the State average of 20 in the other districts. Madras, Chingleput, South and North Arcot, and Tanjore in Tamil districts have a very low proportion of women weavers who are less than 5 per cent of the total. For the whole State, according to this Survey, there is one woman weaver for every 6 weavers.

5·18. This rather high proportion of women weavers adds another problem to the already complex situation of the handloom weaving industry. What kind of policy should be pursued regarding them is the question. Should they be kept out of the industry from active participation as weavers because weaving is a strenuous, monotonous and unhealthy occupation for women? If it were so, the problem of finding out employment for the unemployed and under-unemployed male weavers would be solved to a great extent. This is an easy way of solving the difficult problem of unemployment on the priori grounds of irksome and unhealthy effects of weaving on women-folk. This theoretically easy solution is however too difficult to be implemented in practice for three strong reasons. (1) It could be argued that weaving is not so laborious an occupation as carrying heavy head loads e. g. in the building industry and it is an occupation that can be pursued in one's own house, most ideally suited to womenfolk. As already mentioned, the work could be stopped and resumed whenever there is leisure without any perceptible difference in efficiency, (2) It would be hardly possible to prohibit women from weaving by a fiat; nor is it wise to do so without providing them alternative employment, (3) The total number of idle looms will sharply increase, if women are for any reason stopped from weaving. In the short period i. e. within the Second Plan period, it would be a major blunder to increase idle looms and weavers (even when they are females) when the central objective is to secure maximum handloom cloth output by utilising fully all the capacity lying idle and going to waste. It is appropriate here to remember the recommendation about activising idle looms in order to increase handloom production [Vide page 36, paragraph 79, Chapter VI of the Report of the Village and Small Scale Industries (Karve) Committee]. Hence in the present and near future, it may be necessary to permit women to work as weavers. But what should be the long term policy? It is being increasingly recognised that in all organised industries male workers are working and earning sufficient income to maintain their families. If that were so, the need for making the women work for the upkeep of a weaver's household needs to be examined on the principle of parity between working class homes. If male weavers are able to earn sufficient income to provide a reasonable standard of living to their families and if women weavers, by working on looms, are able to earn good wages and the combined earnings of husband and wife would enable the family to enjoy much higher standard of living, the principle of parity between the various working class communities is not violated. In actual practice, even with the combined earnings of husband and wife, the family income is too low to lift the household above misery, squalor, dirt and disease. Is it proper to perpetuate this unenviable position? This problem will be further clarified when the earnings and levels of living of the weaving population are studied with the help of the data collected in the Economic Survey in Part III.

CONCLUSION :

5·19. In Handloom Industry, the human factor deserves better recognition than it has received in recent years. There has been too much emphasis on looms due to the frequent censuses of looms and the Planning Commission's pre-occupation with attaining the target fixed for Handloom cloth production. The human factor is also important because the special group of communities traditionally engaged in weaving involves an issue of safeguarding minority interests.

5·20. Ill-conceived policies, regarding looms and yarn ration as well as aids, have resulted in the infiltration of large numbers of people from other communities into weaving occupation. Unless effective measures are taken to stop this influx, a vicious spiral of more idle looms, more aid, and more weavers will be generated.

5·21. The important weaving communities are seen in larger concentration in a few districts except Sengunthars who are widely distributed all over the State.

5·22. The elimination of the large army of loomless weavers cent per cent in factories and karkhanas and 27·8 per cent in the households - should be given top priority in the rehabilitation of the Handloom Industry. The present policy of helping loomless weavers to get looms of their own lacks a comprehensive view as it turns a blind eye on its repercussions on factories and karkhanas. Simultaneously with this policy, an organised drive is necessary to convert factories and karkhanas into industrial Co-operatives.

5·23. The weaver-loom ratio indicates that, for the whole State in the household sector, the excess of looms over and above the required number for providing full employment to all adult weavers is about one-third of the total. It is for consideration whether as an emergency measure the idle looms could not be redistributed among loomless weavers without spending on the manufacture of new looms. It appears to be all the more necessary in view of the various new techniques and improvements that are being experimented and proving to be fairly successful and rendering the existing patterns of looms obsolete. The excess looms need not be confiscated from their owners. They may be acquired at market price and given away to the loomless weavers on hire-purchase system. The objection that these looms are not brand-new but only second hand could be overcome by appropriate reduction in price. If difficulties are experienced in regard to their installation in the homes of the loomless weavers, these difficulties may be transformed into an opportunity for setting up Handloom Industrial Estates and Co-operatives.

5·24. The present Survey has revealed that women weavers form 16·8 per cent of the total number of weavers. Their continuance as active weavers is a necessity for many years to come. It is however essential to prevent them from becoming a hard core of sweated workers in the industry. Long hours of work, low wages and a low standard of living constitute the chief problem of the handloom industry. And in solving it special attention has to be focussed on the conditions of work of women weavers so as to enable them to discharge their womanly duties well and efficiently.

PART III

ECONOMIC SURVEY

CHAPTER VI

WEAVERS — A DEMOGRAPHIC SURVEY

INTRODUCTION :

6·1. The prime objectives of the Economic Survey as already briefly indicated (*Vide* paragraph 3·14) is an investigation into the major economic problems of the handloom industry. Foremost among them is the provision of full employment to the existing labour force. This needs a supplementary study in projection about the future trend in the labour force. Secondly in the context of the handloom industry the dominant pattern of disposition of labour time of the weaving population between the various processes assumes a considerable significance and merits a detailed study. Thirdly the problem of output will have to be examined in respect of fabrics and their costs, *vis-a-vis* the competition from the mill sector. Further whether the target for handloom output fixed by the Planning Commission could be attained and the tempo maintained is an issue of great import. Even if that could be achieved, it is a matter for consideration whether the cost of production would not lead to stagnation of stocks when rebates on sales are withdrawn. Closely linked to these are the associated problems of financing and marketing. Finally, the earnings and levels of living of the weaving population to which the entire programme of rehabilitation is tuned, call for a factual assessment. It is these problems which have determined the scope of the Economic Survey, the subject matter of Part III.

SCHEDULES AND QUESTIONNAIRE :

6·2. The present Economic Survey is conducted on the basis of Schedule II and the questionnaire, (*Vide* Appendix) already referred to in paragraph 1·3. Schedule II is in two parts ; the first part relates to the households and the second to the *karkhanas* and factories. The former seeks to collect data relating to the size and composition of the household, community, employment, disposition of members, working hours, and intensity of employment, output and earnings, methods of financing and marketing, cost structure, of fabrics produced and types of looms used. The latter is designed to collect data from the occupiers of factories and *karkhanas* about the number and type of looms, capital structure, input and output including wages, and employment. Besides Schedule II, the questionnaire, as already mentioned in paragraph 1·4, is used to conduct an opinion survey for assessing the attitudes of the weaving community to the various current problems and reforms already inaugurated or in the offing.

SAMPLING FRACTION :

6·3. The Economic Survey covers a sample of 56,757 looms or about 10 per cent of the looms in the frame of 5,60,704 as estimated by the Director of Industries and Commerce, Madras in 1951. The sampling fraction is thus 1/10. The procedure adopted for drawing this sample has already been described in paragraph 3·14. Of this sample, 5,893 looms are found in factories, 1,712 in master weavers' *karkhanas* and 49,152, in 17,990 households The data relating to the establishments are analysed and dealt with separately. The present and the succeeding chapters are concerned with the weavers in the households.

TREND OF LABOUR FORCE :

6·4. A programme for the full employment of the human resources is the paramount need of the handloom industry. Unless it is based upon a preknowledge of the trend

of growth of the labour force among the weaving population it will not have enduring success. The major question is whether, in the next 10 or 15 years, the labour force will be increasing, stationary or decreasing. It may increase due to two factors : (i) an excess of births over deaths among the present day weaving population or (ii) an influx of labourers from other non-weaving communities. In order to assess the intrinsic character of the first factor the rate of growth of population among the weaving communities will have to be compared with that among the total population of the State. The second factor viz., the influx of outsiders into weaving occupation, has been in growing evidence in recent years, and this phenomenon, it is now well-known, has given a great deal of impetus by the ill-devised system of yarn rationing. If utmost vigilance is not exercised in the administration of the financial and other aids under the Cess Fund Schemes, this infiltration of outsiders will merrily continue unchecked, swelling the number of weavers of all sorts and making the attainment of the goal of full employment recede further and further like a mirage.

PROBLEM OF RISING TREND :

6.5. The problem of full employment will be rendered much more complicated, if the trend of labour force is on the upgrade. Provision of full employment to the traditional weaving communities is more a social responsibility than an economic necessity. Because, the technical superiority of the mill-sector over the handloom sector has long been admitted; even in the 1921 Census Report, an expert has remarked that the mills can produce 95 per cent of the different kinds of articles, which he (the handloom weaver) produces just as well, if not, better. (Volume I Part-I P. 270). In an economy, suffering from growing pains and shortage of capital, labour intensive methods to exploit fully the available technical skill is no doubt desirable but permitting an unlimited growth in the number with neophytes and pseudo-weavers, sneaking in through the back-stairs taking undue advantage of loop holes in legislation or administration of rehabilitation measures and then trying to provide employment for them all will be a herculean task.

PROBLEM OF STATIONARY AND DECLINING TRENDS :

6.6. The labour force will remain stationary only under two conditions; either the fecundity and the rate of reproduction should be low enough among the weaving communities or the excess of population should seek other avenues of employment, without sticking to their ancestral occupation. The labour force will manifest a declining trend if the fecundity rate is so low as not to enable the weaving population to reproduce itself. This is hard to happen in the general context of a rapidly rising population. This might happen if weaving has fell occupational diseases of its own playing havoc on population. There is no fear of such calamities from what we know of the health and vitality of the population of the weaving communities.

6.7. If a trend study shows that the weaving population and labour force would be stationary in the near future, the problem of their full employment could be more easily tackled. If for some reason, the trend of the labour force is shown to be on the downgrade, that could be deemed as ideal ; because a permanent solution of the handloom problem, fair to the community of weavers as well as to the community of consumers, could be secured only by a staggered introduction of improved looms and powerlooms (*Vide* the recommendations of the Kanungo Committee) and by draining away the surplus population into other industrial and occupational sectors. To fully comprehend the trend of labour force on a firm factual basis, a separate census of weavers including a study of their sex composition, age structure and the choice of occupations by the younger generation is essential. But such a census (1921 Census Volume XIII Part-I P. 182) has been dropped after 1921 Census when the emphasis was wrongly shifted from the weaver to his loom. In the absence of such comprehensive data, an attempt has been made to compare the

demographic pattern of the sample of weaving households with that of the total population in the State.

6·8. The Economic Survey covers 17,990 households belonging to the traditional and new weaving communities, with a total population of 89,773 persons of whom 45,771 or 51 per cent are males and 44,002 or 49 per cent females. The ideal method of estimating the rate of growth of the weaving population compared with that of the other communities in the society requires an intensive study of the birth and death rates, age structure, the percentage of women of child bearing age etc., in the weaving communities as well as the control groups. Such a method is not possible within the limited frame work of the present survey. An alternative approach, albeit less accurate, would be to study the sex composition of the sample households in broad age groups compared with the latest statistics of the total population of the State, as given in the 1951 census. The relevant statistics for all the districts of the State, tabulated in appendix VII-1 and 2 are summarised below :—

VI-1. PERCENTAGE OF POPULATION ACCORDING TO SEX AND BROAD AGE GROUPS

Age group	1951 census			Sample households		
	Males	Females	Total	Males	Females	Total
0-14 Years ..	18·3	17·7	36·0	17·5	18·3	35·8
15 years and above ..	31·2	32·8	64·0	33·5	30·7	64·2

6·9. The total population in the 1951 census as also the sample households covered by the Economic Survey is divided into two broad age groups (i) non-adults upto 14 years and (ii) adults, 15 years and above. The percentage of adults in both the populations is almost the same being 64 in the 1951 census and 64·2 in the sample. These age groups are further classified into sex groups. Between the two populations, there is a slight difference. Among the adults, the percentage of men to total population is 33·5 in the sample against 31·2 in the 1951 census showing that the weaving communities have relatively a larger number of men than the total population of the State. This would imply that the present labour force among the weavers, meaning by that term male adults, is of a higher proportion than that in the general community. Another factor of some significance in the context of handloom weaving is that there is no age of retirement. Men continue to weave upto a pretty old age. Even when they become too weak to weave, they are engaged in the ancillary processes, so much so there is practically no unemployable male — no superannuation for males in the handloom industry. The percentage of adult women in the weaving communities is 30·7 against 32·8 in the State population. A simple inference from these data is that the number of women in child bearing age is less among the weaving communities than in the State population. This may be argued as an indication that the rate of growth of population among the weaving communities may be lower than among the entire State population. But no definite conclusion is possible without a special enquiry directed to a study of the fecundity, fertility, infant mortality and other vital indicators of demographic trends.

SEX COMPOSITION AMONG CHILDREN AND ADULTS — POSITION IN THE STATE :

6·10. The present enquiry is not purposively directed to examine the fecundity differentials, rates of reproduction and mortality rates which are essential to work out reliable population trend. Certain data collected in schedule II however contain the age

and sex statistics which have been analysed to gain some idea of the probable trend. The total sample population has been classified into 3 age groups *viz.*, "0 to 5 years" "6 years to 14 years" and "15 years and above" and each age group is further classified according to sex. This type of analysis has been done for each of the districts and the State. The latter is summarised below :—

VI–2. CLASSIFICATION OF SAMPLE POPULATION ACCORDING TO SEX AND AGE GROUPS

Age Group	Males		Females		Total	
	No.	Per cent	No.	Per cent	No.	Per cent
Upto 5 years	6,385	48·1	6,888	51·9	13,273	100
6 to 14 years	9,337	49·5	9,532	50·5	18,869	100
15 years and above ..	30,049	52·1	27,582	47·9	57,631	100
Total ..	45,771	51·0	44,002	49·0	89,773	100

6.11. It is noteworthy that the percentage of females decreases as one moves from the infant and children group to the adult group. It is 51·9 in the age group "upto 5 years", 50·5 in that of "6 to 14 years" and 47·9 in that of "15 years and above". Contrari-wise the percentage of males increases from 48·1 in the lowest age group to 52·1 in the adult group. This decreasing proportion of females may be attributed to a higher rate of infant and child mortality among the female children. This finding calls for a more purposive enquiry into problems of vital statistics to confirm it before it could be accepted as a basis for any policy formulation. But the higher survival rate of the male children is evident from the above data. Its direct consequence is a larger male population ; although women and girls also find suitable jobs in a weaver's household, the main brunt of the occupation falls on masculine rather than feminine shoulders. Hence the labour force, the bulk of which consists of weavers *per se* is of a larger proportion. This point needs to be borne in mind despite the fact of an impressive percentage of weavers being women in certain districts as found out in the Enumeration Survey.

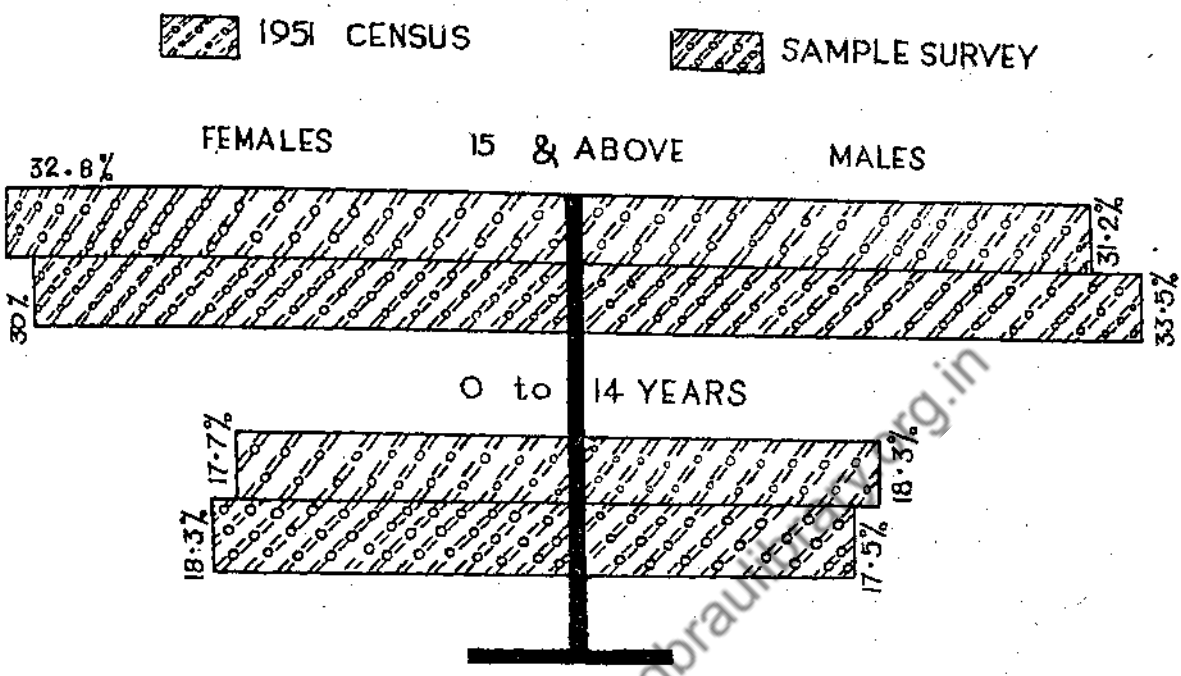
POSITION IN THE DISTRICTS :

6.12. The percentage data relating to sex composition of the sample population in each district is given on the page opposite. The interpretation of the data is confined to the two age groups : (i) children and (ii) adults. In the children group — below 15 consisting of 32,142 persons, the number of males is 15,722 or 48·9 per cent and that of females 16,420 or 51·1 per cent. These percentages vary widely from district to district. The percentage of female children is above the State figure of 51·1 per cent in 5 districts. It varies from 59·7 in South Kanara to 47·1 in Coimbatore district. In the adult group of 57,631 persons, there are 30,049 males forming 52·1 per cent and 27,582 females forming 47·9 per cent. The State percentage of 52·1 is exceeded in 8 districts. The percentage of males in the adult population ranges from 56·0 in Mathurai to 47·0 in Coimbatore district.

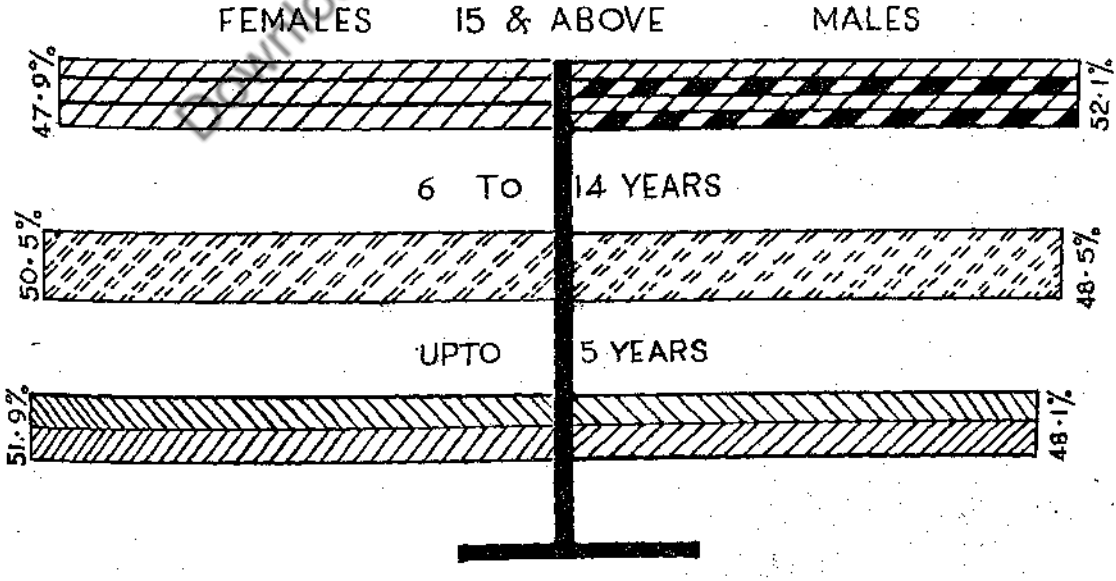
POSITION AMONG THE CHIEF COMMUNITIES :

6.13. The above State-wise and district-wise study of sex composition of the sample population has been extended to the chief weaving communities with the object of finding out whether there is any diversity between them. The total population in each of the six

AGE TREE



AGE TREE
(SAMPLE POPULATION)



VI-3. SEX COMPOSITION AMONG CHILDREN AND ADULTS

S. No.	District	Below 15 years				15 years and above			
		Males	Per cent	Females	Per cent	Males	Per cent	Females	Per cent
1	2	3	4	5	6	7	8	9	10
1	Madras	364	50·6	355	49·4	626	53·1	553	46·9
2	Chingleput	2,126	49·1	2,201	50·9	4,360	52·4	3,955	47·6
3	South Arcot	640	42·5	866	57·5	1,324	56·9	1,005	43·1
4	North Arcot	1,320	49·8	1,327	50·2	2,908	52·1	2,672	47·9
5	Salem	4,361	47·3	4,855	52·7	7,574	51·8	7,044	48·2
6	Tiruchirapalli	669	49·3	688	50·7	1,225	52·5	1,108	47·5
7	Tanjore	384	49·1	397	50·9	832	52·0	769	48·0
8	Mathurai	767	52·6	690	47·4	1,900	56·0	1,495	44·0
9	Ramanathapuram	971	47·1	1,088	52·9	2,283	53·1	2,014	46·9
10	Tirunelveli	1,724	51·0	1,654	49·0	3,340	51·6	3,130	48·4
11	Coimbatore	1,695	52·9	1,508	47·1	2,196	47·0	2,476	53·0
12	Malabar	622	48·0	674	52·0	1,359	52·4	1,236	47·6
13	South Kanara	79	40·3	117	59·7	122	49·4	125	50·6
	STATE ..	15,722	48·9	16,420	51·1	30,049	52·1	27,582	47·9

prominent weaving communities in the State was first classified into children and adults and each group was further classified into males and females. The data, thus processed, are given in the table below :—

VI–4. SEX COMPOSITION AMONG CHILDREN AN ADULTS IN SIX PROMINENT COMMUNITIES

Community	0-14 years				15 years and above			
	Males	Per cent	Females	Per cent	Males	Per cent	Females	Per cent
Mudaliars	6,744	49·7	6,829	50·3	12,282	51·2	11,707	48·8
Devangars	2,844	47·9	3,095	52·1	5,886	52·3	5,368	47·7
Sourashtras	1,303	48·5	1,385	51·5	2,642	54·3	2,223	45·7
Muslims	932	52·0	861	48·0	1,563	43·5	2,026	56·5
Padmasaliars ..	596	50·8	577	49·2	1,215	52·1	1,115	47·9
Chalians (Malabar) ..	347	43·4	453	56·6	720	54·3	606	45·7

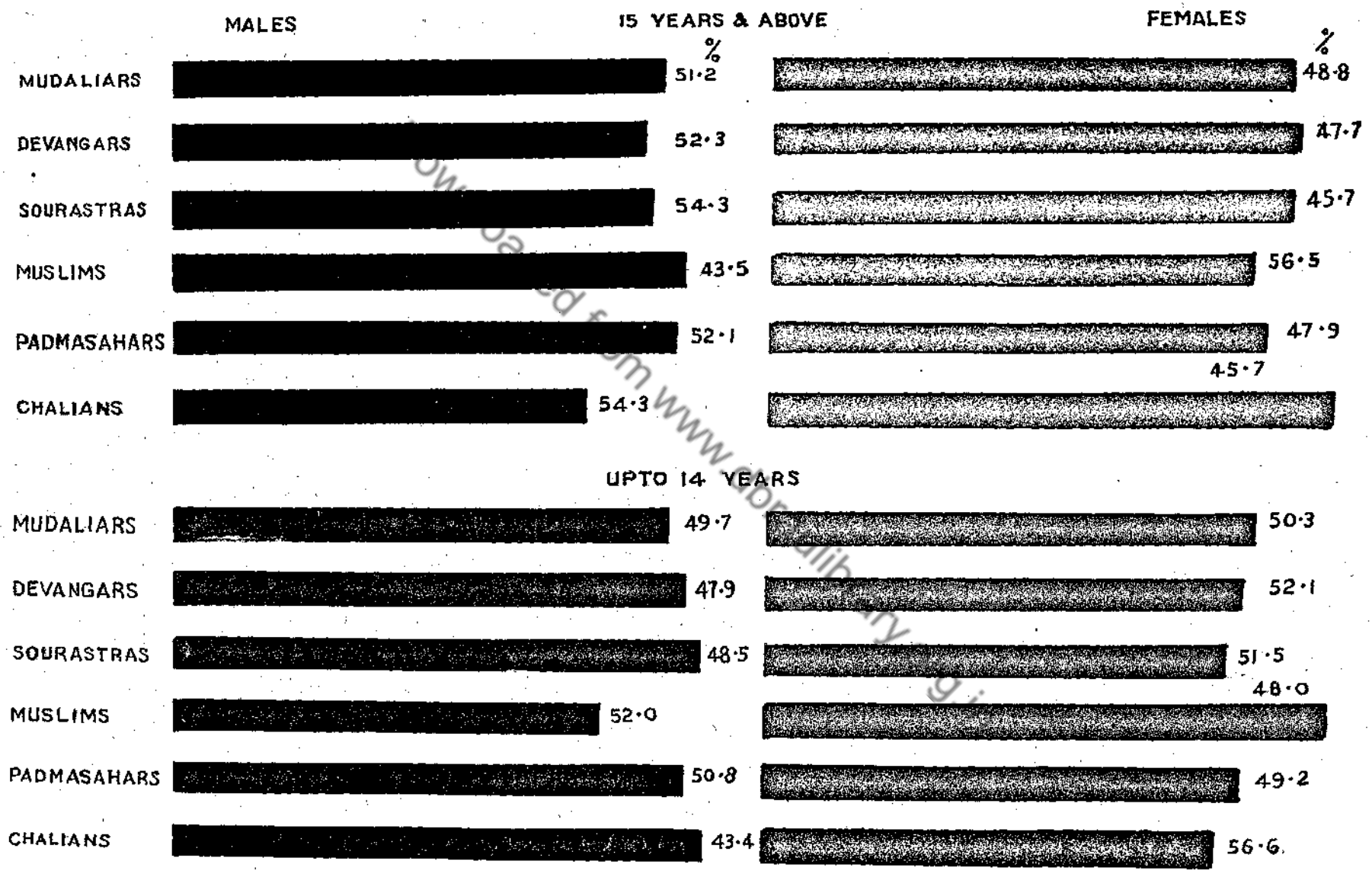
Once again it is found that but for a single exception the percentage of males in the children group is less than females but the position is reversed in the adult group. Among the six communities, the percentage of males in the children group is 52 among Muslims, 50·8 among Padmasaliars, 49·7 among the Kaikola Mudaliars, 48·5 among Sourashtras, 47·9 among Devangas and 43·4 among Chalians (Malabar). In all these communities except the Muslims, among the adults the percentage of males is above 50. It is as high as 54·3 among Sourashtras and Chalians. There are two extreme cases. Among the Chalians, the percentage of males has risen from 43·4 in the children group to 54·3 in the adult group. On the contrary, among the Muslims, there is a sharp fall from 52 per cent males in the children group to 43·5 per cent in the adult group. Both these variations are inexplicable. Is it due to a heavier infant mortality among male Muslim children and female Chalian children ? If so, the reasons will have to be found out by special enquiries. The strange case of Muslims apart, the general finding that the males, constituting the clamant bulk of the labour force, figure out in a larger percentage among the adults than among children, is amply borne out by this special study of the more prominent weaving communities.

MARITAL STATUS :

6·14. Another factor of no small significance in estimating the future trend of weaving population and labour force is the civil condition of the present population. Provision has been made in Schedule II for collection of data relating to marital status of the sample weaving population under the four categories of married, not married, widowed and divorced. In processing the data collected, the overall position in the State as well as the situation in the various districts is examined and compared with the corresponding data for the entire population of the State and the respective districts as in the 1951 census.

6·15. Data showing the percentage of the married and unmarried persons in the sample and 1951 census population are tabulated in the statement on the page opposite. Other things like fecundity, infant mortality and marital age remaining equal, a higher percentage of married persons would imply a higher rate of population growth. The percentage of both males and females who are married is larger in the sample weaving population than in the total (all communities including the weaving) population of the State according

SEX COMPOSITION AMONG CHILDREN AND ADULTS IN MAJOR COMMUNITIES



VI–5. MARITAL STATUS OF THE SAMPLE WEAVING POPULATION COMPARED WITH THAT OF 1951 CENSUS FIGURES

(PART I)

District	Married				Not married			
	Males		Females		Males		Females	
	Census	Sample	Census	Sample	Census	Sample	Census	Sample
1. Madras	44·2	40·6	44·6	44·3	48·0	56·1	37·3	43·6
2. Chingleput	39·6	45·1	42·5	48·6	55·4	50·1	43·3	38·4
3. South Arcot	42·6	46·2	44·5	47·4	53·7	49·5	39·9	39·7
4. North Arcot	40·6	45·9	42·9	48·1	56·2	50·4	42·5	41·4
5. Salem	43·3	37·7	43·7	36·1	52·7	60·0	44·2	55·9
6. Tiruchi	41·3	42·7	41·6	44·8	54·1	53·9	41·1	41·4
7. Tanjore	41·5	50·5	44·6	47·5	54·3	45·8	39·5	40·9
8. Mathurai	41·3	41·6	42·9	51·1	54·5	53·9	43·8	40·2
9. Ramanathapuram	40·9	40·5	42·9	41·4	54·3	56·2	42·6	48·0
10. Tirunelveli	40·6	44·4	41·1	46·5	55·2	53·6	44·5	43·9
11. Malabar	40·3	42·8	42·9	44·0	55·0	54·9	44·8	46·1
12. Coimbatore	37·6	43·0	40·1	40·7	59·8	51·8	45·8	44·9
13. South Kanara	36·2	37·3	39·1	33·5	60·7	60·7	44·4	62·0
STATE ..	40·7	43·0	42·6	44·1	54·9	53·6	42·6	45·1

VI-5. MARITAL STATUS OF THE SAMPLE WEAVING POPULATION COMPARED WITH THAT OF 1951 CENSUS FIGURES

(PART II)

District	Widowed				Divorced			
	Males		Females		Males		Females	
	Census	Sample	Census	Sample	Census	Sample	Census	Sample
1. Madras	7·7	3·5	17·8	11·7	0·1	0·1	0·3	0·4
2. Chingleput	4·9	4·7	14·1	12·5	0·1	0·1	0·1	0·5
3. South Arcot	3·6	4·3	15·4	12·6	0·1	..	0·2	0·3
4. North Arcot	3·0	3·5	14·3	10·0	0·2	0·2	0·3	0·5
5. Salem	3·9	2·2	11·7	7·3	0·1	0·1	0·4	0·7
6. Tiruchi	4·4	3·4	17·1	13·4	0·2	..	0·2	0·4
7. Tanjore	4·1	3·7	15·7	11·6	0·1	..	0·2	..
8. Mathurai	3·7	4·5	12·6	8·7	0·5	..	0·7	..
9. Ramanathapuram	4·2	3·2	14·1	10·3	0·6	0·1	0·4	0·3
10. Tirunelveli	4·0	1·8	14;1	18·9	0·2	0·2	0·3	0·7
11. Malabar	4·5	2·3	11·9	7·1	0·2	..	0·4	2·8
12. Coimbatore	1·8	4·9	11·6	12·6	0·8	0·3	2·5	1·8
13. South Kanara	2·4	2·0	14·3	4·5	0·7	..	2·2	..
STATE ..	4·1	3·5	14·9	10·1	0·3	0·1	0·6	0·6

to 1951 census. For males, it is 43·0 for the former against 40·7 for the latter. For females too, the position is similar, showing a higher percentage of 44·1 for the sample weaving population compared with 42·6 for the entire population of the State (1951 census). The proportion of married males is not however uniform in all the districts ; it varies from 37·3 per cent in South Kanara to 50·5 per cent in Tanjore district. The State average of 43 per cent is exceeded in five districts, being 45·5 per cent in Chingleput, 46·2 per cent in South Arcot, 45·9 per cent in North Arcot, 50·5 per cent in Tanjore and 44·4 per cent in Tirunelveli district. The percentage is the same as the State average in Coimbatore district and lower than the latter in the other seven districts. Compared with the 1951 census population, the sample weaving population has a lower percentage of married persons in two districts only ; in Madras, it is 40·3 per cent against 44·2 in the 1951 census and in Salem 37·7 per cent against 43·3 in the 1951 census. The higher proportion of married persons among the weaving population is brought out by these data. This analysis, however, cannot be extended to a study of fecundity and fertility for want of relevant data, the collection of which would call for a separate survey.

CATEGORY OF " WIDOWED " :

6·16. If married status is a positive factor in the growth of population, " widowed " and " divorced " status will operate as a negative factor, restricting increase in numbers. Relevant data relating to the latter status are shown in the statement No. VI. (*Vide* opposite page). For the whole State, the percentage of persons in the category " widowed " among males is 4·1 according to 1951 census and 3·5 in the sample covered in the present survey. Corresponding percentages for females are 14·9 and 10·1 respectively. In both the sexes, there is a lower percentage of persons belonging to the category of " widowed " in the weaving communities than in the population of the State.

CATEGORY OF DIVORCED :

6·17. Divorce, in the strict sense of the term as known to the West, is not generally resorted to in our country, and less so among the lower income groups to which the majority of the weaving population belong. Hence the term, " Divorced " has been so defined in the present Survey as to include persons, separated from their spouses with little hope of ever being reunited in the future. More or less the same conceptual significance is attached to this term in the 1951 census. The percentage of persons in the 1951 census occurring in this category of divorced is 0·3 among males and 0·6 among females. The corresponding percentages for the sample weaving population are 0·1 and 0·6 respectively. Except for the last group of " divorced " females, the sample weaving population shows a lower percentage of widowed and divorced than the total population of the State in 1951. The consequence of this lower percentage of widowed and divorced accompanied by a higher percentage of married males and females lend support to a probability of a higher rate of growth of the weaving population.

CONCLUSION :

6·18. The salient features of the demographic study may be briefly set out : The future labour force in the handloom industry will be influenced by two factors : (i) natural increase of population and (ii) influx of labourers from non-weaving communities. No policy for rehabilitation of the handloom industry should lead to influx of neophytes and pseudo-weavers. On the other hand, the ultimate objective of a sound policy should be a gradual reduction in the number of handloom weavers, since the mill sector has technical superiority over the handloom in weaving about 95 per cent of all varieties of fabrics.

6·19. Regarding natural increase, the findings of the present survey do not provide any clear trend. Special intensive demographic surveys will be necessary to find out

precisely the trend. As the conclusions set forth here are based on meagre data relating to a narrow field of demographic studies, they should be viewed as highly tentative. The proportion of women of the child bearing age in the weaving communities is less than that in the total population of the State, indicating a lower rate of reproduction. But the survival rate of male children is extremely marked, the percentage of males is 19·2 in the children group (persons below 15 years) while it is 33·0 in the adult group (15 years and above). This differential would imply a larger proportion of labour force in the weaving population, reckoning it on the basis of males only.

6·20. There is a larger proportion of married persons in the weaving communities than in the State population. The percentage of married males is 43 in the former against 40·7 in the latter ; the corresponding percentages for females are 44·1 and 42·6 respectively. From this higher proportion of married persons, normal expectation is a higher rate of growth of population. The percentage of "widowed" and "divorced" or separated persons among males and females in the weaving communities is lower than that in the total population of the State. This is another factor that would normally lead to a relatively larger growth of population. The data revealing a higher percentage of the married and a lower percentage of the widowed and divorced lend support to the forecast that the rate of growth of the weaving population will be higher than the average State rate.

CHAPTER VII

WEAVERS — EDUCATION AND EMPLOYMENT

EDUCATIONAL PROGRESS :

7·1. The future labour force of the weaving population depends not only on marital status, infant mortality and sex composition but also on the levels of education. Whatever might be the merits of the castewise distribution of occupations in the mediaeval Indian society, it has been disintegrating under the impact of the western egalitarian and democratic approach to ways of living. Higher education, which has opened the mind of the common man to the western or modern attitude towards life, has played no mean role in bringing about radical changes in the traditional social attitudes. It has been the common experience in this country for the higher educated persons to quit the traditional handicrafts and other hereditary occupations. The higher educated in the traditional weaving communities are no exception to this general tendency. From this, it may even be argued that the best scheme to reduce the labour force in the handloom industry would be to impart higher education free, partly or fully. One snag in this approach is that the so-called higher educated among the weaving population should not swell the crowd of those who, on account of higher education, have developed a hankering for white-collared, soft-handed, non-specialised and mostly clerical jobs. This snag may be avoided by giving a deliberate slant in favour of technical education from the secondary school upward.

LITERACY :

7·2. The Economic Survey has provided for the collection of data relating to education of the sample population. In the survey of educational standards attained by the population children below 5 years are excluded. In the sample weaving population, this children's group is comprised of 7·1 per cent of the males and 7·7 per cent of the females (*Vide* table below). The 1951 census however shows a lower percentage in both sex groups — 6·1 per cent among males and 6·9 among females.

VII–1. CHILDREN BELOW FIVE YEARS

District	Males per cent		Females per cent	
	Census	Sample	Census	Sample
Madras	4·7	7·7	4·4	8·0
Chingleput	5·9	7·3	5·9	8·3
South Arcot	6·3	6·9	6·5	13·8
North Arcot	6·4	7·5	6·3	7·0
Salem	6·0	7·2	6·9	8·1
Tiruchirapalli	5·9	9·1	6·0	9·0
Tanjore	5·6	7·6	5·7	8·1
Mathurai	5·3	4·7	6·2	6·9
Ramanathapuram	6·2	5·1	5·3	5·3
Tirunelveli	5·9	5·8	5·2	6·3
Coimbatore	6·1	10·4	5·9	7·0
Malabar	6·8	5·8	6·5	6·3
South Kanara	7·1	4·5	6·9	8·1
Total ..	6·1	7·1	6·9	7·7

VII-2. STANDARD OF LITERACY — 1951 CENSUS COMPARED WITH SAMPLE SURVEY

S. No.	District	Total population per cent		Males per cent		Females per cent	
		1951 Census	Sample survey	1951 Census	Sample survey	1951 Census	Sample survey
1	2	3	4	5	6	7	8
1	Madras	50·2	27·4	61·4	27·9	38·0	10·4
2	Chingleput	17·9	23·8	27·4	22·4	8·1	9·3
3	South Arcot	16·5	48·4	27·1	56·3	5·9	19·0
4	North Arcot	17·9	44·2	28·6	62·8	7·2	9·4
5	Salem	11·4	27·7	18·0	30·8	4·7	9·3
6	Tiruchirapalli	18·3	49·3	29·5	58·3	7·3	21·1
7	Tanjore	23·2	42·4	36·5	51·9	10·3	16·4
8	Madurai	20·3	76·5	32 9	81·3	7·9	58·0
9	Ramanathapuram	21·4	36·6	35·5	38·8	8·4	25·7
10	Tirunelveli	25·7	26·2	38·3	23·7	13·8	16·3
11	Coimbatore	17·0	29·4	26·3	34·6	7·6	7·2
12	Malabar	30·9	34·2	41·4	39·3	21·0	17·3
13	South Kanara	23·3	22·8	32·6	23·9	14·8	10·1
	STATE ..	19·7	19·5	33·5	41·5	11·9	17·0

7·3. It is for the population above 5 years that the literacy test will have to be applied. As in the 1951 census, "literates" are defined for the present survey as "those who are able to read and write any simple letter in any language". Applying this test, the sample population is classified into literate and illiterate according to sex. These data are reduced to percentages and shown along with corresponding percentages for the whole population of the respective districts and the State as in 1951 census. (*Vide* Table No. VII-2 on page opposite). The percentage of literates is 41·5 among the males in the sample weaving population compared with 33·5 among the males in the 1951 census population for the whole State. The corresponding percentages for females are 17·0 and 11·9. Obviously the standards of literacy are much above the State averages both among males and females. This is mainly due to the fact that most of the traditional weaving communities are fairly high up in the social hierarchy. This will be apparent from a comparison of the levels of literacy in the various districts, bearing in mind the communities, found to be prominent in them. (*Vide* paragraphs 5·3 to 5·7 in the Enumeration Survey). The highest percentage of literacy among males is 81·3 recorded in Madurai district where the most prominent community is the Sourashtra, reputed to be most advanced among all the weaving communities. Relatively very low percentages of literacy are recorded in Madras, Chingleput, Ramanathapuram, Tirunelveli and South Kanara where the weaving population belongs to backward communities as also Muslims.

7·4. In respect of female literacy too, a somewhat similar pattern is noticeable, Madurai leading with 58·0 per cent. In Chingleput, North Arcot, Salem, Tanjore and Coimbatore, the percentage that is literate among the female population is less than 10 per cent. Compared with the literacy standards of the districts according to the 1951 census, the female weaving population in four districts is relatively very backward. Literates in the female population are 10·4 per cent in the sample in Madras against 38·0 per cent in 1951 census; in Tanjore it is 6·4 per cent against 10·3 per cent; in Coimbatore 7·2 per cent against 7·6 per cent, in Malabar 17·3 per cent against 21·0 per cent and in South Kanara 10·1 per cent against 14·8 per cent. Notwithstanding these relatively lower percentages, the over all position of both males and females in respect of literacy may be described as fairly above the State average. Mere literacy *per se* will not induce persons to seek pastures new; it is but an index of the position the weaving communities occupy in the social hierarchy.

SECONDARY AND HIGHER EDUCATION:

7·5. If the earlier hypothesis that higher education produces an attitude to turn away from the hereditary vocation is accepted, it is necessary to examine how far it has spread among the weaving population. The relevant data are processed and given in the table below with corresponding figures for the entire population of the State (1951 census) for purposes of comparison.

VII–3. PERCENTAGE IN DIFFERENT EDUCATIONAL GROUPS

Education Group	State Population (1951 Census)		Weaving Population (Sample)	
	Males	Females	Males	Females
Illiterate	74·4	92·4	68·40	93·06
Primary School	22·2	6·7	27·85	6·70
Middle School	1·8	0·6	2·80	0·20
Secondary School	1·1	0·2	0·90	0·04
University	0·5	0·1	0·05	..
Total ..	100·0	100·0	100·00	100·00

7·6. The sample population of the weaving communities and the 1951 census population of the State are classified in the above table into five groups. Illiterate needs no explanation. "Primary" group denotes literacy or education upto the highest standard of the Primary School. Similarly to the "Middle School" group are assigned all the persons who have completed VIII standard or III Form, and to the "Secondary School" group persons who have completed S. S. L. C. Persons who have had not less than two years of University education are placed in the group designated as University. The data in the table on page 74 shows that the weaving population has a larger percentage of males in the "Primary" and "Middle School" categories than the State population viewed as a whole. But in the "Secondary" and "University" stages, the weaving population has 0·9 per cent and 0·05 per cent respectively compared with 1·1 per cent and 0·5 per cent in the State population. Per 100 males, the number of persons with S.S.L.C. qualification is 9 among the weaving communities against 11 in the State population. As for University group it is 5 only per 10,000 compared with 5 per 1000 in the State population. These figures bring into bold relief the backwardness of the male weaving population in respect of higher education.

7·7. The percentage of females with "Primary School" qualification is the same for the weaving and the general population, being 6·7 in both cases. But at the higher stages the weaving population has a very poor record. The percentage in the "Middle School" stage is 0·2 for the female weaving population compared with 0·6 for the State population which is three times larger. In the "Secondary School" stage, the female weaving population has only one S. S. L. C. for 5 in the general population. Although the general population has one in 1,000 females in the "University" stage, there is none in the sample.

Six Chief Communities — Educational Progress :

7·8. Besides the assessment of the progress of higher education among the weaving population in general, separate study of the position among the six prominent hereditary weaving communities is also attempted. As already seen in the Enumeration Survey, the six communities of Mudaliars, Devanagas, Sourashtras, Muslims, Padmasalis and Chalians constitute 81 per cent of the total weaving population in the State. Theirs is a hereditary occupation of several centuries' standing. Their educational advancement merits special notice.

VII-4. PERCENTAGE IN DIFFERENT EDUCATIONAL GROUPS

Educational Groups	Senguntha Mudaliars	Devangas	Sourashtras	Muslims	Padmasalis	Chalians
Illiterate ..	79·9	72·8	65·3	79·5	86·6	66·8
Primary School ..	18·0	25·1	31·4	19·2	10·5	32·1
Middle School ..	1·7	1·7	2·7	1·1	2·1	..
Secondary School ..	0·4	..	0·4	..	0·7	0·8
University ..	..	..	..	..	..	..
Total ..	100·0	100·0	100·0	100·0	100·0	100·0

7·9. In all these six communities, illitaracy is most rampant among the Padmasalis, the percentage of illiterate persons being 86·6. Nearly 4 out of 5 persons are illiterate in the Senguntha Mudaliar and Muslim communities and 3 out of 4 among the Devangas. Among the Sourashtras and the Chalians 2 out of 3 are illiterate. In the "Primary" stage or mere literacy group, the Chalians and Sourashtras are better than the other four communities with 32·1 per cent and 31·4 per cent literates. One in 4 is literate in the Devanga community, less than 1 in 5 in the Senguntha Mudaliar and Muslim communities and 1 in 10 in the Padamasali community. In the "Middle School" group, even the relatively progressive Sourashtras lead with 2·7 per cent only, the other communities having less than two in 100 in this group. In the "Secondary School" group Chalians and Padamasalis have 0·9 per cent and 0·7 per cent and Sengunthars and Sourashtras 0·4 per cent each; Devangas and Muslims have none. University education is conspicuously absent in all the communities. These data derived from a sample study cannot claim to indicate the exact position but they could be relied upon to afford a fairly good approximation to truth, which reveals the sorry state of education among the hereditary weaving communities. If not for anything else, higher education on a larger scale should be given because it will help the weaving community to do their job more efficiently and to develop incentives to earn more for raising their living standards. Even if a churning up of the smug complacency or an awakening from dormant fatalism is brought about by higher education, it will pave the way for making the weaving community receptive to new ideas, new techniques and new equipment.

7·10. When higher education is such a rare commodity, the younger generation is confronted by two stark alternatives of either sticking to the ancestral occupation, even if the earnings be a pittance, or moving to unskilled labour which is not only physically hard work but aslo contrary to the mores of the communities. Between the two horns of this dilemma, little wonder that they choose the first. The hereditary weaving communities lack not only education but also capital. Even if they had small capital, they could move to small-scale business on own account because culturally they have a great partiality for self-employed status and occupation. From this analysis of their situation, it is not far wrong to conclude that most of the younger folks of the weaving communities stay put in the paternal occupation not by their free choice but by compelling circumstances. This kind of natural deposit of labour force in the handloom industry could be avoided by imparting technical education and providing some seed-capital to start some other business than weaving on own account. Their inherited deftness of fingers and alertness of mind will stand them in good stead in most of the many village industries, developed at present under Government aids programme and so essential to serve the heavy industries of the future. This will accord with the policy recently reiterated that the youth "should be trained especially from the point of view of fitting into the scheme of the Plan and being utilised for greater production in land and small and cottage industries". (*Vide* Congress Election Manifesto 1957).

Some Economic Aspects :

7·11. The Enumeration Survey revealed in a general manner the weaver-loom ratio and the percentage of active women weavers. These and other kindred aspects are sought to be studied in greater detail in the Economic Survey.

Size and Composition of the Household :

7·12. The data relating to the size and composition of the population in the households covered are tabulated in statement number VII·5 on page reverse. As already indicated, the Economic Survey covers 17,990 households having a total population of 89,773 persons of whom 45,771 are males and 44,002 females. It may be seen that the average size of the weaving households is 4·9 persons, a little less than 5·2 persons per household

VII–5 SAMPLE WEAVING POPULATION

District	No. of House-holds	No. of Looms	Weavers			Weaving Population				Per Household				No. of persons support-ed by a weaver
			Males	Females	Total	Per cent of (4) to (6)	Males	Females	Total	No. of Looms	No. of weavers	No. of male weavers	No. of persons	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Madras	361	1,160	470	13	483	97·3	990	908	1,898	3·2	1·33	1·3	5·2	3·9
Chingleput ..	2,689	5,938	4,289	76	4,365	98·2	6,486	6,156	12,642	2·2	1·62	1·5	4·7	2·8
South Arcot ..	751	2,278	835	46	881	94·7	1,964	1,871	3,835	3·0	1·17	1·1	5·1	4·3
North Arcot ..	1,563	4,228	2,000	51	2,051	97·5	4,228	3,999	8,227	2·7	1·32	1·2	5·2	4·0
Salem	5,064	15,016	7,059	2,938	9,997	70·6	11,935	11,899	23,284	3·0	1·97	1·3	4·5	2·3
Trichirappalli ..	729	827	908	73	981	92·5	1,894	1,796	3,690	1·1	1·34	1·2	5·0	3·7
Tanjore ..	504	921	675	10	685	98·5	1,216	1,166	2,382	1·8	1·35	1·3	4·7	3·4
Mathurai ..	916	3,108	1,500	212	1,712	87·6	2,667	2,185	4,852	3·3	1·86	1·6	5·2	2·8
Ramnad ..	1,287	3,995	2,370	1,130	3,500	67·7	3,254	3,102	6,356	3·1	2·71	1·8	4·9	1·8
Tirunelveli ..	2,031	4,806	2,782	1,028	3,810	73·0	5,064	4,784	9,848	2·3	1·87	1·3	4·8	2·5
Coimbatore ..	1,339	4,372	2,135	770	2,905	73·4	3,891	3,984	7,875	3·2	2·16	1·5	5·9	2·7
Malabar.. ...	703	2,183	1,197	37	1,234	97·0	1,981	1,910	3,891	3·1	1·75	1·7	5·5	3·1
South Kanara ..	53	320	97	57	154	62·9	201	242	443	6·0	2·90	1·8	8·3	2·8
Total ..	17,990	49,152	26,317	6,441	32,758	80·3	45,771	44,002	89,773	2·7	1·8	1·4	4·9	2·7

No. of Females Weavers per Household = 0·4
No. of Males per Household = 2·5
No. of Females per Household = 2·4
No. of Persons per Loom = 1·8

Per cent of male weavers to total weavers = 80·3
Per cent of female weavers to total weavers = 19·7
Per cent of males to total = 50·9
Per cent of females to total = 49·1
Per cent of male weavers to total = 29·3

in Madras State (1955) according to the 1951 census. But the size of the weaving household varies from 4·5 in Salem district to 8·3 in South Kanara district. In 8 out of the 13 districts in the State, the average size is 5 persons or more. The average number of males per household is 2·5 against 2·4 females.

ACTIVE WEAVERS — MALES AND FEMALES :

7·13. The total number of active weavers (those who regularly work on looms) is 32,758 of whom 26,317 or 80·3 per cent are men and 6,441 or 19·7 per cent women. The proportion of men to women weavers is roughly 4:1. The total number of weavers per household is 1·8 of whom 1·4 are men, 0·4 women. The presence of active women weavers already revealed by the Enumeration Survey is confirmed by this more intensive investigation. Women weavers are found in larger proportion in some districts than in others. Their percentage exceeds 25 per cent of the total in 6 districts : it is 37·1 per cent in South Kanara, 32·3 per cent in Ramanathapuram, 29·4 per cent in Salem, 26·6 per cent in Coimbatore and 27 per cent in Tirunelveli district. This is more or less the pattern revealed by the Enumeration Survey. (*Vide* Paragraph V-17). In view of the significant proportion of women weavers, it is not practicable, as already suggested, to prohibit women from weaving.

DEPENDENTS IN HOUSEHOLDS :

7·14. The number of dependents, *i. e.* non-weavers most of whom may however be employed fully or partly in the ancillary processes, is 3·8 per household in the State and the number of dependents per weaver is 2·1 persons. The number of weavers per household and the number of male weavers varies from 1·17 and 1·10 respectively in South Arcot to 2·9 and 1·8 respectively in South Kanara district. The number of dependents per weaver varies from 1·8 in Ramanthapuram to 4·3 in South Arcot district. Except for the South Kanara district an extreme case giving an average of 8·3 persons per household the average size of the household in all the other districts varies only within narrow limits. Naturally the number of dependents per weaver is larger wherever the number of weavers per household is smaller.

SURPLUS LOOMS VIS-A-VIS REGISTRATION :

7·15. The present Economic Survey reveals that there are 49,152 looms in the sample of 17,990 households. The total number of male and female weavers being 32,758, the weaverloom ratio works out to 1 : 1·5. It is not easy to assign any definite reason for the occurrence of such proportions of idle looms together with a large proportion of dependents. It is generally found that no member of the weaver's household keeps away from working on the loom unless it be due to old age, physical unfitness or convention in the case of women in some districts. The large number of dependents should not therefore be confused with unemployed weavers. If this argument is accepted, the existence, on an average of 2·7 looms against an average number of 1·7 weavers per household indicates the magnitude of surplus looms in the industry - 50 per cent surplus of looms above requirements by active weavers. A registration or licensing of looms alone will not give a firm basis for estimating the output of the industry. It will be a grossly misleading basis as there will not be an equal number of weavers to work on them. A misconceived emphasis placed on looms since the 1931 census has led to serious abuses resulting in a startling growth of ghost looms and this mistake could never be rectified except by a shifting of the emphasis to the weavers and registering them. There may be opposition to this procedure from interested quarters but the only effective way of preventing (1) the influx of outsiders into the handloom industry attracted by the present programme of aids which would spell unemployment and misery to the old, well-established and hereditary weavers ; (2) a vicious spiral of more looms chasing more aids which would stultify the entire policy of rehabilitation and (3) an artificial inflation of the number of looms which would provide a thoroughly unrealistic basis

for fixing targets of handloom output, is to register weavers on the basis of certain criteria like (a) hereditary character of the occupation (b) minimum number of years of experience and (c) a specified minimum standard of proficiency in weaving. Application of these criteria need not be viewed as insuperably difficult ; because these tests could be applied by a village committee of representative weavers presided over by a Government representative.

PROBLEM OF LOOMLESS WEAVERS :

7.16. The weaver-loom ratio of 1 : 1·5 relates only to the weavers in the households surveyed ; the army of loomless weavers does not figure in this ratio. The latter are active and in most cases, experienced weavers who do not have looms of their own due to extreme penury. It may be recalled that loomless weavers in the handloom industry have been described as the opposite numbers of landless labourers in agriculture. The Committee that is suggested above to license active weavers would find it within their purview to include the loomless weavers in the corps of licensed or registered weavers. To equip them with the necessary looms, it is desirable to inaugurate in a campaign for *Loomdhan*. This may be attended by as much success, if not more, than that of *Bhoomidhan*, because gifting away an unused loom is less of a wrench than parting with a piece of tillable land. This method of redistribution of looms is proposed to solve the immediate problem of unemployment. The long-term solution, as already indicated, rests upon imparting higher education and technical training on a larger scale among the weaving population which will unleash new urges among the younger generation to seek new avenues of employment, incidentally bringing about the much-desired consummation of reducing the labour force stagnant and superfluous in the handloom industry.

CONCLUSIONS :

7.17. To sum up the findings of this chapter, so far as literacy is concerned the level of literacy in respect of the weaving communities is fairly above that of the State population Among the males, 41·5 per cent are literate in the sample weaving population, compared with 33·5 per cent in the male population of the State according to 1951 census. The corresponding percentages for females are 17·0 and 11·9 respectively. This higher level of literacy is mainly attributable to the weaving communities occupying a relatively higher position in the social hierarchy.

7.18. The weaving communities are in a better position in respect of "Middle School" education but worse off in the matter of "Secondary School" and "University" education. Among the various communities, the Sourashtras are more advanced than the rest. Higher education appears to be the crying need to improve the lot of the weaving communities. It may lead to a larger number of the younger people to choose occupations other than weaving, reducing to that extent the magnitude of unemployment. Or it may lead to improvement in efficiency since the educated weavers will be animated by a greater desire to raise their incomes and living standards.

7.19. The average weaving household consist of 4·9 persons compared with 5·2 in Madras State according to 1951 census. The proportion of men to women weavers is approximately 4 : 1. Women are actively engaged in weaving in some districts like South Kanara, Ramanathapuram, Salem, Coimbatore and Tirunelveli. There are on an average 3·8 dependents including auxiliary workers in a household.

7.20. The weaver-loom ratio works out to 1 : 1·5. There is an urgent need to register or licence weavers instead of looms, if measures for rehabilitating the industry should have enduring results. The problem of loomless weavers is of serious import and the provision of looms to them is an urgent need. The possibility of *Loomdhan* a la *Bhoomidhan* looks promising and deserves to be explored.

CHAPTER VIII

EMPLOYMENT AND ACTIVITY STATUS

Chief Workers and Family Helpers :

8·1. Employment being a means to earnings, full employment should imply reasonable earnings as much as work for eight hours a day to all those who are deemed to be employed. The concept of full employment needs some fresh clarification and special definition in the handloom industry, in common with all home industries but distinguished from its familiar connotation in factory industry. In the latter, individuals work in specially erected workshops away from their homes, under strict discipline with regard to hours of work and output and their earnings are determined on the basis of what is called "living wage" or "fair wage" usually arrived at by collective bargaining. On the other hand, earnings of particular individuals in home industries can hardly be separated from the pool of household earnings because the chief worker in the household is either a worker "on own account" or on contract basis, assisted in both cases by family helpers. The contributions of family helpers are not capable of precise calculation nor is the apportionment of the due share from earnings-pool. It is the general practice in the handloom industry for non-self-employed weavers to be working on a contract wage per warp of 20 or 40 yards or more of cloth of specified picks and ends, payable either by the Co-operative Society of which he may be a member or by the master-weaver for whom he may happen to be working. If the employer Co-operative Society or master-weaver gives a few knots of yarn, they must be subjected to certain preliminary processes before actual weaving could commence. The chief among these are bobbin-winding for the warp, pirn-winding for the woof, warping and sizing which are done by all the members of the weaver's household according to their ability, inclination, leisure and urgency.

Dual and Multiple Activity Status :

8·2. A noteworthy trait of the handloom industry is the absence of rigid specialisation of workers. Most of the members are trained and competent to do any one of the various activities associated with weaving. Persons may do winding and weaving, warping and sizing, warping and weaving or any combination of two or more processes according to the exigencies of the moment. Unlike in modern factories, the members of the household cannot therefore be assigned to a single, specialised activity status but they enjoy a dual if not multiple activity status. It is this trait that renders difficult any precise estimate of the character and magnitude of employment among the home workers of the handloom industry. However a knowledge of the general pattern of the disposition of labour time of the entire corps of workers among the various activities is a pre-requisite to estimate the intensity of employment and the levels of earnings as well as to evolve any scheme of rationalisation, productive of greater efficiency. With this object in view, provision was made in schedule II for the collection of relevant data. Investigators were instructed to find out from all the members of the household, except those who never figure as a family helpers of any sort, their primary and secondary activities together with the order or priorities among them.

Full Employment – Apparent not Real :

8·3. The figures of employment viewed in conjunction with the male and female population, adults as well as children given in paragraph 6·10, indicate that the level of employment among the sample population is pretty high. Of the total sample population of 89,773 the number of persons gainfully employed in some activity or other in the handloom

industry is found to be 49,677 or 55·3 per cent compared with 31 per cent of self-supporting persons and earning dependents for the total population of undivided Madras State according to 1951 census. In the male population of 45,771, the number employed is 30,939 or about 66 per cent and in the female popoulation of 44,002, the number employed is 18,738 or 42·5 per cent. These figures include adults as well as children, although no break-down figures are available. In the male group, the number employed is 30,939 against the sample male adult population of 30,049 showing an excess of 890 persons, obviously children. The latter figure of 890, it should be added, sets but the lower limit of children (persons below 15 years) gainfully employed because among the adult males, there will be a considerable number of persons who may not be employed due to illness, old age and other causes. In other words cent per cent employment of the adult male population should be ruled out. In the female population too, a significant proportion is accounted for by children who find winding a congenial occupation. These figures, giving an impression that all is well on the employment front in the handloom industry, are misleading. Because the real problem of employment is hidden behind this statistical facade.

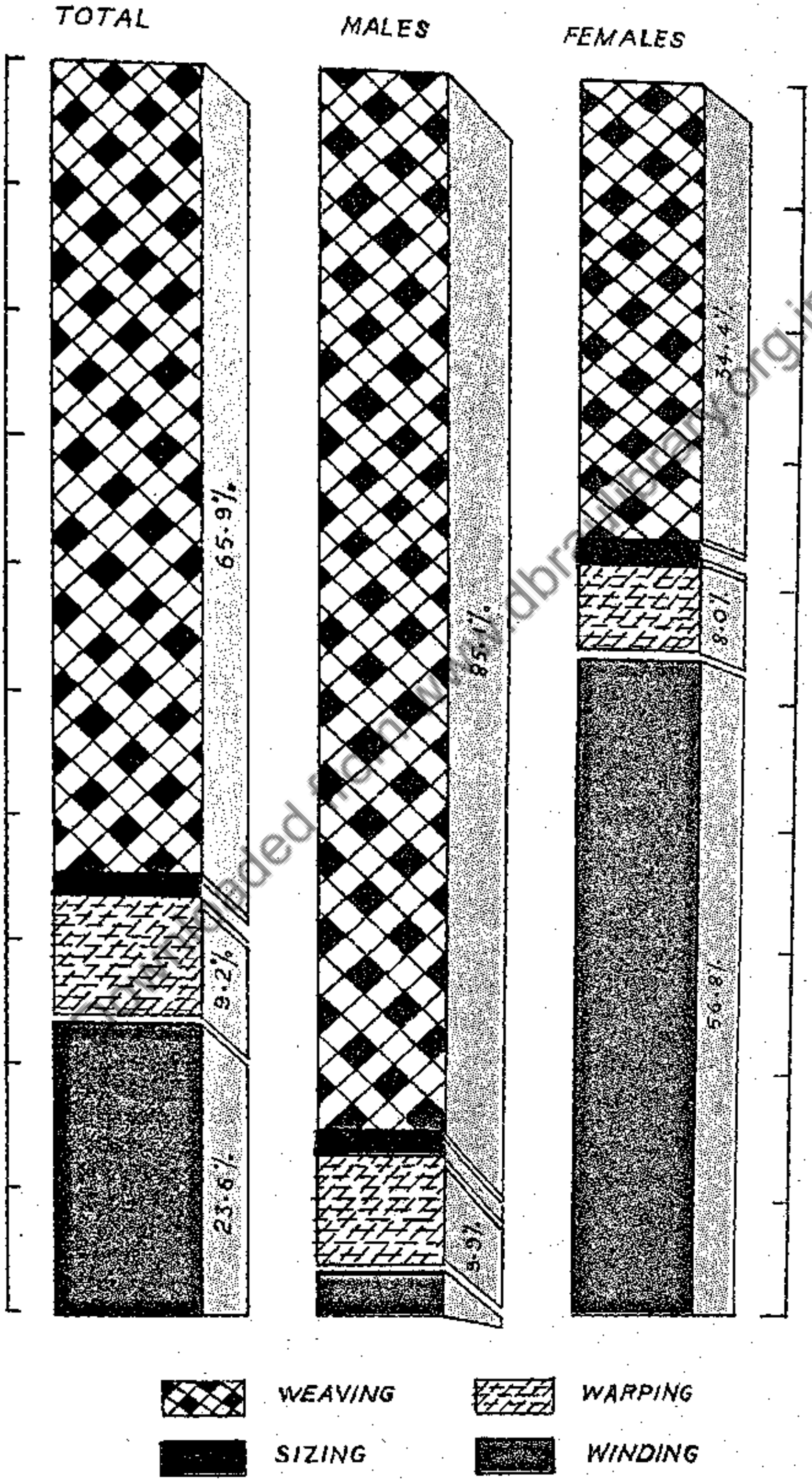
8.4. The data collected had necessarily to be incomplete due to time limit set for the completion of the enquiry which precluded further probing into employment data as also to the poor memory and/or general reluctance of respondents to fact a more searching enquiry. Consequently, information on the two vital aspects of (i) duration of employment and (ii) earnings per day of full employment are lacking. To make up for the statistical lacunae, we should turn to the knowledge of the actual situation, gained from practical observation during investigation and answers to the questionnaire, already referred to, used for an opinion survey. Among the persons reported to be engaged in the various activities, there is a large number, who are but nominally employed : all those who do winding, weaving or any other process even for an hour or two per day have gone to swell the number of employed in the respective processes. This kind of entry was made unavoidable because the respondents insisted upon being counted as workers for sentimental reasons, again there is also a basic justification for their claim. It was not possible to pause and go into the details of this facet and study the intensity or duration of employment of these persons and the earnings thereof per hour which calls for a separate enquiry. However the knowledge derived from observation and the opinion survey make it clear that the high level of employment shown in the above table is but apparent and not real. As wages are not paid separately for auxiliary activities like winding, warping and sizing, it is not possible to assess whether the earnings of those who have given them as their primary activities are adequate to enable them to maintain reasonable living standards. Above all the weavers would like to make it clear and it is generally true - that these auxiliary activities are under taken along with the main activities of weaving not on strict business considerations after estimating the man hours required and extra earnings possible but simply because there is plenty of idle labour available in every weaver's household. They also contend that if the idle hands could get more remunerative employment, they would never care to be employed in, these auxiliary processes. The position is then just like that in agriculture and the problem here too is one of under-employment the magnitude of which the present enquiry, concerned with the various facets of the industry, cannot undertake to measure. The higher percentage of self-supporting persons and earning dependents among the handloom population lends an impression of full employment being approached if not attained. As already stated, full employment loses its substance if it is not accompanied by adequate earnings for maintaining a resonable standard of living. Since the earnings of persons engaged in the auxiliary processes cannot be separately determined, the adequacy of the family pool of earnings will have to be examined in respect of the number of consumption units in it.

DISTRIBUTION OF WORKERS AMONG THE VARIOUS ACTIVITIES :

8.5. Provision was made for the collection of data for five types of activities. As there is little difference between bobbin and pirn winding, both of them are clubbed together

ACTIVITY STATUS

(DISTRIBUTION OF MALE AND FEMALE WORKERS)



to form one category of activity namely winding ; warping ; sizing and weaving form the next three activities. The fifth designated " others " include warp-joining, drawing-in etc. At the stage of analysis, the fifth category had to be droped as reliable data pertaining to it could not be collected. The data were subject to two types of processing and analysis : the first was designed to find out the proportion of labour time spent in each of them and the second the distribution of the sexes in these four activities. It is based on the answers given to the question as to the primary activity of the respondents. A summary of the statement (*Vide* page 85 giving the district-wise breakdown figures) high lighting the overall position in the State is given below :—

VIII-1. DISTRIBUTION OF MALE AND FEMALE WORKERS IN EACH ACTIVITY STATUS

Activity	Males		Females		Total	
	Number	Per cent	Number	Per cent	Number	Per cent
Winding	1,076	9·1	10,650	90·9	11,726	23·6
Warping	3,050	65·9	1,507	34·1	4,557	9·2
Sizing	496	77·9	140	22·1	636	1·3
Weaving	26,317	80·3	6,441	19·7	32,758	65·9
Total ..	30,939	62·2	18,738	37·8	49,677	100·0

8·6. Of the four activities, weaving, the primary occupation, provides the largest employment for 32,758 persons or 65·9 per cent of the total 49,677 gainfully employed persons. Next in importance is the auxiliary occupation of winding, employing 11,726 persons or 23·6 per cent, thirdly in warping are employed 4,557 persons or 9·2 per cent, lastly in the process of sizing are engaged 636 persons or 1·3 per cent. The extremely low percentage of persons engaged in sizing calls for some comments. It may be attributed to two factors. First it is common knowledge that warping and sizing are usually done simultaneously and the respondents might have given warping as their primary occupation ignoring the sizing they also do. The " home " weavers are psychologically inclined to view warping and sizing as a single occupation. In fact separate activity status for these two processes is a recent innovation created in the factory environment and by its new fangled specialisation. Consequently most of the home workers reported as warpers are also sizers. Thus the legitimate place of sizing in the weaving industry has got whittled down. Secondly communities like the Sourashtras do not undertake to do sizing operation themselves. They entrust it to certain other communities who have taken sizing as their sole occupation. They do not weave and have no looms. As the basic criterion of a sampling unit in the present survey is ownership of looms, these communities have fallen outside its scope. If they had also been covered to the appropriate extent concerning the sample of weavers the number of persons engaged in sizing would have appreciably increased. This point has to be borne in mind while looking at the low percentage of sizers in the above table. An incidential inference from the second factor is that sizing could be separated from the weaver's occupation without any prejudice to its efficiency. The percentage of persons engaged in sizing being of this character, for our purpose, warpers and sizers may be merged as belonging to a single actity status. The figures in the above table indicate that for 65·9 weavers there are 23·6 winders, and 10·5 " warpers and sizers ". From this it may be seen that for 100 man-hours of weaving, 35 man-hours of winding, and 16 man-hours of warping and sizing are required.

DISTRIBUTION ACCORDING TO SEX :—

8.7. The next point for consideration is whether there is a natural preference of the sexes for these different types of activities. Winding appears to be essentially a feminine occupation. Of the 11,726 persons employed in winding 10,650 or 90·9 per cent are females. Both bobbin and pirn winding are easy jobs involving very little physical strain. Hence the old and the weak among the males also attend to this work. But the special characteristic of winding is its monotony and the special talent required is patience, coupled with steady application. The process of winding could be stopped and resumed according to one's convenience or choice. For the women attending to their legitimate domestic duties this is a very convenient occupation. Whether it is remunerative for every hour of work put forth or truly congenial to the discharge of their legitimate duties as house-wives and working mothers calls for further consideration. In the ultimate analysis of the family pool of earnings, unless the share attributable to the hours of winding done is worthwhile, this work on the part of women and children of tender age could not be said to be free from the taint of sweating. (*Vide infra*).

8.8. In the case of warping 1,507 workers or 34:1 per cent of the total 4,557 are females. Apart from this percentage being smaller than in winding, women employed here are mostly assistants helping their men folk in the arduous task of warping. This investigation has not revealed any case of an entirely Amazonian team employed in warping. The most popular types is street warping which presents a spectacle of the noblest virtues of co-operation among the weavers living in a street or compact area. Several hours are spent in the open streets. Although the work is started in very early hours of the morning, workers have to stand and run about in the hot sun. When the Jacks rush from end to end of the warp beating and sizing the warp, the Jills are seen invariably tumbling after them. This kind of rough and hard work could not be wholly viewed as wholesome diversion from the long hours of their sedantary occupation. These sudden jerks of activity unevenly interspersed in the even tenor of their lives do have serious repercussions on their efficiency and output. Moreover street warping depends upon favourable sunny climate. Unexpected inclement weather will rule out street warping with its evil consequences upon weaving. Unwanted spells of unemployment thus mar the weaver's life. In view of these considerations it would be better to have central warping plants where warping could be done in fair as well as foul weather and unbroken supply of ready made warps guaranteed to the weavers, and the weavers allowed to concentrate on weaving, without any distraction. This is not a novel suggestion either, because most of the co-operative societies and master-weavers have already introduced the system of supplying ready made warps to the weavers. Our conclusion from the present study lends only a theoretical justification to a practice that has already gained wide ground.

FROM THE DISTRICT ANGLE :

8.9. The distribution of sexes in the various activities is not the same in all the districts. The relevant data are tabulated in the statement on the opposite page. Winders are cent per cent women in Tanjore, Coimbatore and South Kanara districts. The percentage of women winders is above the State average of 90·9 in all the districts except Salem with only 73 per cent. The strange situation of Salem in regard to winding done by a larger percentage of males may be due to the heterogenous communities who have flocked into the weaving occupation. The new-comers in large numbers might have taken to winding as a first step towards becoming weavers. This is confirmed by the lower percentage of 70·6 of the total number of gainfully employed persons reported to pursue weaving as their primary activity. Out of sympathy for the winders doing long hours of work oking out meagre earnings, it is sometimes suggested that the winders should be released from this low paid and therefore weated activity and trained to become full fledged weavers. An implementation of this

VIII–2. EMPLOYED PERSONS — PRIMARY ACTIVITY STATUS

District	Male	Female	Total	Per cent of 3 to 4	Male	Female	Total	Per cent of 6 to 8	Male	Female	Total	Per cent of 10 to 12	Male	Female	Total	Per cent of 14 to 16
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
Madras ..	37	534	571	93·5	454	12	466	97·0	..	..	..	..	470	13	483	97·3
Chingleput ..	226	2,330	2,556	91·1	79	18	97	79·0	1	..	1	100·0	4,289	76	4,365	98·3
South Arcot ..	49	488	537	90·8	1	19	20	5·0	1	1	2	50·0	835	46	881	94·8
North Arcot ..	19	881	900	97·2	1	..	1	100·0	..	..	..	..	2,000	51	2,051	97·5
Salem ..	342	926	1,268	73·0	2,351	1,251	3,602	65·0	350	102	452	77·4	7,059	2,938	9,997	70·6
Tiruchi ..	60	630	690	91·3	3	..	3	100·0	2	1	3	66·6	908	73	981	92·5
Tanjore ..	..	425	425	100·0	..	..	..	76·9	..	..	..	..	675	10	685	98·5
Mathurai ..	121	1,212	1,333	90·9	10	3	13	90·3	10	1	11	90·9	1,500	212	1,712	87·6
Ramanathapuram	67	867	934	92·9	28	3	31	100·0	16	..	16	100·0	2,370	1,130	3,500	67·7
Tirunelveli ..	76	1,067	1,143	93·3	2	..	2	100·0	40	..	40	100·0	2,782	1,028	3,810	73·0
Coimbatore ..	..	428	428	100·0	87	..	87	5·2	17	..	17	100·0	2,135	770	2,905	73·4
Malabar ..	79	777	856	90·7	11	201	212	100·0	59	35	94	62·7	1,197	37	1,234	97·0
South Kanara ..	..	85	85	100·0	23	..	23	..	..	..	..	..	97	57	154	62·9
Total ..	1,076	10,650	11,726	90·9	3,050	1,507	4,557	65·9	496	140	636	77·9	26,317	6,441	32,758	80·3

policy will increase the total number of weavers all too quickly and aggravate their problem in all respects. The appropriate policy in the present *miliue* of a phased reduction of the total number of handloom weavers for the introduction of power-looms would be not to provide any facilities for winders to transform themselves into a cavalcade of new weavers. At this stage, it may be added that the best way of improving the earnings of the weaver's household is not to increase the number of weavers plying their trade on miserably low wages but to increase the earnings of each weaver to such levels as to enable them to maintain their respective families in reasonable comfort.

8·10. With regard to warping the data for the districts of South Arcot, North Arcot, Tiruchirapalli, Tanjore, Mathurai, Ramanathapuram, Tirunelveli and South Kanara are not adequate to draw valid conclusions, although in the aggregate an adequate size of sample units has been obtained for the State. Among the other districts, Salem shows an employment of 3,602 persons in warping of whom 65·3 per cent are males. In Malabar there is a very low percentage of men employed in warping which it is feared could not be taken as a reliable index of the real position. The dominance of the factory system in this district renders a further probe into this question unnecessary.

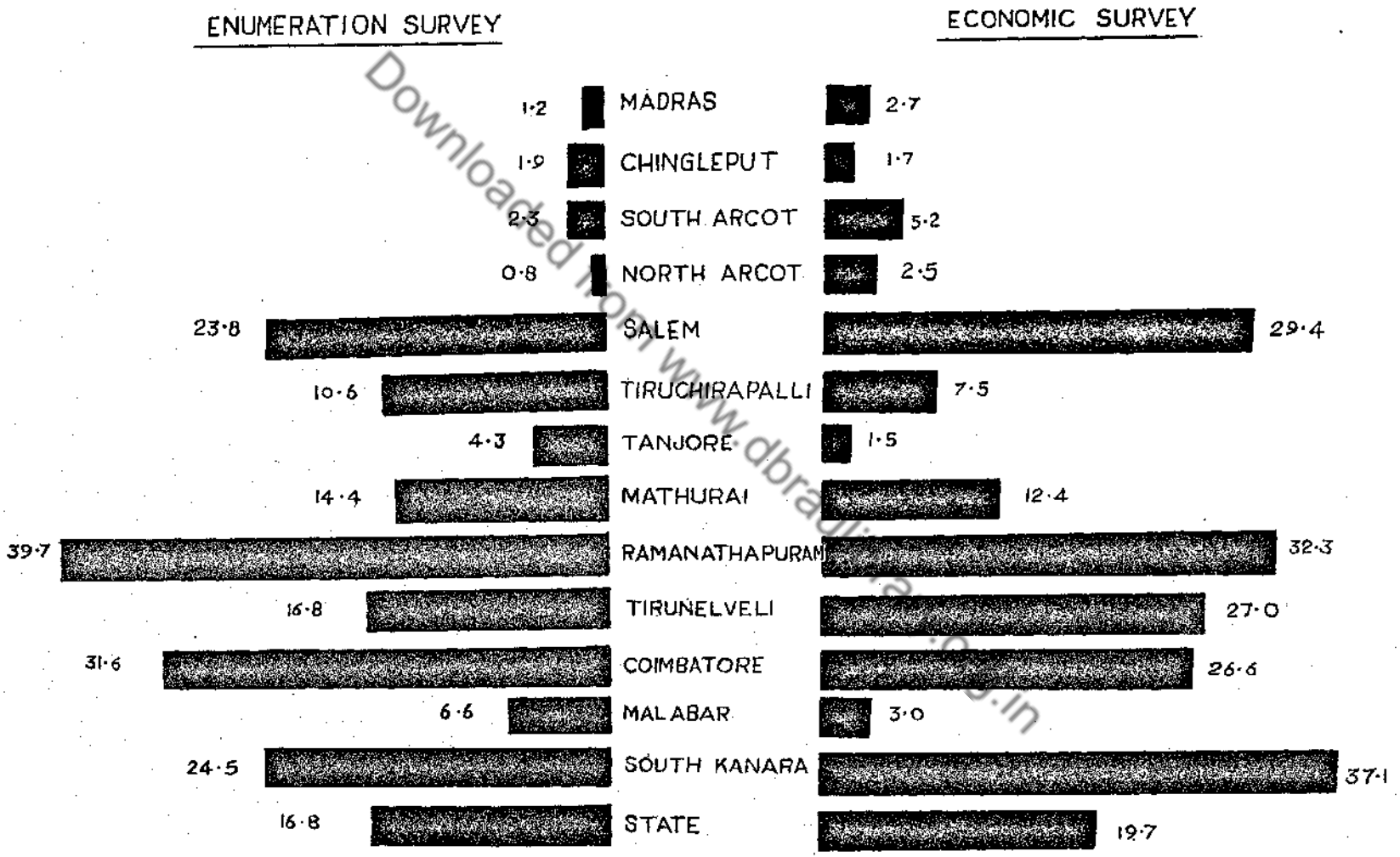
8·11. In weaving, the data collected for the present Economic Survey tend to confirm the findings of the Enumeration Survey. Of the total number of 32,758 persons recorded as engaged in weaving as the primary activity, 6,441 or 19·7 per cent are females. The percentage of women with weaving as primary activity varies from district to district. It will be of interest to compare in this respect the findings of this Economic Survey with those of the Enumeration Survey (*Vide* Table below). :—

VIII-3. PERCENTAGE OF FEMALE WEAVERS TO TOTAL

	District	Enumeration Survey	Economic Survey
1.	Madras	1·2	2·7
2.	Chingleput	1·9	1·7
3.	South Arcot	2·3	5·2
4.	North Arcot	0·8	2·5
5.	Salem	23·8	29·4
6.	Tiruchirapalli	10·6	7·5
7.	Tanjore	4·3	1·6
8.	Mathurai	14·4	12·4
9.	Ramanathapuram	39·7	32·3
10.	Tirunelveli	16·8	27·0
11.	Coimbatore	31·6	26·6
12.	Malabar	6·6	3·0
13.	South Kanara	24·5	37·1
	STATE ..	16·8	19·7

8·12. There is a remarkable coincidence in these two series of percentages. Once again we find that in Ramanathapuram district women weavers are in relatively largest proportion. As already stated no immediate release of women from weaving activity will be possible if the targets of handloom production fixed in the Second Five Year Plan should be realised. However in long term planning for the handloom industry based on the proposal of introducing powerlooms, suitable arrangements will have to be made to relieve women first from weaving which would be in conformity with the principle of progressive realisation of a Welfare State.

PERCENTAGE OF FEMALE WEAVERS



8·13. All the foregoing considerations relate to primary activity covering 49,677 gainfully employed persons. A noteworthy characteristic of the handloom labour force is its dual or multiple activity status. A considerable number of this total labour force has been found in other activities as well depending upon yarn and warp supply, weather condition, health and inclination of the weavers. This kind of flexible disposition of labour time among the various activities is rendered possible because of the ability of most of the members to do most of the processes. Of the 49,677 employed persons, 14,533 or 29·3 per cent have given multiple activity status. It means they are switching on from one process to another from time to time. Of the 30,939 employed males, 11,140 or 36·0 per cent and of the 18,738 females, 3,393 or 18·1 per cent are recorded as having multiple activity status. (*Vide* statement on page reverse). Data collected during the investigation indicate also the second, third and fourth important activities in which they are engaged from time to time. The distribution of these workers in the various districts according to the priority of activities is shown in Appendix. These data underline one important point. A large section of the labour force in the handloom industry is distributing its disposable labour time in an unmethodical fashion, dictated by circumstances over which it has no control. This naturally results in a lower order of efficiency. The primary cause for this dissipation is lack of continuous supply of warp. Even if this cause alone is eliminated it will be highly conducive to step up efficiency.

CONCLUSION :

8·14. The data of the Economic Survey indicate a high proportion of employment among the weaving population. It is 55·3 per cent compared with 31 per cent in the whole population of Madras State. This is however an exaggerated picture of the stuation in view of the low levels of employment attained by women winders and the aged and weak men engaged in auxiliary activities. The real test of full employment is the volume of earnings about which no definite statement can be made at this stage.

8·15. Due to dual or multiple activity status of the bulk of the weaving population, all the individuals except tiny tots and the decrepit with age and infirmities are reckoned as being employed. But viewed in terms of earnings, employment in most cases is of a very insignificant order. More than 50 per cent of the employed women are engaged in winding, earnings of which are extremely low and not free from the taint of sweating although it is in many respects a spare time occupation.

8·16. Warping and sizing form a combined process which is done in certain cases by persons belonging to non-weaving communities. This offers a proof in support to the argument that warping and sizing could be done in centralised institutions enabling weavers to devote all their time to weaving, the most highly remunerative among the processes in the handloom industry. Women are also employed in sizing but it is the least congenial occupation for them. As women are engaged in active weaving in considerable numbers, they will have to continue for the time being to fulfil the targets of the Plan. But weaving is too hard a job for women. In implementing the proposal of introducing powerlooms, a staggered reduction in the number of handloom weavers is called for. This may well begin with women weavers.

8·17. The analysis of the disposable labour time of the weaving population most of whom are enjoying dual or multiple activity status leads to the conclusion that there is a need for a great deal of rationalisation. This could be effected by establishing centralised all-weather warping and sizing units to serve compact areas, capable of producing warps of required length and width. Women should be progressively weaned away from weaving and weavers enabled to concentrate upon weaving alone.

VIII–4. OCCUPATIONAL RANKING II, III & IV
EMPLOYED PERSONS)

District	Winding			Warping			Sizing			Weaving		
	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total
Madras ..	37	534	571	454	12	466	..	..	..	470	13	483
Chingleput ..	334	63	397	3,426	80	3,506	283	3	286	..	..	..
South Arcot ..	141	32	176	142	117	206	17	55	72	17	2	19
North Arcot ..	..	..	..	..	..	..	..	..	..	..	..	..
Salem	..	..	..	..	..	..	..	..	..	..	..	..
Tiruchirapalli ..	10	19	29	158	27	185	182	2	184	3	10	13
Tanjore ..	137	..	137	..	..	..	..	..	..	..	..	..
Mathurai ..	..	..	..	..	..	..	..	..	..	..	..	..
Ramanathapuram	..	..	..	..	..	..	..	..	..	..	..	..
Tirunelveli ..	..	..	..	..	..	..	..	..	..	..	..	..
Coimbatore ..	395	90	485	3,374	1,256	4,630	282	..	282	..	..	..
Malabar ..	147	293	440	541	752	1,293	402	33	435	..	..	..
South Kanara ..	51	..	51	137	..	137	..	..	..	..	..	..
STATE ..	1,252	1,031	2,283	8,232	2,244	10,476	1,166	93	1,259	490	25	515

CHAPTER IX

HANDLOOM FINANCE

9.1. The problem of finance in the handloom industry has scarcely received the attention it deserves. The argument that handloom industry is labour-intensive, advanced *ad nauseum* to further the cause of employment has unwittingly contributed to be little its needs of finance. It is no doubt true that finance required for fixed capital consisting of the handloom and other appurtenances is small, usually less than Rs. 100. But the finance required for working capital for the purchase of yarn, and other requisites is of the same order as in the mill sector and that amount of capital is required every month, a fact which renders it a disproportionately heavy burden on the handloom weaver. Thus the problem of financing the handloom weaver for his working capital assumes major significance. It is analogous to financing of agriculture but with one cardinal difference. The ryot wants finance once or twice in a year according to the number of crops but the weaver wants it every month and twelve times in a year. Both the ryot and the weaver have depended for too long and too much on individual financiers, the village money lender on the one hand and the master-weaver on the other. The plight of both is sought to be relieved by a progressive widening of co-operative finance. None can dispute that the policy is impeccable nor that the achievement is yet extremely incommensurate to the enormous and ever soaring needs.

Need for a Factual Basis for Estimating Working Capital :

9.2. The urgency for providing the handloom weaver with working capital has of late been recognised and some measures have already been taken. All this has been done in response to the general demands of weavers expressed time and again. It is essentially an intuitive approach. No comprehensive effort has ever been made to make a firm estimate of the weavers' requirements and the financial commitments which are implied on the part of Government, Co-operative Societies and other agencies. In order to provide a factual basis for such estimates to be made, Schedule III was provided for the collection of relevant data. From experience it was found that most of the weavers are so extremely indigent as to need finance not only for business but also for subsistence. At the same time there are also weavers who depend upon their own resources, fully or partly, for working the looms. Bearing these two points in mind the schedule was so constructed as to collect data regarding finance. The purposes for which finance may be required were classified into five groups *viz.*, (i) Purchase of looms and other items of fixed capital ; (ii) Purchase of Yarn ; (iii) Purchase of other raw materials ; (iv) Sale of finished goods and (v) Subsistence. Further the sources of finance are classified into four groups :— (i) Own resources ; (ii) Co-operatives ; (iii) Banks and (iv) Money lenders or Master weavers. The analysis of the data collected with the help of this schedule forms the main theme of this Chapter.

Response Factor :

9.3. During the field investigation the collection of data for the schedule III was found to be a little more difficult than for any other. This was due to two reasons. Firstly, a large number of weavers depended on Co-operative societies and master-weavers for the supply of warps. The impact of the burden of financing the purchase of yarn was not directly felt by them. Although most of the respondents were in a position to evaluate the working capital needed, several lacked this ability. Secondly, in the case of some households the respondents showed a high degree of reluctance to furnish these data. In their case the response was poor. Even where response was good and ability appeared to be satisfactory, later screening of the data in some cases revealed incongruities making

them suspect. Such cases had to be rejected for purposes of analysis. Due to these circumstances, the analysis had to be based upon the data relating to a lesser number of households than the sample of 17,990 covered. Nor was this short fall in the number of valid schedules uniform in respect of the various purposes for which finance is needed. The actual number of household schedules utilised in each case is given in the appropriate place.

FINANCIAL NEEDS OF WEAVERS :

9·4. In respect of the number of schedules used for analysing the total expenditure per month incurred on particular items, the amount and percentage of loan raised for each purpose are given in the statement on the opposite page. In this statement loans are distinguished from expenditure incurred out of own resources. In respect of finance for subsistence, the number of schedules processed is 15,744 or 87·5 per cent of the total sample. The total expenditure for subsistence incurred by them amounted to Rs. 12,74,462 per month. This works out to Rs. 80·9 per household of which Rs. 48·8 or about 60 per cent is met from weaver's own resources and Rs. 32·1 or 40 per cent from loans. The number of valid schedules collected regarding expenditure on yarn is Rs. 12,402 or 68·9 per cent of the sample households. The total expenditure on yarn incurred by these households amounted to Rs. 20,49,012. The average expenditure on yarn per household is Rs. 165·2 of which 28 per cent is met from own resources and 72 per cent from borrowings. For other requisites 6,914 households or 38·4 per cent of the sample incurred an expenditure of Rs. 1,60,288. The average expenditure on other requisites per household is Rs. 23·1 of which 74·4 per cent was derived from own resources and 25·6 per cent from loans. Expenditure on marketing the products was furnished by 3,161 households or 17·5 per cent of the sample. Incidentally this low percentage throws light on the small number of weavers who did direct marketing of their goods. The average expenditure on marketing per household is Rs. 6·3 almost the whole of which is financed out of own resources, a mere 3 per cent figuring out as derived from loans.

INDEBTEDNESS OF WEAVERS :

9·5. The above data lead to certain conclusions regarding the indebtedness of weavers. Per household the total financial requirements are estimated to be Rs. 275·5 of which Rs. 80·9 are for subsistence and Rs. 194·6 for business. As the weaver is able to provide for his business about 33·5 per cent of his requirements, a weaver's household is generally indebted to the extent of Rs. 126 for the purpose of pursuing his occupation. This is in fact loan raised for productive purposes and should not weigh heavily on him if he is diligent and careful. For subsistence, weavers ' households require on an average Rs. 80·9 which under present circumstances of food and other prices cannot be deemed extravagant. Indeed it is the barest minimum required for maintaining his household above primary want. With Rs. 80·9 the weaver's household should be maintaining rather a low standard of living even from which the average indebtedness per household amounts to Rs. 32. Obviously the family occupation provides him only the balance of Rs. 48·9. This debt incurred for subsistence is in the orthodox sense unproductive and undoubtedly dead weight. The existence of this debt is really a running sore. This could be healed up only two ways. Either the household should reduce its expenditure on subsistence to this extent which would certainly jeopardise its health and efficiency. Or it should increase its earnings which implies more employment at prevailing wages or higher wages for prevailing employment.

REQUIREMENTS FOR BUSINESS :

9·6. The above data highlight two points : (i) loan finance features less in regard to subsistence and more in regard to business and it cannot be otherwise because lending agencies usually fight shy of giving credit for consumption expenditure ; (ii) the requirements

IX–1. STATEMENT SHOWING THE EXPENDITURE INCURRED BY THE WEAVERS ON SUBSISTENCE AND WORKING CAPITAL

Purpose	Total Number of Households	Number of Households furnished reliable data	Per cent 3 to 4	Total Expenditure incurred	Average per Household	Own resources	Average	Others	Average
1	2	3	4	5	6	7	8	9	10
Subsistence ..	17,990	15,744	87·5	12,74,462	80·9	7,68,485	48·8	5,05,977	32·1
Yarn	17,990	12,402	68·9	20,49,012	165·2	5,80,806	..	14,68,206	118·4
Other requisites ..	17,990	6,914	38·4	1,60,288	23·1	1,19,521	17·2	40,767	5·9
Marketing ..	17,990	3,161	17·5	20,079	6·3	19,540	6·1	539	0·2

of business finance are relatively larger. Per household, the total finance required for yarn, other requisites and marketing would work out to Rs. 194·6 per month. As the average number of looms per household is 2·7, the working capital required for operating one loom works out to Rs. 72. From investigation it is found that a weaver has to keep adequate yarn for three warps, — one on the beam, one in the winding process and one in the warping stage. On the basis of an average of 20 yards warp length, the cost of yarn for these three warps, assuming fabrics to be of normal width, will be about Rs. 60. This analysis indicates that the " business finance " requirements of Rs. 72 as revealed by the above data are not wide of the mark. Working then on the basis of Rs. 72 per loom, the total number of 4,79,444 looms in Madras State is estimated to require a working capital of the order of Rs. 345 lakhs per month. Applying the percentage of 65 of loan finance derived from the foregoing analysis, the handloom industry requires business finance to the tune of Rs. 225 lakhs from external agencies, the balance, Rs. 120 lakhs, being the share of self-financing by the weavers themselves. To this should be added the finance required for subsistence at the rate of Rs. 80·9 per household, *viz.*, Rs. 145·8 lakhs of which Rs. 58·3 lakhs are from loans and Rs. 87·5 lakhs from own resources. These data may be tabulated as follows :—

IX–2. FINANCIAL REQUIREMENTS OF THE WEAVING COMMUNITY PER MONTH

(*Rupees in Lakhs*)

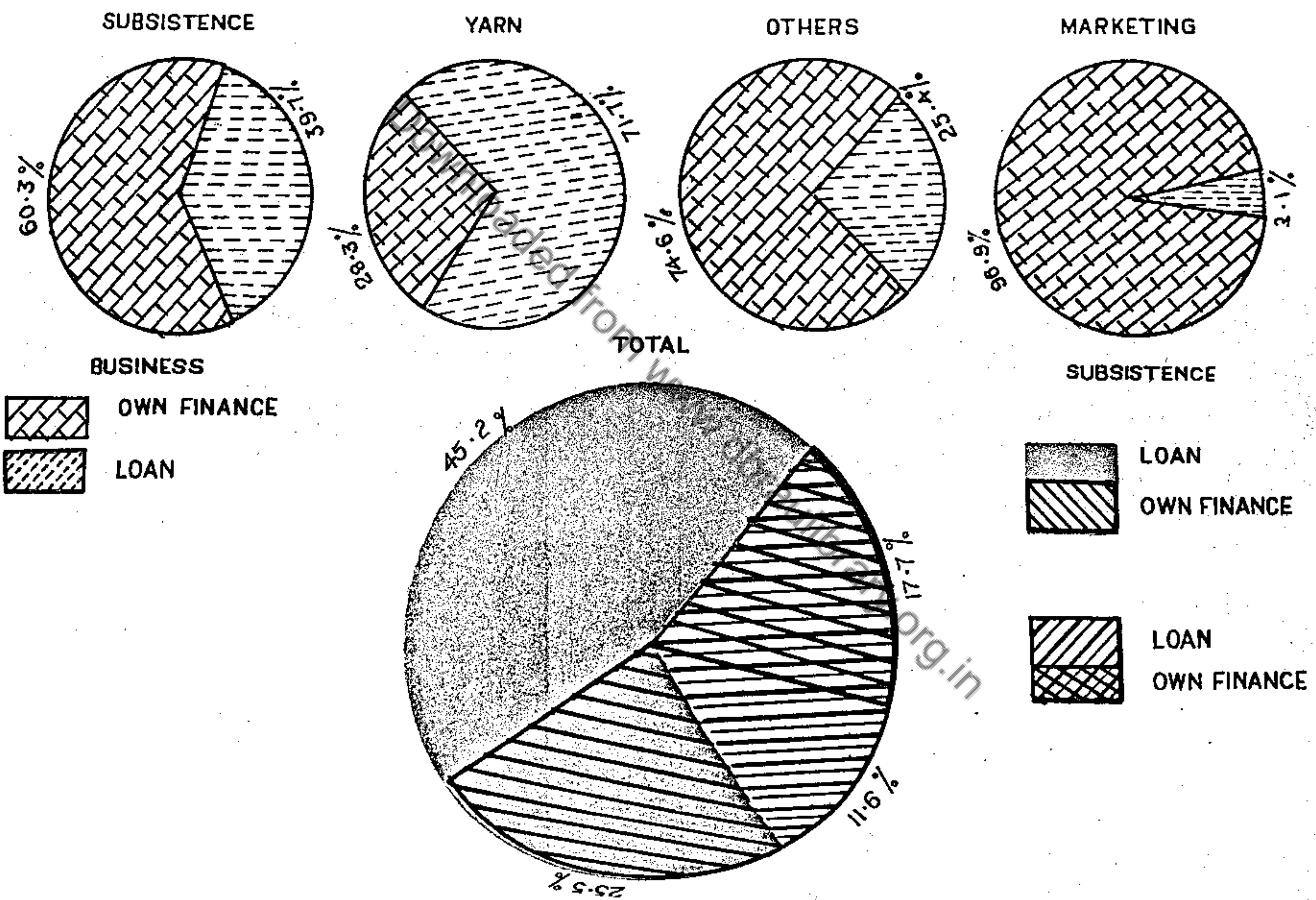
Purpose	Loan finance	Self finance	Total
Business ..	225	120	345
Subsistence ..	58	88	146
Total ..	283	208	491

The overall financial requirements of the weaving community thus work out to Rs. 491 lakhs per month of which Rs. 345 lakhs is for business and 146 lakhs for subsistence. Of this total Rs. 283 lakhs is loan finance and Rs. 208 lakhs self finance.

SOURCES OF FINANCE :

9·7. The next question is how this magnitude of finance every month is obtained by the weavers. It has been seen that weaver's own resources account for Rs. 208 lakhs in the aggregate for all the five purposes, namely the purchase of looms, yarn and other requisites, sale of finished goods and subsistence. At present the sources of finance which the weaver can tap are four. First is the ubiquitous money lender who takes several avatars according to the occupation for which he is the purveyor of finance. In the handloom industry master-weaver is this avatar. To him most of the weavers turn and from him the bulk of the credit is successfully secured. Like this confrere in agriculture, he is no stickler insisting upon securities or formal documents. A shrewd judge of his clientele, with encyclopaedic knowledge of their history, activities and financial conditions, he does his business in a manner pleasing to his borrowers. He is not a mere money lender. He is a a capitalist-weaver as well and his exact counter-part in agriculture is the land-lord-money lender. But with regard to this type of financier there is one difference between agriculture and handloom weaving. Whereas land-lord-banias are few and far between, master weaver-cum-money lenders abound. The third source of finance is the recently expanding co-operative agency. Its method of business, despite theoretical professions of prompt mutual help, is in practice clogged by several formalities. In recent years these drawbacks as also delays are being progressively eliminated, thanks to the liberal allotments from the All India Handloom Board and State Governments. The fourth and the last agency for credit is the commercial joint stock bank, whose business methods have not yet become familiar to the weavers. Yet there are some cases of borrowings from such banks. In the succeeding paragraphs an attempt is made to present the pattern of finance as revealed by the data for each of the five purposes from these four agencies besides self-finance.

SOURCE OF FINANCE FOR SUBSISTENCE AND BUSINESS



LOANS FOR SUBSISTENCE :

9·8. As already pointed out, an expenditure of Rs. 12,74,462 for subsistence has been incurred by 15,744 households. Of this Rs. 7,68,665 or 60·0 per cent has been met from weavers' own resources and 5,05,797 or 40 per cent by borrowings from the various lending agencies. This loan has been raised from various agencies the details of which are given in the table below :—

IX-3.

Source	Amount Rs.	Per cent to total	Per Household
1. Moneylenders	2,26,872	44·9	14·41
2. Master Weavers	2,21,846	43·9	14·09
3. Co-operative Societies	45,432	9·0	2·88
4. Commercial Banks	9,692	2·0	0·62
5. Exporters	1,955	0·2	0·12
Total ..	5,05,797	100·0	32·12

The most important among the various agencies supplying credit to weavers for subsistence is the money-lender accounting for 44·9 per cent of the total loan finance. Next in order of importance is the master weaver accounting for 43·9 per cent. Co-operative Societies contribute about 9 per cent, Commercial Banks 2 per cent and Exporters 0·2 per cent. It is noteworthy that the bulk of the total loan finance raised for subsistence by the weavers amounting to 88·8 per cent is derived from either money-lenders or master weavers.

YARN :

9·9. The total expenditure incurred on purchase of yarn by 12,402 households amounts to Rs. 20,49,012 of which Rs. 5,80,806 or 40 per cent is met from own resources while the balance of 60 per cent is made up of loans raised from other sources. The share of the various agencies advancing loans to weavers for the purchase of yarn is shown below :—

IX–4.

Source	Amount in Rs.	Per cent to total
Master weavers	6,09,699	41·6
Exporters and Yarn Dealers	4,82,877	32·8
Co-operative Societies	3,32,263	22·7
Money Lenders	35,784	2·4
Khadi Society	7,583	0·5
Total ..	14,68,206	100·0

In the sphere of financing the weaver for the purchase of yarn, master weavers dominate with 41·6 per cent of the total loans raised, followed by " exporters and yarn dealers " accounting for 32·8 per cent and co-operatives 22·7 per cent. The share of the general money lenders is 2·4 per cent and that of the " Khadi society " is 0·5 per cent. So far co-operatives have gone to the rescue of the weavers in this sphere only upto about one-fifth of the total requirements.

OTHER REQUISITES :

9·10. Besides cotton yarn, weaver has to buy other requisites like dobby, lace, art silk etc. The amount spent on the purchase of other requisites by 6,914 households was Rs. 1,60,288. Major part of this, 74·6 per cent is derived from own resources and the balance of Rs. 40,767 or 25·4 from advances by other agencies.

The amounts advanced by these agencies for the purchase of other requisites are given below :—

IX–5. ADVANCES FOR THE PURCHASE OF OTHER REQUISITES

Source	Amount Rs.	Per cent to total
Exporters and Yarn Dealers	32,998	80·9
Money Lenders	3,332	8·1
Master Weavers	2,511	6·1
Co-operative Societies	1,926	4·9
Total ..	40,767	100·0

The weavers have obtained more than four-fifths of their credit for the purchase of other requisites from the Exporters, and less than one-twelfth from Money lenders, one-sixteenth from Master weavers and one-twentieth from Co-operatives.

MARKETING :

9·11. The total expenditure incurred by 3,161 households towards the sale of finished goods amounts to Rs. 20,079 of which Rs. 19,540 or 97·3 per cent is met out of own resources and the rest from advances by the lending agencies :—

IX–6. LOANS FOR MARKETING

Source	Amount Rs.	Per cent to total
Money Lenders	271	50·2
Exporters and Yarn Dealers	221	41·0
Master Weavers	37	6·8
Co-operative Societies	10	2·0
Total ..	539	100·0

The money lender figures significantly in this sphere, his share being 50·2 per cent, followed by exporters ; yarn dealers account for 41·0 per cent, master weavers 6·8 per cent and Co-operative 2·0 per cent.

THE ROLE OF LENDING AGENCIES :

9·12. The foregoing paragraphs show the shares of the various lending agencies besides "own finance" for each one of the five purposes for which weaver needs credit. As the size of the sample households utilised widely varied as between different purposes, a separate analysis is called for to gain a full view of the role of the various agencies in the realm

of handloom finance. To this end the average amounts of loan taken by a household in addition to self-financing for all the five purposes are worked out below :—

IX-7. SOURCE OF FINANCE FOR BUSINESS AND SUBSISTENCE

Purpose	Total Expenditure	Own	Loan Total	Master Weaver	Money Lender	Export Dealers	Co-operatives	Banks
Subsistence ..	80·94	48·82	32·12	14·09	14·41	0·12	2·88	0·62
Yarn	165·20	46·83	118·37	49·16	2·88	38·93	26·79	0·61
Others	23·17	17·29	5·88	0·36	0·48	4·77	0·27	..
Marketing ..	6·35	6·19	0·16	0·01	0·08	0·07	..	..
Total ..	275·66	119·13	156·53	63·62	17·85	43·89	29·94	1·23
Percentage ..	100·0	43·2	56·8	23·1	6·5	15·9	10·9	0·4

9·13. It may be seen from the above table that the total expenditure on all items is Rs. 275·66 per household. For the estimated number of 180,000 weavers' households in the State, the aggregate amount of finance required, computed at this rate of Rs. 275·66 will be Rs. 495 lakhs. In whichever way the data may be analysed, the Handloom Industry in Madras State appears to be in need of a revolving capital of Rs. 490 to 495 lakhs per month. From these figures the problem and magnitude of handloom finance could well be appreciated. The pattern of loan and own finance could be deduced from the figures in the above table. It is remarkable that own finance for expenditure, for subsistence as well as business accounts for 43·1 per cent. This constitutes the largest share of the total requirements, indicating that the financial situation of the handloom weavers is not so desperate as it is commonly imagined. This is indeed a heartening situation. The role of the master weavers is no doubt highly significant, their share of financing being 23·07 per cent ; they are followed by their next of kin, " Exporters and Yarn Dealers " providing 15·92 per cent of the total finance. The third species of this large genus of private financiers is composed of " Money Lenders " who are found to finance to the extent of 6·47 per cent. All these three agencies together provide finance to the tune of 43·46 per cent. The place of co-operatives is far down in the scale and its share is 10·86 per cent only. Lastly the Banks including the " Khadi Society " make a meagre contribution of 0·47 per cent. This pattern leads to two conclusions : (1) The co-operative societies have much leeway to make up ; (2) the role of the commercial banks is extremely insignificant and in the near future, there is very little likelihood of banks replacing private financiers. Now that the co-operative societies have made a fairly good start and are gaining momentum, the major responsibility of coming to the rescue of the weavers falls squarely on them.

9·14. Co-operative finance has always been confronted by a heated controversy as to the propriety of providing finance for subsistence. Of late it is being increasingly recognised that subsistence is no less important than business, because to work, one should first subsist. If in the agricultural sector, poor ryots are sometimes forced to eat up the seeds to keep the wolf from the door, the weavers are frequently driven to effect distress sales of their yarn to avoid starvation. The system of controlled credit, despite all its vigilance and follow-up programme, cannot stop a starving weaver from mortgaging his yarn for a mess of pottage. This argues the necessity for providing subsistence finance at least in distressing circumstances. In that case the amount of finance that co-operatives should provide should be increased to 54 per cent of the total requirements from the present 10·86 per cent or more than five fold, should the three private financing agencies be eliminated. Unless this is made the chief plank, no programme of rehabilitation of the handloom industry would ever succeed. The urgency for co-operative finance is thus clearly established. It will become more evident on a careful examination of the interest burden of loan finance on the weavers.

RATES OF INTEREST :

9·15. The usurious rates of interest, to which the handloom weavers are subject, are no less serious than the agriculturists. But they are hidden from view by the complicated system of money lending devised by the master weavers and their ilk. In their lending operations liquid cash does play no mean part but its role is heavily overshadowed by the provision of warps to which is tagged on onerous conditions relating to the sale of cloth woven. The indebted weavers are placed under an obligation to sell it to the master weaver creditors at prices invariably favourable to the latter. It is not easy to evaluate the incidence of interest rates on the profit margins of weaving. Frequently the heavy interest rates actually charged are blurred from view by the ingenious device of fixing wages much below the normal. The extent to which wages are reduced varies according to the magnitude of unemployment real or potential, faced by the weavers. In this baffling situation it was not found possible to collect data regarding the real rates of interests extracted by the master weavers. However, circumstantial evidence of the high rates of interest levied by master weavers is available from the rates charged by money lenders, the breed among the private financiers. Relevant data of interest rates in respect of the latter are given in the table No. IX-8. as shown below. These rates are not uniform in all the districts. Nor are they the seme for all borrowers in the same district. It varies from 30 to 40 per cent at Vellankuli and Pudiamputtur from 25 to 30 per cent at Pudur in Tirunelveli district. At Meenakshipettai in South Arcot and at Palayamkotai in Tirunelveli district rates of interest vary from 15 to 30 per cent. In other districts they are a little ower yet they are much higher than those charged by institutional agencies.

IX-8. RATES OF INTEREST CHARGED BY LENDING AGENCIES IN DIFFERENT CENTRES

Centre	District	Money lender	Master weaver	Bank	Co-operatives
Pudur	Tirunelveli	25 to 30	..	6·5	6·25
Vellanguli	,,	30 to 40	..	6·5	6·25
Pudimamputtur ..	,,	,,	..	6·5	6·25
Palayamkottai ..	,,	15 to 30	..	6·5	..
Mathurai	Mathurai	6 to 18	..	..	..
Karaikudi	Ramnad	10	..	..	..
Kallursandai ..	,,	12·5	..	..	..
Arupukottai ..	,,	6 to 12	..	..	..
Kumbakonam ..	Tanjore	10	6·25	..	..
Tholasampatti ..	Salem	12 to 20	8 to 16	..	..
Meenaxipettai ..	South Arcot	15 to 30	..	7·5	6·25
Mangalore	South Kanara	25	8	..	..
Chirakal	Malabar	7 to 12	..	..	..
Tellicherry	,,	6 to 22	..	..	..
Payyanur	,,	7 to 18	..	6·5	..
Kollegal	Coimbatore	10 to 15	..	7	..
Darapuram	,,	10	..	..	..
Kangayam	,,	8 to 10	..	..	..
Tirpur	,,	12 to 20	12 to 16	..	6·25

9.16. It may be seen from the table that commercial banks and Co-operatives charge lower rates of interest. As between these two the rates of the former varies from 6·5 to 7·5 per cent. It is the co-operatives which charge the lowest interest of 6¼ per cent. Although the difference between banks and co-operatives is not very great, the former play a very insignificant part and are also new to this kind of work. Their scope of operations covers all commercial and industrial activities. Handloom industry is but one in a multitude of clientele and not much of a favourite either, because the poor handloom weavers are the least credit worthy in the eyes of these banks. It is in this context that the co-operative agency assumes major significance. Specially designed to help the weavers, its responsibilities are as direct as they are significant. At present the Handloom Production and Sales Societies whose ostensible function is handloom financing have confined their operations to regular provision of warps and payment of wages for weaving them. In a few centres they offer wages in advance also in highly distressing situations. The only example of cash loan granted by these societies is the occasional advance upto Rs. 50 or less made on the eve of Deepavali or Pongal in a discriminating fashion to a select few. Loans for subsistence are conspicuously absent. The rules and regulations of the Co-operative Department and the bye laws of the societies forbid them from undertaking all the responsibilities associated with full financing of the weaver not excluding that for subsistence. Consequently these co-operative production and sales societies have tended to occupy no better than a mid-position between master weavers and commercial banks. Incomplete financing is fraught with greater dangers than no finance. If it were a case of "no finance" it will be an ideal example of laissez-faire and laissezaller in which the strongest of the weavers will thrive and the weakest will go to the wall. It will make short shrift of the superfluous weavers and perhaps tone up the industry quickly albeit cruelly. In the case of incomplete finance, the weak are not allowed to perish, they survive only to be wretched, with ebbing vitality and vanishing moral. Most of the weavers will approach these societies for whatever loans that could be got, seeking and getting at the same time more loans from elsewhere. Such a predicament lays the axe at the root of loyalty and genuine co-operation is turned into a mockery. Hence there is an urgent need for amply widening the scope and functions of the Co-operative Societies, enlarging their responsibilities with regard to the business and the subsistence of the weavers and making them function truly as friend, philosopher, guide and full financier as well.

CONCLUSIONS :

9.17. The financial requirements of the weaving community in Madras State are estimated at Rs. 491 lakhs per month of which Rs. 208 lakhs are self financed and the balance of Rs. 283 lakhs is derived from lending agencies.

9.18. Per household the total financial requirements are estimated to be Rs. 275·5 of which Rs. 80·9 are for subsistence and Rs. 194·6 for business. The average borrowings for subsistence amount to Rs. 32·1 per household or 40 per cent of the total. Loans for business purposes amount to Rs. 124·4 per month. Of this business loan a major part consisting of Rs. 118·4 is utilised to purchase yarn.

9.19. Among the five important lending agencies master weavers provide 40·6 per cent, money lenders 11·4 per cent, exporters 28·1 per cent, Co-operative Societies 19·1 per cent and commercial banks 0·8 per cent.

9.20. Co-operative Societies have a heavy responsibility in the realm of financing. They have to enlarge their operations nearly five fold. They should not hesitate to help the weavers with loans for subsistence. Otherwise master weavers would continue to play a dominant part in handloom finance.

CHAPTER X

HANDLOOM FABRICS -- COST OF PRODUCTION

Problem Indicated :

10·1. It cannot be gainsaid that the handloom fabrics are costlier than mill cloth. The overwhelming superiority in technical efficiency and the massive scale of production of the latter are obviously the factors contributing to their relative cheapness. If handloom and mill cloth are permitted to compete freely with each other, several types of handloom fabrics will be placed at a serious disadvantage. As stated earlier, there are of course some fabrics like the silk sarees and choli pieces, Gundanju and Bavanju dhoties and coloured sarees of medium yarn which belong to a non-competitive group enjoying a well defined market stemming from well settled consumer preferences. But with regard to a multitude of other fabrics competition between the handloom and the mill is acute. It is in this area of competition that more handlooms operate and more handloom goods are produced rendering the employment and well being of the majority of the handloom weavers precarious and problematic. It is to fortify their position that Government have intervened, providing rebates on sales of handloom cloth in addition to excise duties on mill cloth. But this twin mechanism can hardly be perpetuated. Designed as a temporary measure, its removal is a question of time, depending on the quickness with which the handloom industry gains fillip and strength. Rebates and cesses by themselves cannot reduce costs of production of handloom fabrics. The various components of cost structure in the production of handloom cloth need a careful investigation with a view to discovering the ultimate causes responsible for the higher cost of handloom cloth. This kind of investigation should have two objectives :(1) what are the causes inherent in the handloom set up that induce a higher cost for its product ? (2) what are the causes extraneous to the industry that push up the cost of handloom cloth ? With those objectives in mind, schedule V was devised to collect relevant data which are analysed in the present Chapter.

Analysis confined to Representative Fabrics :

10·2. An analysis of the cost structure is rendered a formidable adventure in view of the innumerable and bewildering varieties of fabrics handloom is capable of producing. It is easy to theoretically list the components of the total cost as consisting of cost of yarn, cost of dyeing, cost of preparatory processes, cost of weaving and cost of calendering and finishing. But it is not so easy to reduce the number of variables entering into each to a manageable few for purposes of valid comparison. Yarn alone yields as many variables as there are counts. Silk, cotton, art silk and other fibres add still more variables. The widths adopted by the handloom in response to genuine demand range from 28/" of width of Bachikhana Towel to 52/" width of kailies and lungis. Lengths of fabrics vary equally widely. In the present enquiry it has not been found possible to do justice to every type of these innumerable and baffling varieties introduced by width, length, counts and colours of yarn. Again coloured yarn super-imposes another set of variables. Representative types among them are chosen for the proposed analysis of the cost structure. They include sarees, dhoties, towels, bedsheets, gada, lungis, besides silk and art silk fabrics.

Frame of Analysis :

10·3. In the above list of representative fabrics, each group includes several sub-groups of fabrics based on fineness of yarn. Each group has therefore to be classified into appropriate sub-groups according to the counts of yarn used. Counts of yarn are significant in a study of costs due to two important reasons. One of them is the wide variation in the cost of yarn depending on their counts. As there are in use numerous counts of yarn, this study has to be simplified by grouping them into six categories *viz.*, (1) coarse;

(2) medium ; (3) fine ; (4) superfine varieties ; (5) silk and (6) art silk fabrics following the usual trade practice. Secondly time required for weaving cloth of different counts of yarn varies with their fineness even if they are of standard lengths and breadths. Thus the scope of investigation is first determined by the list of representative fabrics and later by the six sub-groups into which each group of fabrics is classified.

10.4. The next stage of analysis calls for an evaluation of the costs of the various components making up the total cost of each group in this list. At the stage of processing the data, it was found that information about costs of calendering and finishing was too meagre to be of statistical value, because most of the handloom weavers are innocent of these finishing processes. Only shirting cloth can profitably be calendered and finished; calendering and finishing plants are widely used in the handloom factories in Malabar district which produce shirting, furnishing fabrics, curtains etc. The goods of household handloom weavers like common dhoties, sarees, towels etc., sell without any calendering and finishing. Consequently the analysis of the cost of production would involve three items :—(a) cost of yarn ; (b) cost of preparatory processes and (c) cost of weaving. The percentage of each of those items to the total cost, as worked out, shows that cost of yarn takes a giant's share, the cost of preparatory processes a midget share and the cost of weaving is something that lies in between, varying directly with counts of yarn used. The primary object of discovering the reasons for the relative costliness of handloom fabrics, is closely inter-linked with those types of fabrics which have a larger labour potential; because their encouragement is bound to be helpful in policy formulation.

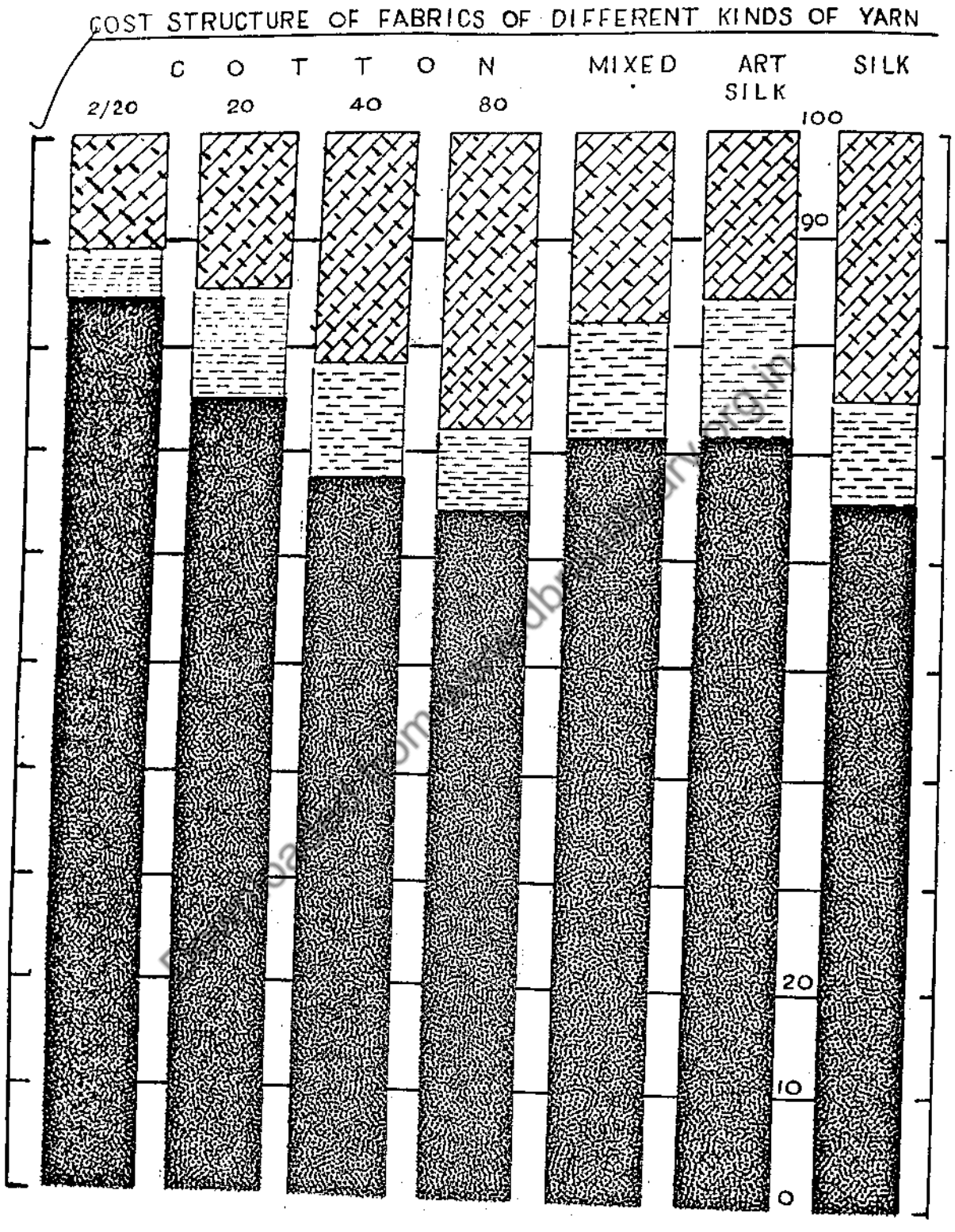
10.5. Data relating to labour requirements for weaving various types of yarn are analysed in a later chapter, the findings of which have to be anticipated now to appreciate the analytical procedure adopted here : the number of mandays (8 hours) required for weaving 60 yards pieces of the same width is 7½ days for coarse counts ; 10 for 20s ; 12 for 40s and 15 for 80s. These are general averages from which minor deviations occur in respect of extremely plain weave as in gada and in less simple designs as in coloured sarees with prominent borders and headings. Nevertheless, the differential rates in labour-days required are so significant that they could well serve as a rational basis for grouping cotton fabrics into four broad categories for the purpose of cost analysis. Silk and art silk fabrics form two separate categories as they are all superfine and the question of counts does not arise.

COARSE VARIETIES : (Using yarn upto 16s) :

10.6. Time was when the Madras handloom was engaged in weaving coarse yarn upto 16 counts on a larger scale. Even as late as 1940, kailies used to be of 9s and 13s. But at present in all apparel cloth and even in gada and towels, the use of coarse yarn has been discarded. The most prominent varieties using coarse yarn to-day are bedsheets and carpets. Relevant data relating to the cost structure of these two types of products are given below :—

X–1.

Type of Fabric and Centre	Percentage cost to total			
	Counts of yarn	Yarn	Preliminary processes	Weaving
Carpet :				
Bhavani	2/20 × 10s	72·5	3·2	24·3
Shevapet	2/12 × 10s	65·8	3·1	31·1
Average ..		69·1	3·1	27·7
Bedsheets :				
Mathurai	2/20 × 10	80·7	6·2	13·1
Karur	2/20 × 10	88·3	2·1	9·6
Average ..		84·5	4·1	11·3


COST STRUCTURE OF FABRICS OF DIFFERENT KINDS OF YARN
COTTON
2/20
20
40
80
MIXED
ART SILK
SILK
100
90
20
10
0
YARN
WEAVING
PRELIMINARY PROCESS

10.7. All the data in the above table relate to household weavers and represent averages of not less than ten cases in each centre. Bhavani and Shevapet are two famous centres for carpet weaving in the State. It will be evident from the above figures that the share of weaving carpets is distinctly higher than that of weaving bedsheets. The weaving cost of carpet amounts to 27.7 per cent whereas that of bedsheets to 11.3 per cent of the total cost. On this ground alone it would be worthwhile to concentrate on weaving carpets in preference to bedsheets so far as coarse yarn is concerned. Moreover carpets are practically a monopoly of the handloom and the problem of competing with the mill sector hardly arises. On the other hand handloom bedsheets are confronted by a stiff competition of mill bedsheets in regard to the price factor. There is of course a steady demand for handloom bedsheets from the upper income groups who can afford to be fashionable. These considerations indicate that carpet weaving will long remain an exclusive preserve of the handloom while bedsheets weaving falls decidedly in the area of competition. Encouragement of carpet weaving will be attended by better results from the standpoint of employment and earnings of weavers.

MEDIUM VARIETIES : (17s to 33s)

10.8. The most representative of the medium varieties at present is made of 20 counts There is a variety of fabrics of which dhoties, sarees, gada and shirting are important. The cost structure of these fabrics is analysed in the statement as shown below. Data from five centres for dhoties, three each for sarees and gada pieces, two for lungis and one for shirting have been processed and tabulated in the statement. In each centre

X–2. COST STRUCTURE

20s

	Per cent Yarn	Per cent of Prelim.	Per cent of weaving
Dhoties :			
Tiruvamuthur	71·5	8·1	20·4
Erode	76·1	11·3	12·6
Melapalayam	73·5	9·8	16·7
Pudiamputur	67·8	11·9	20·3
Vadipatti	67·4	15·8	16·8
Average ..	71·3	11·4	17·3
Sarees :			
Velakurichi	80·3	5·9	13·8
Arupukotai	75·1	9·1	15·8
Sevalpatti	69·9	5·5	24·6
Average ..	75·1	6·8	18·1
Gada :			
Tiruchengodu	74·3	10·1	15·6
Kandanpalayam	74·2	10·3	15·5
Salapalayam	72·7	10·4	16·9
Average ..	73·7	10·3	16·0
Shirting :			
Melapalayam	73·7	9·5	16·8
Bedsheets :			
Melapalayam	80·6	8·5	10·9
Mathurai	81·8	4·4	7·8
Lungis :			
Melapalayam	75·5	10·7	13·8
Arupnkotai	71·6	11·0	17·4
Average ..	74·5	9·6	15·9

not less than ten cases have been taken into consideration. Selection of centres and fabrics was solely guided by the need for comparability. In all these centres and for all the fabrics the cost of yarn ranges from 67·4 per cent to 80·3 per cent of the total cost. The latter is a high percentage recorded at Velakurichi where the cost of yarn has been inflated by a relatively high cost of dyeing. The average cost of yarn for all the centres is 74·5 per cent, the balance of 25·5 per cent being labour cost. The latter is composed of weaving cost representing 15·9 per cent and cost of preliminary processes representing 9·6 per cent. It may be seen that the cost of weaving alone varies from 12·6 per cent for dhoties in Erode to 24·6 per cent for sarees in Sevalpatti. The share of the cost of yarn is lower for medium than for bedsheets, being 74·5 per cent and 84·5 per cent respectively. Both of them, be it noted, are faced by fierce competition from mill made goods. But among the handloom varieties of medium counts listed in the table, the degree of competition with mill goods varies. It is least in regard to sarees, usually worn by working class women and by middle classes while at home, and less in the case of dhoties and lungis; gada pieces and shirting have to face the most fierce competition of which shirting is the latest recruit to the handloom sector. The competitive strength of these two fabrics in relation to their mill counterparts needs watching and a careful investigation before any attempt is made to stabilise or step up their output.

FINE VARIETIES: (34s to 60s)

10·9. With regard to fine varieties fabrics of 40 counts have been selected as ideal for enquiry. These fabrics consist of dhoties from three centres, sarees from nine centres, shirting from two centres, lungis from one centre, towels from two centres and kailies from one centre. The various components of their costs (taking once again a minimum of ten cases in each centre) are tabulated in the statement as shown below. The cost of yarn

X–3. COST STRUCTURE

40s

	Per cent Yarn	Per cent of Preliminary	Per cent of weaving
Manamathi	67·7	13·1	19·2
Conjeevaram	65·5	7·9	26·6
Pachel	63·3	13·7	23·0
Average ..	65·5	11·5	23·0
Sarees			
Arni	75·2	7·3	17·5
Pudupakam	77·2	7·4	15·4
Jaderpalayam	66·9	7·4	15·7
Tirunelveli	68·5	10·2	21·3
Sawyerpuram	70·2	9·2	20·6
Karaikudi	74·4	7·2	18·4
Sevalpatti	75·3	5·6	19·1
Sillamarathupatti	74·8	11·1	14·1
Chinnalapatti	70·1	8·9	21·0
Average ..	72·5	8·3	19·2
Shirting			
Meenaxipatai	56·0	8·2	35·8
Buvanagiri	56·8	11·3	31·9
Lungis			
Arni	75·8	6·6	17·6
Towels			
Poonamapet	61·4	12·8	25·8
Salem Town	63·9	10·7	25·4
Kailies			
Orakadupetai	62·5	7·5	30·0
Average ..	68·1	9·2	22·7

varies from 56 per cent at Meenakshipettai for shirting to 77·2 per cent for sarees at Pudupakkam. That shirting is more labour intensive is obvious and that accounts for the relatively low cost of yarn. The cost of yarn for sarees, as already noted is bloated by dyeing charges. The cost of preliminary processes varies from 5·6 per cent at Sevalpatti for sarees to 13·7 per cent at Pachel for dhoties. The cost of weaving varies from 14·1 per cent at Sillamarathupatti for sarees to 35·8 per cent at Meenakshipettai for shirting. For all the items the average cost of yarn works out to 68·1 per cent and the labour cost 31·9 per cent of which weaving accounts for 22·7 per cent of the total cost. The percentage cost of yarn for fine fabrics is lower than that of medium fabrics, being 68·1 and 74·5 respectively.

SUPERFINE VARIETIES : (60s and above)

10·10. Superfine fabrics are made of yarns of 60 counts and above. For the present study fabrics made of 80 counts have been selected, as they form the most important in this group. Dhoties from two centres, sarees from five centres, Angavastram and kailies from one centre each are included in this sample study (*Vide* Table below) :—

X–4.

80s

	Per cent Yarn	Per cent of Prelim.	Per cent of weaving
Sarees :			
Tiruparkadal	77·6	3·5	18·9
Pudukotai	67·8	6·4	25·8
Mathurai	53·5	9·5	37·0
Periakulam	67·9	15·0	17·1
Palayamkotai	56·6	5·1	38·3
Average ..	64·7	7·9	27·4
Angavastram :			
Shevapet	67·5	8·8	23·7
Kailies :			
Moonankattalai	65·3	10·6	24·1
Average ..	63·4	8·4	28·2

10·11. The percentage cost of yarn varies from 53·5 per cent for dhoties at Ammapet and Sarees at Mathurai to 77·6 per cent for Sarees at Tiruparkadal. The percentage cost of labour for preliminary processes varies from 5·1 for sarees at Palayamkotai to 15·0 per cent for sarees at Periakulam. This variation is of course fairly compensated by the cost of weaving in these two extreme cases. The percentage cost of weaving varies from 17·1 for sarees at Periakulam to 38·3 for sarees at Palayamkotai. These differences are the result of different procedures adopted in these centres for apportioning weaving cost. For all the items covered by this study the average cost of preliminary processes 8·4 per cent and cost of weaving 28·2 per cent. Once again it may be noted that the share of the cost of yarn declines as the counts of yarn rise, clearly indicating that labour potential increases with increase in counts.

SILK FABRICS :

10.12. The cost structure of silk fabrics is analysed with the help of data collected in all the six important silk weaving centres in Madras (*Vide* Table below) :—

X–5.

Centre	Percentage cost of		
	Silk	Preliminary process	Weaving
Conjeevaram	62·6	8·7	28·7
Arni	61·8	12·7	25·5
Tanjore	62·6	7·5	29·9
Kumbakonam	61·8	13·4	24·8
Kollegal	68·3	6·6	25·1
Tiruchirapalli	67·1	7·7	25·2
Average ..	64·0	9·5	26·5

COST OF SILK FABRICS, ANALOGOUS TO SUPERFINE :

10.13. The percentage cost of silk yarn to total cost of silk fabrics varies from 61·8 in Arni and Kumbakonam to 68·3 at Kollegal. The percentage cost of preliminary processes varies from 6·6 at Kollegal to 13·4 at Kumbakonam and that of weaving from 24·8 at Kumbakonam to 29·9 at Tanjore. The average cost of silk yarn works out to 64 per cent and labour cost 36·0 per cent made up of 9·5 per cent for preliminary processes and 26·5 per cent for weaving. There is a notable coincidence between the cost of weaving in respect of silk fabrics and superfine cotton varieties being 36 per cent and 36·6 per cent of the total cost respectively. These two varieties which are most labour intensive are also those the production of which has expanded most in recent years. A beneficent consequence of this phenomenon is provision of more employment. So far as silk fabrics are concerned their rising output is in response to genuine rise in demand the outcome of rising individual incomes. On the other hand the expansion of output of superfine cotton fabrics is the result of an artificial stimulus imparted by the twin mechanism of rebate and cess. Labour cost in their production forming nearly 2/5 of the total cost is much above that in the case of corresponding output in the mill sector. This artificial expansion of superfine fabrics is in danger of fizzling out unless labour cost is substantially reduced. As the rate of daily earnings of handloom weavers could not be lowered for obvious economic and non-economic reasons the only way out lies in increasing their efficiency. This could be done only by the introduction of improved looms. A final answer to this problem of disparity in the costs of handloom and mill superfine fabrics cannot be given before a further analysis of yarn costs in both the sectors (*Vide infra* paragraph 10.21).

ART SILK FABRICS :

10.14. The advent of art silk yarn, as already stated, is a recent phenomenon. The bulk of its consumption is in the making of borders and headings in essentially cotton yarn sarees. But yet there is already a significant progress in the manufacture of cent per cent art silk fabrics in a few centres. The most important of these centres is Chinnalappatti where unmixed art silk sarees are produced in considerable quantities for consumption within the State and in Upper India. Hence the cost structure of art silk sarees is analysed with the data collected from 14 handloom weavers at the centre. The average cost of Art Silk yarn works out to 70·7 per cent and of labour cost 92·3 per cent which is made up

of 11·6 per cent for preliminary processes and 17·7 per cent for weaving. This breakdown of total cost for Art silk sarees closely approximates to that of fine cotton fabrics of 40s counts.

MIXED FABRICS :

10·15. The cost structure of mixed fabrics of cotton warp and art silk woof, as would be expected follows the same pattern of unmixed art silk and unmixed cotton fine (40s) fabrics. (*Vide* Table below) :—

X-6.

Centre	Percentage cost of		
	Yarn	Preliminary processes	Weaving
Kallursandai	70·3	12·2	17·5
Karaikudi	69·8	9·6	20·6
Aruppukotai	72·7	9·7	17·6
Average ..	70·9	10·5	18·6

10·16. The data in the above table show that the cost of yarn varies from 69·8 at Karaikudi to 72·7 at Arupukotai, the cost of preliminary process from 9·6 at Karaikudi to 12·2 at Kallursandai and weaving cost from 17·5 at Kallursandai to 20·6 at Karaikudi. The average cost of cotton and art silk yarn works out to 70·9 per cent and of labour cost 29·1 per cent which is made up of 10·5 per cent for preliminary processes and 18·6 per cent for weaving.

PRESENT AND PAST COST STRUCTURE :

10·17. The present day significance of the costs of the two major factors of yarn and labour has been assessed in the foregoing paragraphs in respect of six broad groups of fabrics. It will be of interest to know how these two factors contributed to the total cost before the abnormal forces of war and Post-war periods had come into operation. For this purpose the data presented in the Fact Finding Committee Report appear to be quite suitable because they relate to 1940 in which year the aforesaid forces had not been generated. Comparable data from the Report of the Fact Finding Committee and the present survey are tabulated below :—

X-7.

Fabric	Counts	Percentage cost of							
		Yarn		Preliminary processes		Weaving		Total Lab. cost	
1	2	FFC 3	SS 4	FFC 5	SS 6	FFC 7	SS 8	FFC 9	SS 10
Dhoties	20s	70·2	71·3	11·2	11·4	18·6	17·3	29·8	28·7
Dhoties	40s	65·4	65·5	11·9	11·5	22·7	23·0	34·6	34·5
Sarees	40s	75·0	72·5	10·4	8·3	14·6	19·2	25·0	27·5
Dhoties	80s	57·3	57·3	11·7	8·5	31·0	34·2	42·7	42·7
Sarees	80s	53·9	64·7	17·8	7·9	28·3	27·4	46·1	35·3

FFC : Fact Finding Committee; SS : Sample Survey.

10.18. It is most remarkable that in four out of the five items in the table No. X-7, on reverse page the cost structure is very nearly the same. Only in the case of 80 counts sarees there is some difference. The percentage cost of yarn is 64.5 in the present survey compared with 53.9 in Fact Finding Committee Report. This difference is obviously due to the abnormal rise in the cost of dyeing at present compared with 1940 which forms part of the cost of yarn in both the data. Consequently the share of labour forms only 35.3 per cent in the present survey against 46.1 per cent in 1940. The broad conclusion from this comparative study is that the cost structure has continued to be almost the same as it was before the impact of the disrupting forces of the war and its aftermath.

10.19. The war time witnessed an unprecedented situation of actue shortage of yarn, enormous demand for handloom fabrics and an unparalleled rise in wages. As the gargantuan demand of the Military sector could not be fully satisfied even after the maximum utilisation of the mill capacity there was a spillover of military demand which had to be met by the handloom industry which was already overstrained by the soaring demand from the civilian sector. Consequently handloom industry was prepared to pay very high wages. Shortage of yarn caused a drastic reduction in the number of days of employment. Weavers were forced to live on the earnings of 10 or 12 days of work for a full month. In this context wages shot up to historic peaks. Wages per yard for weaving 40 counts sarees at Salem rose from one anna in 1941 to fifteen annas in 1947. For shirting of 64 counts at Cannanore it rose from 1.2 annas to 9.5 annas (*Vide* Report of the Court of Enquiry into the Working conditions of Handloom). These abnormal forces completely distorted the cost structure of 1940 as the figures tabulated below would show :—

X–8.

Centre	Product	Counts	Yarn	Total Labour
Tiruchngodu	Sarees	20s	38.1	61.9
Salem	,,	40s	34.2	65.8
Palani	,,	40s	31.6	68.4
Chinnalpatti	,,	40s	44.3	55.7
Mathurai	,,	80×60	45.5	54.5
Coimbatore	,,	100s	37.5	62.5
Melapalayam	Lungis	20s	44.1	55.9
Bhavani	Carpets	2/10s	45.6	54.4
Malabar	Shirts	2/20s	46.7	53.3

10.20. It may be seen from the above table that the percentage cost of labour in 1947 varied from 53.3 for Malabar shirts of 2/20 counts to 68.4 for Palani sarees of 40 counts. It is ten years after this critical period that the present survey has been conducted. During this period the yarn situation has eased, more employment has been found and the cost structure has almost readjusted itself to the pre-war pattern. The experience of the war time was however left a legacy behind ; although other distortions have faded out, the sharp rise in the cost of living index has got aggravated which is a strong justification for demands for higher wages. However there has been a down trend in wages since the peak year of 1947. Wages for Salem sarees of 40 counts have fallen from 15 annas per yard in 1947 to 3 annas in 1956 and those for Cannanore shirting from 9.5 annas to 5.0 annas in the same period. This downtrend is indicated here only to emphasise one important conclusion

that the question of scaling down wages to reduce the total cost of handloom fabrics is beyond pratical politics. Thus the only inherent factor that might contribute to higher prices of handloom fabrics is seen to be blameless and immune from manipulation.

COST OF YARN :

10.21. Turning then to the extraneous factor, affecting the price of handloom cloth, namely cost of yarn, no conclusion is possible without a study of its trend since 1940. Data relating to prices of yarn of 20 counts representing medium, of 40 counts fine, and 60 counts superfine from 1939 to May 1956 are given in the statement below :—

X-9. AVERAGE ANNUAL WHOLESALE PRICES OF COTTON YARN AT MADRAS FOR 20s, 40s AND 60s FROM 1939 TO 1956

Source : YARN MERCHANTS' ASSOCIATION

Year	Per bundle of 10 lbs.		
	20s	40s	60s
	Rs. a. p.	Rs. a. p.	Rs. a. p.
1939	6 0 0	6 12 0	10 2 6
1940	5 0 3	6 2 3	10 4 6
1941	6 1 3	10 14 0	17 3 0
1942	10 9 3	15 4 6	26 7 6
1943	20 5 3	29 4 6	50 14 0
1944	14 5 6	21 4 6	50 14 0
1945	11 11 0	18 1 0	38 1 0
1946	11 12 0	17 11 6	36 12 9
1947	12 1 3	18 0 0	36 10 9
1948	20 11 0	34 5 9	60 11 0
1949	17 5 6	25 1 3	43 14 0
1950	....	26 0 9	42 14 6
1951	....	26 0 0	66 10 6
1952	19 1 0	28 10 0	55 12 6
1953	17 1 6	27 2 3	43 10 0
1954	17 10 6	26 4 6	44 15 6
1955	15 15 0	23 9 0	42 0 0
1956	18 11 0	27 4 0	47 13 0

The figures in the above table pertain to those counts for which comparable data could be easily collected. It may be seen that yarn of 20 counts has risen by 212 per cent or 40 counts by 300 per cent and 60s 372 per cent. Although the rise in the price of yarn is in broad conformity with the general index of wholesale prices for the purpose of studying its impact on the cost of handloom fabrics a different series of prices which go into the cost

structure of mill fabrics alone will be relevant. But this is not easily accessible. However, it is well known that the spinning cum weaving mills do not incur cost, insurance and freight nor middlemen's commission which in the aggregate would be of no mean significance. Another factor that is often overlooked and is of great relevance to handloom industry is the huge amount of bonuses paid to spinning mill workers which goes to puff up the price of yarn. Unless these issues are fully gone into — and this merits a special investigation— no definite assessment could be made of the incidence of yarn price on the total cost of handloom fabrics.

CONCLUSIONS :

10·22. The prosperity of handloom industry depends upon its ability to sell its goods in a price sensitive market against the competition of mill goods. This renders necessary an investigation of the cost of production of handloom fabrics to find out whether factors inherent in or extraneous to the handloom set up are responsible for its higher level.

10·23. Due to the immense variety of fabrics, complicated still further by the innumerable variables like counts widths, lengths etc., this kind of enquiry would be far too complex. To simplify the analysis and yet obtain a realistic picture it would be better to classify fabrics on the basis of yarn into 6 groups and study their component costs.

10·24. The six groups are (i) coarse varieties; (ii) medium varieties; (iii) fine varieties; (iv) superfine varieties; (v) silk and (vi) art silk fabrics. An analysis of the cost structure reveals the following :— (a) As counts increase from coarse to superfine, labour cost increases, the only exception being carpets, practically a monopoly of the handloom where a study into comparative costs is irrelevant; (b) total costs are broken into yarn costs and labour costs. The latter ranges from 11·3 per cent for bedsheets of 2/20s to 28·2 per cent for superfine fabrics of 80s. This proportion of labour cost is much lower than what is was in the peak days of 1946-47 and more or less on a par with the 1940 level. The question of scaling down labour cost does not therefore arise whether it is compared with 1940 levels or with present day costs of living *vis-a-vis* those of 1947. (c) As for yarn cost, its trend is in general conformity with the general index of wholesale prices but for composite mills the real cost of yarn should be lower to the extent cost of transport and middlemen's profits paid by handloom consumers. Exact figures for purposes of comparison not readily available may throw light on this issue, if specially collected.

CHAPTER XI

MARKETING

Importance of Marketing Agencies :

11·1. It would be erroneous to imagine that cottage industries enjoy compact local markets. It was perhaps true, and even that to a limited extent, in the remote past in an earlier phase of industrial evolution, when village artisans and craftsmen catered to the essential needs of the village community. By the Middle Ages, several handicrafts had achieved distinction by extreme specialisation and produced artistic and luxurious goods like Kashmir shawls, Dacca muslin, bronze statuettes, ivory and horn curios which were bought by princes and aristocrats of the land. For these articles local markets had hardly any significance. In respect of ordinary, utility articles too, local tastes and needs led to a great deal of specialisation. Water pots vary in size and shape from State to State, if not from district to district. As for cloth, the sartorial preferences were reflected in a proliferation of designs, widths, lengths, borders etc. Thus the most outstanding trait of the handloom industry to-day has come to be its multitudinous variety of fabrics produced. Each type of fabrics has its own market, not necessarily in the place of its origin. It is this aspect of handloom production that has led to the necessity of specialised agencies for carrying the product to near as well as far away centres of consumption. There are, of course, a number of standardised goods in width and counts, like gada, dhoties, medium count sarees, which have a wide market. But as they are produced in small quantities in thousands of homes, their collection and organisation for sales require once again specialised marketing agencies. Above all, the handloom weaver " cannot afford to hold stocks of materials, or to produce finished articles for stock. If he works to consumers' orders only, he will as likely as not be subjected to much irregular unemployment. Production is most economically organised if there is a middleman between the craftsmen and the consumer. The middleman can carry stock ; can arrange for bulk display in shops in order to widen the market ; can arrange to have several craftsmen producing identical articles, if the market requires standardisation ;.....Such work is often done by private middlemen, but it is generally though that the middlemen, are able to take advantage of the craftsmen, by getting them into debt ". (W. Arthur Lewis : " The Theory of Economic Growth ", P. 139).

Four Types of Markets :

11·2. In the case of Madras handloom, there are four distinct types of markets :— (1) Local market consisting of the village community and its neighbourhood ; (2) State market consisting of all the districts within the State ; (3) National market comprising other States of the Indian Union and (4) Foreign market extending from West Africa to Malaya and in special cases to Europe and America. According to the findings of this Survey, the estimated value of the output of the Madras Handloom industry is of the order of Rs. 50 crores. In considering the magnitude of the problem of marketing, these points have to be borne in mind.

Producing and Consuming Centres :

11·3. The complex nature of the marketing problem is revealed by the data collected in the present enquiry which are processed for this purpose and shown in the statement on the page 110 (*vide* Table XI-1). Sarees, lungis and thombu are sold within Madras State as well as in Andhra Pradesh and West Bengal. Mathurai art silk and cotton sarees and dhoties and sarees produced in Ramanathapuram district enjoy a good market in Bombay, Cochin, Calcutta and Delhi, besides State market. Coimbatore carpets, South Arcot, Madras

and Chingleput lungis are sold in large quantities in Malaya. Madras handkerchiefs have a large market in West Africa. Malabar furnishing fabrics and Tiruchirapalli bedsheets have a great demand in U. S. A. and U. K. Within the State there is a good deal of criss-cross inter district trade in dhoties, sarees and towels.

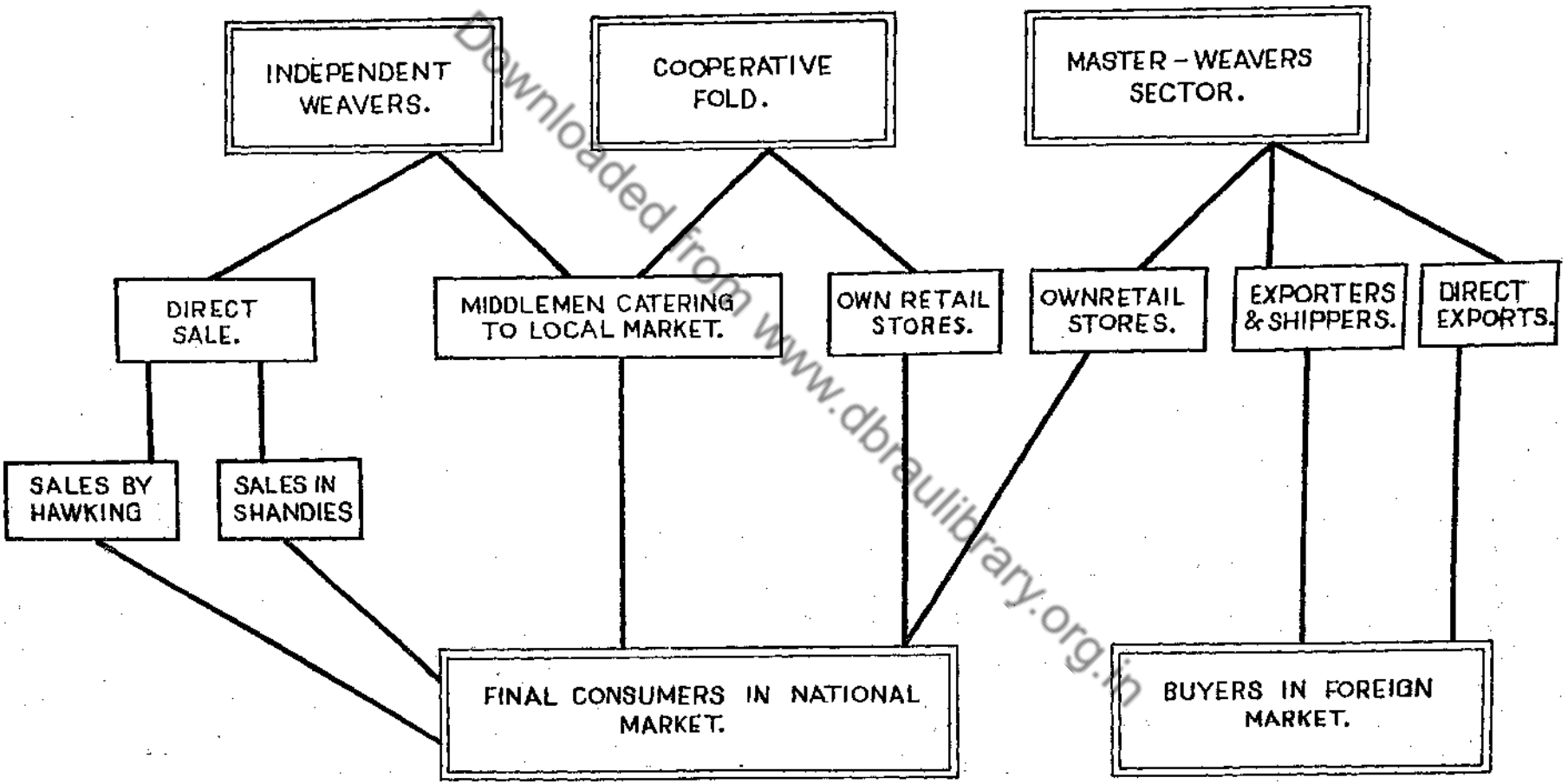
XI–1. PRODUCING AND CONSUMING CENTRES

District of origin	Type of fabric	Inter-District	Inter-State	Foreign
1	2	3	4	5
North Arcot	Sarees	Madras State	Andhra Pradesh	
	Lungis, Thombu	..	West Bengal.	
Mathurai	Sarees	Madras State	Bombay, Cochin-Bombay, West-Bengal and Delhi.	
	Art Silk Sarees	Madras State		
Ramnad	Sarees	Mathurai	..	
	Dhoties	..	Andhra Pradesh, Bombay.	
Salem	Sarees	Coimbatore	Andhra Pradesh, Hyderabad, Orissa, Mysore and Bombay.	
Coimbatore	Carpets	Madras	..	Malaya
South Arcot	Sarees, Shirtings	Madras Coimbatore Salem	Andhra Pradesh	
	Lungis	..	West Bengal	Malaya
Malabar	Shirtings	..	Delhi, Madhya-Pradesh, West-Bengal	
	Towels, Dhoties			Burma, Ceylon
	Furnishing fabrics	..	..	U. S. A., U. K.
Madras	Lungis	..	..	Singapore, Ceylon.
	Madras Handkerchiefs	..	..	West Africa
Chingleput	Madras Handkerchiefs	..	..	West Africa
	Lungis	..	West Bengal	Ceylon, Burma, Malaya, U. S. A.
	Kailies	..	..	Aden, Malaya, U. S. A.
	Sarong	..	..	Indonesia, Malaya, U. S. A.
	Silk Sarees	..	India	
	Pavadai	..	West Bengal	Singapore, Ceylon.
Tiruchi	Bedsheets and Napkins	..	North India	U. S. A.

FIVE TYPES OF MARKETING AGENCIES :

11·4. In spite of a bewildering variety in fabrics and multiplicity of markets, near and far, it is interesting to find that the entire output is passing through five broad channels

CHANNELS OF MARKETING



of marketing which may be briefly designated as (1) Direct sale, (2) Local market, (3) Middlemen, (4) Master-weavers and (5) Co-operative Societies. This classification does not imply that the goods getting into one channel at the producers' end continues to flow only through it until it reaches the final consumers. It is quite often found that these streams of marketing mingle and separate according to the exigencies of the moment and character of the fabrics. Kailies, Lungis, Sarongs, and furnishing fabrics belonging to the group known as export sorts pass through one or more of these channels but invariably find their outlets through either specialised shippers or master weavers, who are engaged in export trade. A significant portion of the products of the Co-operative handloom weavers is found to move along the co-operative channel to the ultimate consumers. Although there is so much commingling of the various channels of marketing, for purposes of analysis, each channel will have to be dealt with separately.

DIRECT SALE :

11.5. The chief merit of direct sale lies in the personal contact between the weaver and the consumer, without the intervention of any kind of middlemen. This kind of marketing manifests itself in two forms : (1) it is commonly found in most villages where the independent weavers take their products out to the doors of their customers. This involves getting away from the loom occasionally, which may be viewed as an interruption to continuous production. But the weavers usually consider it a welcome change and relief from a highly sedentary and monotonous occupation. Personal contact with their consumers helps the weavers to understand their tastes and preferences to which their production is suitably adjusted. Wherever sales are effected by old men to whom continuous work on the loom is neither possible nor desirable, this form of direct sale appears to be a distinct advantage. This type of marketing enables the weaver to get the full price for his fabrics paid by consumers without being reduced by the middlemen's toll. The second type of direct sale is seen when the consumers go to weaver's dwellings to make their purchases. The weaver here enjoys certain obvious advantages. He does not waste his time by going out, hawking his product. He is also in a better position to drive a better bargain when the consumers come in search of his fabrics. This kind of direct sale is more commonly met with in the case of silk sarees, than in the ordinary types of utility fabrics. In both these forms of direct sale, the weaver's profits are undoubtedly maximised. But the scope of this channel of direct sale is very restricted, playing a small part in the total turn-over of the handloom fabrics.

LOCAL MARKET :

11.6. Local market is a mild variation of the preceding type of marketing. Typical examples of this local market are the village fairs and the weekly shandies. Independent weavers go to them and spread their goods for sale. Final consumers pick and choose their requirements, higgle and haggle over prices. In this type of marketing too, weavers make the best of the situation and maximise their profits. They also get the opportunity of meeting their customers and understanding their tastes. These local fairs and shandies are not to be construed as the exclusive haunts of independent weavers and their patrons. To them come all kinds of dealers in cloth, including master weaver-merchants. Occasionally they are able to book large orders on showing samples from their small stocks.

MIDDLEMEN :

11.7. The next agency of marketing described as " middlemen " includes all classes of dealers in handloom cloth, from the street hawker to wholesale merchants and exporters. The chief distinction between them and master-weavers functioning also as merchants lies in the fact that the former do not employ a corps of weavers like the latter. They are the essential links between scattered producing centres and distant consuming areas, whose importance is so well stressed by Arthur Lewis. They are well-trained in their jobs, and

well provided with adequate finance. They watch for favourable moments to buy and sell. They have expert knowledge as to where they should buy and where they should sell. Their primary objective is to secure maximum profits. They are capable of driving hard bargains with weavers in distress. They do not have as much stake in the industry as the master weaver-cum-merchants, who by virtue of their role invest huge amounts in yarn and warps, supplied to weavers working under them. Consequently they would remain in the handloom trade so long as it pays minimum profits. Shifting from dealing in handloom cloth owing to shorter or longer association with it, as the case may be, to other trades is not impossible for them, albeit difficult.

DHALALIS OF SALEM :

11·8. There are, as already stated various types of middlemen. The Dhalali of Salem is *Sui Generis*, whose operation deserves to be mentioned. He does not have any capital of his own, nor a shop exclusively for his use. He usually rents out a corner of a regular shop and purchases handloom products from independent weavers with finance supplied by merchants in consuming centres. He is a hard bargainer. He takes as much advantage of the impecunious conditions of weavers who have not the where with all to carry even small stocks. He pays the least for his purchases ; and he makes profits from his sellers as well as buyers. The latter who are merchants at distant consuming centres place orders with them to buy on the basis of certain price quotations supplied by him. If the Dhalali is able to buy at prices lower than those quoted, the profit accruing therefrom is retained by him. In addition he also gets a commission of 2 or 3 per cent on his purchases from the buyers. Another element contributing to his profits is the customary levy called "Swami dharmam" paid by the weavers. The Dhalali's presence and prosperity is an index of the crying need for efficient marketing system for handloom industry. This appraisal of the technique of the Dhalali cannot however be used for a wholesale condemnation of the middlemen. As a class the middlemen play a significant role in clearing accumulated stocks, which could not easily be taken over immediately by more serviceable agencies like the co-operative societies.

MASTER WEAVERS :

11·9. Master weavers appear to be the king-pin of the handloom industry. Their function as financiers has already been indicated. As merchants too, their contribution to the industry is of considerable significance. Their scope of activities is very wide from retail trade in local markets to wholesale export to Foreign Countries. They deal not only in their own products, but also in those of independent weavers and co-operative societies. In short, master weavers constitute an *omniverous* channel of marketing, through which passes all kinds of handloom fabrics in all directions to markets, home as well as foreign.

CO-OPERATIVE SOCIETIES :

11·10. In the sphere of marketing, Co-operative Societies are much more like the master-weavers than the middlemen. Generally all these societies are both production and sales societies. Viewed from the business angle, they are the owners of yarn, warps, and fabrics woven by their member-weavers. Under the present constitution of societies, the member-weavers are hardly better than wage-earners working under Co-operative Societies. As a result of this arrangement, the member-weavers are divested of all their responsibilities regarding the sale of their products which are fully shifted on to the societies. The risks, arising from adverse fluctuations in prices of fabrics compared with the cost of yarn, are borne by the societies. In the years of booming prices of handloom cloth, during and after World War II, they made phenomenal profits, a moiety of which was wiped out in the late years of slump. They stand between the member-weavers and their customers protecting the former from losses when prices fall. At the same time profits earned when prices rise are

retained in reserves, held in trust for the weavers. Under this barricading arrangements while the member-weavers are protected from losses, they are denied the flush of pleasure and enthusiasm that a high tide of profit gives.

11.11. The products of Co-operative Societies are sold in three ways : (1) Consumers directly come to the societies and buy their requirements. Most of the societies have got their own retail stores for this purpose. (2) A portion of their products is sold to the co-operative emporia, run by the Apex or State Weavers' Co-operative Society. (3) Another portion is sold to merchants who include also the master-weavers.

MARKETING CHANNELS — ORDER OF SIGNIFICANCE :

11.12. One of the objectives of the Economic Survey is to determine the respective shares of the five marketing channels, as described above in the sale of the handloom products. For this purpose, data regarding the quantity of cloth produced by the household weavers in the month preceding the date of investigation were collected, as also the manner in which they were sold. This aspect of the investigation refers to the first stage in the long chain of marketing, stretching from the primary producer to the ultimate consumer. The collected data are analysed in two ways with reference to (1) total output and (2) three broad groups of handloom fabrics produced in the State.

11.13. The total quantity of handloom cloth produced by 17,990 households covered by this survey amounted to 4,421,866 yards, the channels through which this quantity was actually disposed of is shown in the table below :

XI-2. SHARES OF THE DIFFERENT CHANNELS OF MARKETING

Channel of marketing	Quantity in yards	Per cent to total
Direct sale	376,352	8·8
Sale through Middlemen ..	693,209	15·6
Sale through Master Weaver ..	1,932,336	43·6
Sale through Co-operatives ..	1,013,628	22·9
Local Market	406,341	9·1
Total ..	4,421,866	100·0

11.14. It may be seen from the above table, that by far the largest quantity amounting to 43·6 per cent of the total output passes through the hands of master weavers. Next in order of importance is the co-operative society accounting for 22·9 per cent, followed by middlemen with 15·6 per cent to their credit, local market with 9·1 per cent and direct sale with 8·8 per cent. The share of the co-operatives is less than one quarter of the total output. It is a function of the production by weavers belonging to the co-operative fold. It could increase only with increase in the number of weavers joining co-operative societies. It is evident that the benefits of the co-operative societies in the sphere of marketing is limited by the progress of the co-operative movement.

11.15. At present, co-operative societies confine their marketing operations to the output of their own members. Working outside this limited field is beyond their powers, as the finances required to discharge even this limited responsibility are less than adequate. In the wider interest of the handloom industry, the co-operative movement should buy even from non-members in order to stabilise prices and to provide a minimum profit. Under the present system of co-operative organisation, financing for production is looked upon as the

primary objective and financing for marketing as a concomitant off-shoot. In the prevalent climate where master-weavers and middlemen operate exclusively with an eye to profit, there is a strong case for co-operative societies animated by higher altruistic motives to expand their operations in the general interests of the handloom weaving community.

11.16. The present policy lays a strong emphasis on enrolling more weavers as members of co-operative societies for production and sale. Naturally, more finance per member-weaver will be required to implement it. A wing of co-operative movement could devote itself to marketing alone, helping the independent weavers and others to dispose of their products more quickly. The independent weavers are as a class in a better position with regard to finance, enterprise and initiative. In times of general depression, they deserve a helping hand. The co-operative or a semi-public or government agency would be doing a great service, if it could buy accumulating stocks and avert further fall in prices, before it develops into a serious depression. Such a policy would be analogous to government stepping in to buy foodgrains in the agricultural sector. No doubt incentives should be provided to weavers to enroll themselves as members of co-operative societies, but there will be genuine cases of independent weavers who would choose to remain independent to escape from what appear to them to be defects and inefficiencies in the co-operative organisation. (It has already been seen that co-operative societies are only a shade different from master-weavers' organisation in respect of their procedure in supplying warps and paying wages). In this context, too much insistence on membership as a basic qualification for enjoyment of marketing facilities almost tantamounts to the treatment of the bulk of independent weavers in a vindictive spirit. It is perhaps a recognition of this element of discrimination which has raised the co-operative weavers into a somewhat privileged sub-caste, that organisations like All India Handloom Fabrics Association have come forward to finance marketing of handloom cloth, irrespective of the class of weavers with whom stocks stagnate.

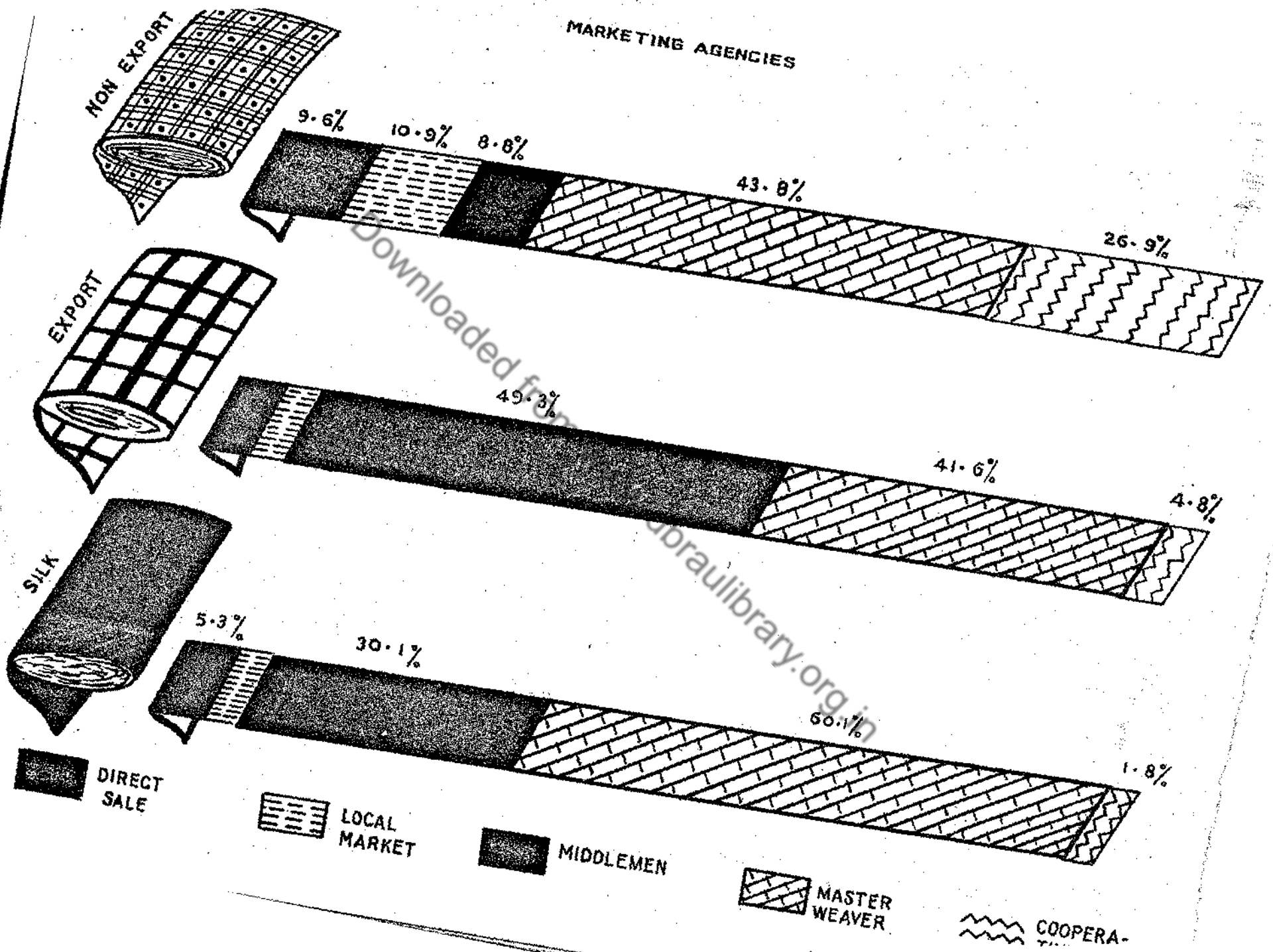
MARKETING DIFFERENT TYPES OF GOODS :

11.17. Although there are innumerable varieties of handloom fabrics, it is possible to group them into three broad categories:—(1) silk, (2) cotton export fabrics and (3) cotton non-export fabrics for appreciating more clearly the problems and intricacies of marketing involved. The data collected for all the goods produced have been suitably processed to show the percentage shares of the five different marketing channels in respect of these three broad categories. (*Vide* Table below) :—

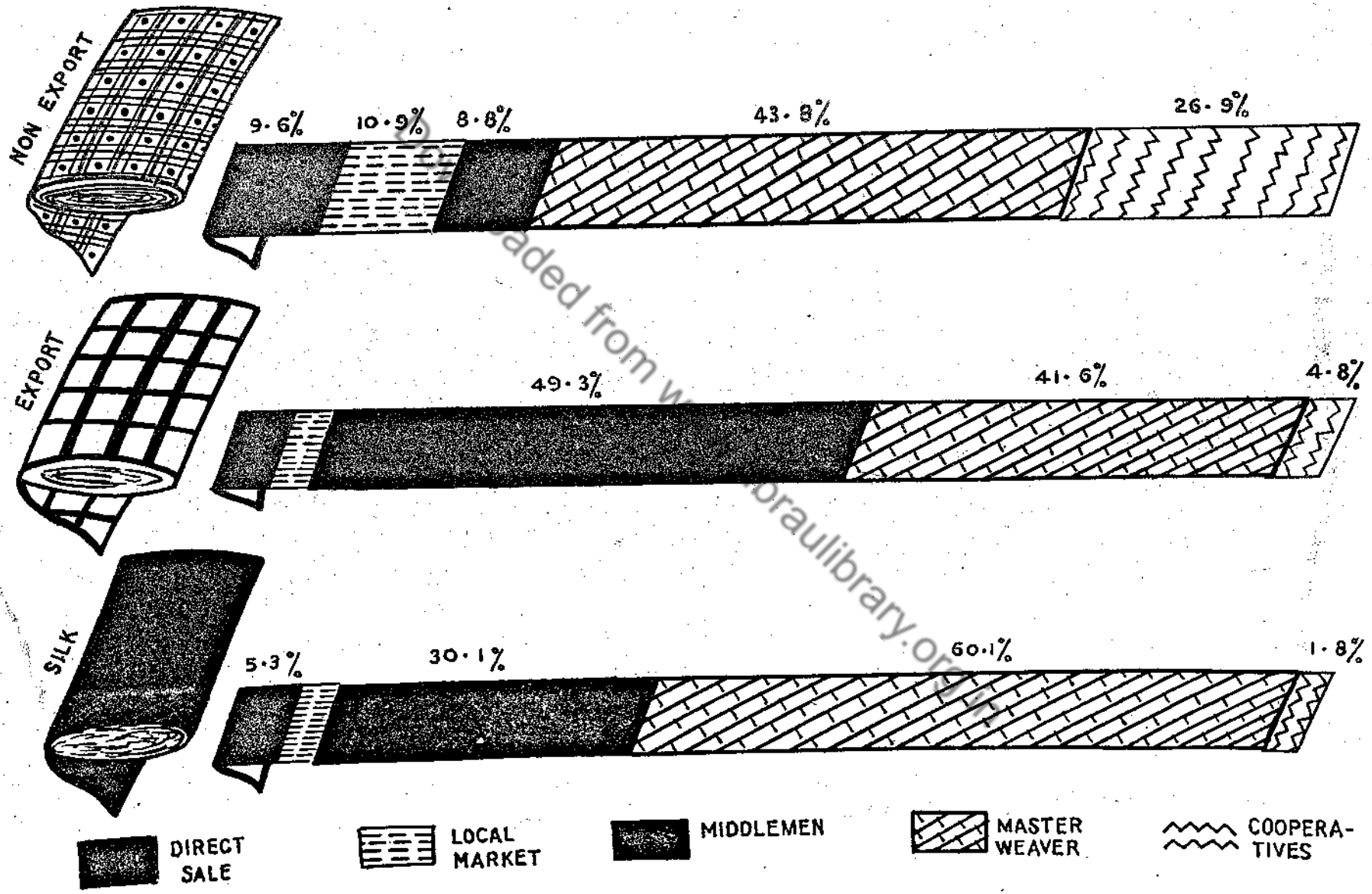
XI–3.

Marketing Agency	Silk	Cotton		All Fabrics
		Export fabrics	Non-export fabrics	
Direct sale	5·3	3·1	9·6	8·8
Local Market	2·7	1·2	10·9	9·1
Middlemen	30·1	49·3	8·8	15·6
Master Weaver	60·1	41·6	43·8	43·6
Co-operative Societies	1·8	4·8	26·9	22·9

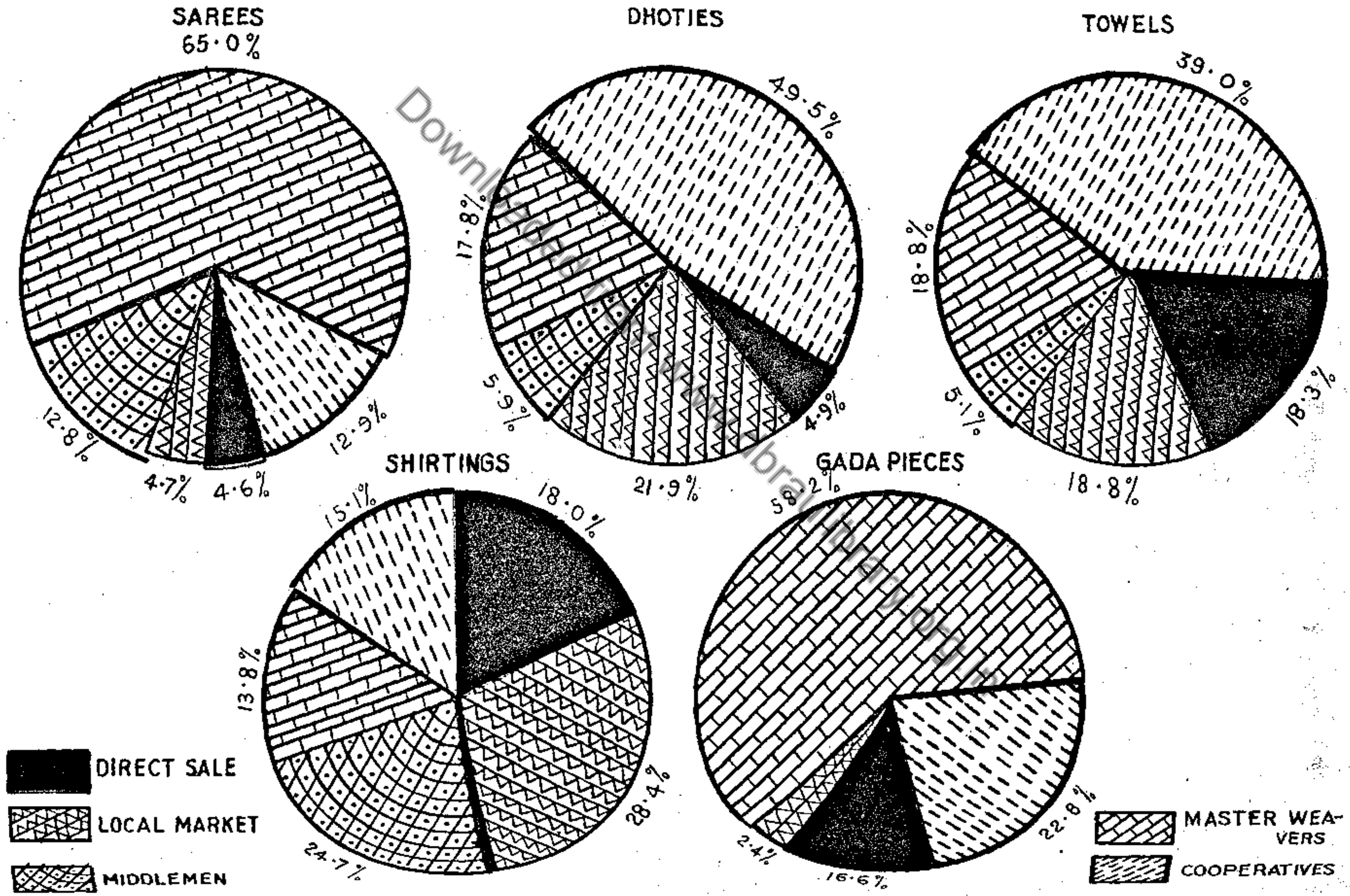
11.18. It may be seen from the above table that direct sale is of greater relative importance in regard to cotton non-export fabrics. Its share is 9·6 per cent compared with 5·3 per cent for silk and 3·1 percent for cotton export fabrics. Again local market carries a relatively larger volume of trade in the case of cotton non-export fabrics, namely,



MARKETING AGENCIES



SHARES OF MARKETING SYSTEMS IN RESPECT OF CERTAIN TYPES OF FABRICS



10·9 per cent of the output against 2·7 per cent in silk and 1·2 per cent in cotton export fabrics. Master-weavers and middlemen carry the bulk of the trade amounting to 90 per cent in both silk and cotton export fabrics. Their respective shares of 60·1 per cent and 30·1 per cent in silk and 41·6 per cent and 49·3 per cent in cotton export fabrics. The share of co-operative societies is insignificant amounting to 1·8 per cent in silk and 4·8 per cent in cotton export fabrics, although it is 26·9 per cent in the case of cotton non-export fabrics.

11.19. It is evident from the above figures that co-operative societies have been relatively more successful with regard to cotton non-export goods. They are mostly utility cloth like dhoties, sarees and towels, which do not call for a high skill of salesmanship. Demand for them is steady and fairly inelastic. Thus they have succeeded only in that sphere where marketing problems are least acute.

11.20. Silk fabrics are marked by two important characteristics. They are highly specialised and pretty costly. Specialities to meet individual tastes being one of the features, discriminating consumers are seen to take the trouble of going to weavers' homes to buy their requirements. In so doing, they escape the incidence of middlemen's heavy profits. Dealing in silk fabrics needs enormous capital and changes in fashion regarding colour, border etc., are so quick, that merchants run the risk of holding large quantities of fabrics, which go out of fashion. In this situation, merchants find it necessary to make a profit of 3 to 4 annas in a rupee. This profit the consumers avoid by making direct purchase from the weavers themselves. Co-operative societies do not find business in silk fabrics quite congenial on account of heavy capital outlay and high risks. Their share in silk business is thus very small. The Co-operative society for silk handloom weavers at Conjeevaram is one of the few engaged in this business. Even this society would hardly have been able to face the risk, but for the liberal financial assistance offered to it from the cess fund. The handloom silk trade is essentially in the hands of capitalist master-weavers, who are more competent to meet the inherent risks of this trade.

11.21. Cotton export fabrics also require vast capital outlay. Besides, long experience and good knowledge of the foreign market are essential attributes to success. Naturally middlemen of long standing as shippers and exporters take a lion's share of this trade which is nearly half of the total volume. Master weavers find it profitable to have their own principals in foreign countries, with whom they negotiate sales on a considerable scale and it is scarcely surprising that their share is 40 per cent of the total volume of the trade.

COTTON NON-EXPORT GOODS :

11.22. Both silk and cotton export fabrics have their exclusive markets, but cotton non-export fabrics have always to contend against competition from mill goods. Further, they constitute the largest bulk of the handloom products. They consist of numerous varieties, of which sarees, dhoties, towels, shirting and gada are the most important, from the stand point of utility and output. A special attempt is therefore made to study the shares of the various channels of marketing in respect of them. (*Vide* Table below) :—

XI-4. SHARES OF VARIOUS MARKETING SYSTEMS IN RESPECT OF CERTAIN TYPES OF NON—EXPORT COTTON FABRICS

Marketing Agency	Sarees	Dhoties	Towels	Shirting	Gada
Direct sale	4·6	4·9	18·3	18·0	16·6
Local Market	4·7	21·9	18·5	28·4	2·4
Middlemen	12·8	5·9	5·4	24·7	..
Master weaver	65·0	17·8	18·8	13·8	58·2
Co-operative Societies ..	12·9	49·5	39·0	15·1	22·8

11.23. Master-weavers are the most prominent in respect of sarees and gada, their share in the trade being 65 per cent and 58.2 per cent respectively. Co-operative Societies lead in respect of dhoties and towels accounting for 49.5 per cent and 39 per cent respectively. Direct sale and local market are of considerable significance in respect of shirting, towels and dhoties, their share being 46.4 per cent, 36.8 per cent and 26.8 per cent respectively. It is this share of direct sale and local market that gives an illusion that handloom goods enjoy compact village markets. The higher percentage in shirting does not really mean much as the total volume of shirting cloth produced is but an insignificant fraction of the aggregate handloom output in the State. However, it should not be over looked that direct sale and local markets are of importance and their expansion is tied up with progress in standardisation of fabrics, and more homogenity in consumer preferences. With standardisation of fabrics, the difficulties of marketing are bound to decrease and the opportunities of direct sale and co-operative societies increase with a consequential diminution in the ascendency of master-weavers and middlemen in the realm of marketing.

CONCLUSIONS :

11.24. The multitudinous varieties of fabric produced in small quantities in thousands of homes of handloom weavers unable to carry even small stocks render marketing difficult and specialised expert marketing agencies indispensable. Further, handloom goods enjoy nation wide and foreign markets, local markets playing an insignificant part. Inter district trade is another notable feature in handloom marketing.

11.25. Even in this complex situation it is possible to discern five broad channels of marketing. Taking all the handloom fabrics together master weavers are by far the most important who carry 43.6 per cent of the entire trade compared with 22.9 per cent by co-operatives, 15.6 per cent by middlemen, 9.1 per cent by local market and 8.8 per cent by direct sale. The last two channels help the weavers to get maximum profits whereas middlemen and master-weavers frankly out to make profits leave the handloom weavers with least returns for their labour. The scope for expansion of direct sale and local market being extremely limited, co-operatives are looked upto, for rescuing weavers from being exploited by middlemen and master weavers. But co-operatives limit their marketing activities to the products of their members. Whether the co-operative movement could not develop a special wing for marketing without saddling itself with financing production, buying from both members and non-members when prices sag too far, is a point that deserves to be examined. Fixing floor prices and purchasing stocks whenever prices fall below them on the lines adopted in agricultural sector for foodgrains may be helpful.

CHAPTER XII

EMPLOYMENT AND EARNINGS

INTRODUCTION :

12.1. In the preceding chapter remuneration for labour as a factor cost has been examined with a view to determining its share in the total cost. From the weaver's angle, the remuneration for labour showing the reverse side of the medal appears as wages in common parlance. They are the earnings for the weavers which hold the key to their standards of living. The ultimate objective of all enquiries into the economics of handloom industry is to find out how far the living standards of the handloom weavers are reasonable compared with not only those of their opposite numbers in the mill sector but also those of craftsmen and artisans with similar degrees of inherited or acquired skill in the home industry sector. In study of this problem, earnings unrelated to duration of employment have hardly any significance. This chapter will thus be concerned with (1) analysis of the data relating to mandays employed ; (2) earnings in sample centres and under different organisations ; (3) present earnings compared with the past ; and (4) earnings of weavers compared with those of other categories of workers.

LEVELS OF EMPLOYMENT :

12.2. Since the easing of the yarn situation in 1953 with the final decontrol of yarn, weavers are generally finding better employment. Yet this period could not be said to be entirely free from slackness of employment which was invariably caused by accumulation of stocks, in its turn caused by relatively higher costs and the serious competition on the resatively cheaper mill goods. The remedial action for this type of unemployment occurring spasmodically is to be based on the conclusions of the preceding chapter. This chapter will be concerned with an assessment of the earnings of weavers, the Hamlet of the Hand loom Industry and with the data collected relating to wages and the volume of employment. Analysis will proceed on the assumption that this volume of employment will be maintained in the near future. Relevant data collected in schedule II cover 32,758 weavers in all the sample centres in the 13 districts. The average number of working days per month in each centre and for each district, together with average number of hours of work per day, have been worked out (*Vide* Appendix). The statement on the page reverse summarises the data found in the appendix, with some further computation.

12.3. It may be seen that the employment position is fairly satisfactory, if full employment is reckoned as 25 days of work in a month. The average number of days per month is found to vary from 21.5 days in Tanjore to 25.25 days in Ramanathapuram district. But these data relating to average number of days per month are not strictly comparable because the number of hours per working day show a wide variation from district to district. The average number of hours per working day shown in column 7 varies from 7.5 in the district of Tiruchirapalli and Tanjore to 9.6 in Mathurai. To eliminate the influence of this variable and to determine more exactly the volume of employment, a standard rate of 8 hours of work per day is applied to the relevant data and the results are tabulated in column 8. According to this computation, the number of standard working days of 8 hours each varies from 20 in Tanjore to 28 in Mathurai.

12.4. The reasons for this variation in the volume of employment between the various districts are many and complex. Supply of yarn of required counts and in adequate quantities, facilities for dyeing the yarn and other conditions have already been mentioned. Wherever preparatory processes like warping and sizing are done at a distant place as for Palayamkottai at Paramakudi another reason creeps in. There is more regular employment in the case of plain weave and utility clothes than in specialities. There is also the market factor and unsold stocks lessen the tempo of work given particularly by master weavers. Throw shuttle equipment runs a tortoise race and thereby provides more steady

XII-1. AVERAGE NUMBER OF WORKING DAYS PER MONTH AND WORKING HOURS PER DAY

No.	District	Number of centres	weavers	Average No. of days per month	Average No. of hours per month	Average No. of hours per working day	No. of standard working days of 8 hours each
1	2	3	4	5	6	7	8
1.	Mathurai	8	1,712	23·25	1,788	9·6	28·0
2.	Tirunelveli	8	3,810	25·0	1,622	8·0	25·25
3.	Ramanathapuram	8	3,500	25·25	1,748	8·6	27·3
4.	Madras	1	483	24·00	192	8·0	24·0
5.	South Kanara	2	154	23·00	368	8·0	23·0
6.	Malabar	12	1,234	23·50	2,584	9·2	27·0
7.	Tiruchirapalli	8	981	23·00	1,383	7·5	21·6
8.	Tanjore	2	685	21·50	321	7·5	20·0
9.	Coimbatore	12	2,905	24·00	2,596	9·2	27·0
10.	South Arcot	8	881	24·60	1,705	8·6	26·8
11.	North Arcot	8	2,051	24·00	1,528	8·0	24·0
12.	Chingleput	12	4,365	22·0	2,225	8·4	23·2
13.	Salem	18	9,997	24·00	4,487	7·9	24·2
	Total	108*	32,758				

* For the purpose of this analysis, Salem district gets 18 centres, instead of 14. Hence the total number of centres is 108 instead of 104.

employment. In weaving mixed fabrics, ready availability of art silk yarn brings is another factor. It is not easy to determine the availability of employment separately for various types of fabrics, utilising various counts of yarn as they are conditioned by these complex factors. The data in the above table reveal in broad outline the general levels of employment in various districts.

PRESENT EARNINGS :

12.5. Although there are various categories of workers like winders, warpers, sizers and weavers, the system of piece wage payment almost universally prevalent as well as the multiple activity status of weavers precludes the possibility of studying their respective earnings. In collecting the data about earnings weavers were requested to furnish their actual earnings in the month preceding the date of investigation, as that alone was found to be feasible. In processing the data a classification of fabrics according to counts was made in order to find out the relationship between the counts used and the wages earned. In this special study centres noted for 2/20s, 20s, 40s and 80s were selected (*Vide* table below): —

XII–2. EARNINGS

Centre	Earnings	Centre	Earnings
2/20	Rs. as. p.	20s	Rs. as. p.
1. Kozhikode ..	19 4 0	1. Dharapuram ..	15 11 0
2. Karur	27 8 0	2. Uthiramerur ..	16 4 0
3. Tirupur	51 0 0	3. Sevalpatti ..	16 4 0
40s		4. Chirakkal ..	17 4 0
1. Sevalpatti ..	21 0 0	5. Elayavoor ..	25 14 0
2. Naduvattam ..	23 8 0	6. Tellicherry ..	20 0 0
3. Talipadi	24 0 0	7. Kottayam ..	21 0 0
4. Mangalore ..	24 6 0	8. Kannirod ..	23 0 0
5. Dharapuram ..	25 8 0	9. Coyalamannam ..	..
6. Kangayam ..	26 9 0	10. Pazhambalacode ..	27 0 0
7. Pollachi	31 0 0	11. Erode	27 5 0
8. Kottayam ..	31 0 0	12. Villupuram ..	34 8 0
9. Pazhambalacode ..	33 0 0	13. Tiruvamuthur ..	16 4 0
10. Conjeevaram ..	33 0 0	80s	
11. Tiruparkadal ..	33 10 0	1. Kumbakonam ..	36 4 0
12. Pudupakam ..	34 6 0	2. Mangalore ..	38 2 0
13. Valapandal ..	36 0 0	3. Pollachi	38 6 0
14. Bhuvanagiri ..	36 2 0	4. Tirupur	38 10 0
15. Karaikudi ..	38 8 0	5. Madras (Kambai) ..	48 0 0

FABRICS OF 2/20s :

12.6. With regard to fabrics of 2/20 counts data relating to the three centres Kozhikode, Tirupur and Karur are tabulated. The average monthly earnings per weaver at each centre are Rs. 19-4-0 at Kozhikode, Rs. 27-8-0 at Karur and Rs. 51-0-0 at Tirupur. The high earnings at Tirupur are due to two reasons. The fabric woven here is bedsheet but towels in the other two centres. Again Tirupur provided more days of employment than the other two centres. Though an extreme case, it was thought fit not to omit Tirupur lest an unrealistic picture should be presented. The average earnings for weaving 2/20s should however be put somewhere between Kozhikode and Karur, say Rs. 23-0-0 because it is not given to all centres to weave the more rewarding bedsheets for obvious reasons.

FABRICS OF 20s :

12.7. For fabrics of 20 counts data relating to 13 centres are given in the table. The average earnings of a weaver per month vary from Rs. 15-11-0 at Uthiramerur to Rs. 35-12-0 at Chirakkal. The latter centre is reputed for furnishing fabrics as also Elayavoor recording Rs. 34-8-0. Here too the average earnings of all these centres will falsify the position. Taking the median, earnings per month are about Rs. 21-0-0 occurring at Erode. It may be seen that 2/20s fabrics help the weaver with better wages but those fabrics are produced in much smaller quantities than fabrics of 20 counts.

FINE FABRICS :

12.8. Earnings of weavers of fine fabrics of 40 counts in 15 centres vary from Rs. 21-0-0 per mensem at Sevalpatti to Rs. 38-8-0 at Karaikkudi. Taking once again the median, the average earnings per month of weavers weaving 40s are Rs. 31-0-0 seen at Kottayam.

SUPERFINE FABRICS :

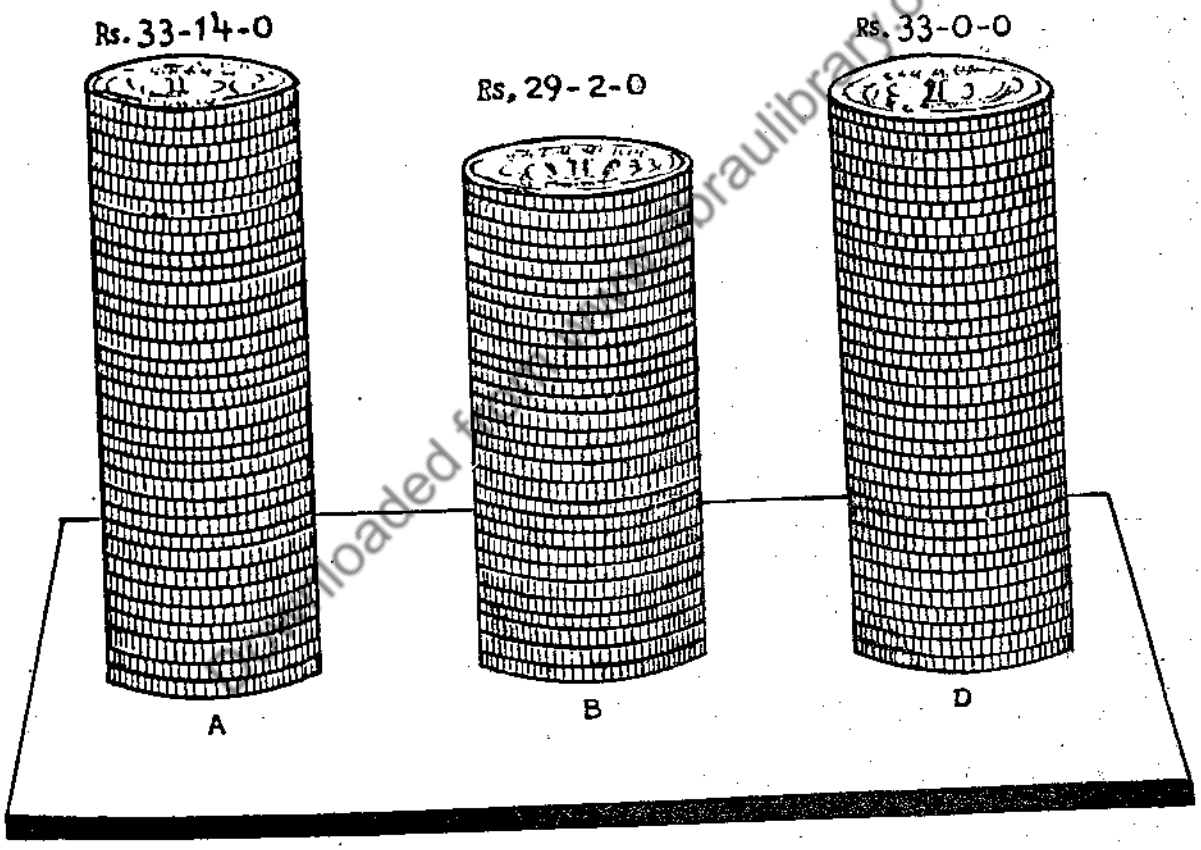
12.9. For fabrics of 80 counts average wages earned at five centres are tabulated. They vary from Rs. 38-6-0 at Kumbakonam to Rs. 48-0-0 in Madras. The latter is high not because of the metropolitan character of the place but the cloth woven is Kambai. In this category the median of earnings is Rs. 38-6-0 found in Pollachi.

12.10. The foregoing analysis clearly indicates that the earnings of weavers are less than Rs. 40 per mensem for more than 20 days of work, frequently dipping below Rs. 25 per mensem. Since earnings appear to vary with the counts of yarn, the recent upward trend in the output of finer fabrics should be deemed a favourable factor in raising the earning capacity of the weavers. This uptrend is of course limited by the ever fluid market situation which is the resultant of the triple forces of stocks, costs and competitve strength of the mill goods.

EARNINGS OF WEAVERS—ORGANISATION-WISE :

12.11. Apart from variations in earnings depending on counts of yarn, it will be of interest to investigate as to whether the different types of organisations of weavers have any bearing on their earnings. Benefits in regard to finance, regular supply of yarn and warps and marketing derived from Co-operative Societies and master weavers have already been indicated. It is appropriate and necessary to consider the question whether these agencies are helpful in increasing the weavers' earnings. The real test of the success of any organisation should be in the excess of earnings of its members over and above those of other organisations. Data relating to earnings collected in the present enquiry have been analysed

AVERAGE MONTHLY EARNINGS OF WEAVERS
(ORGANISATION-WISE)



A INDEPENDENT WEAVERS

B COOPERATIVE SOCIETY WEAVERS

D WEAVERS WORKING UNDER MASTER WEAVERS

with this object in view as shown in appendix XI. A summarised version of the processed data giving the district averages is shown below :—

XII-3

District.	Average monthly earnings		
	Independent	Co-operative	Master weaver
	Rs. as. p.	Rs. as. p.	Rs. as. p.
1. Tiruchirapalli	30 0 0	27 0 0	31 10 0
*2. Tanjore	39 3 0	37 10 0	38 4 0
*3. South Kanara	41 6 0	31 15 0	38 13 0
*4. Malabar	25 9 0	23 8 0	24 8 0
*5. Madurai	38 3 0	30 0 0	33 15 0
*6. Ramanathapuram	31 10 0	23 15 0	24 7 0
*7. Tirunelveli	25 6 0	25 2 0	25 2 0
8. South Arcot	21 2 0	23 3 0	24 0 0
*9. North Arcot	24 8 0	23 14 0	24 7 0
*10. Madras	44 0 0	40 0 0	37 4 0
11. Chingleput	26 14 0	27 7 0	27 1 0
*12. Coimbatore	37 3 0	32 6 0	33 12 0
13. Salem	31 2 0	33 13 0	33 12 0

12.12. In the processing of the above data, the only criterion of organisation to which the weavers belong has been taken into account. Distinctions relating to fabrics and counts of yarn have been ignored. Yet the sample of weavers occurring in each district whose earnings have been aggregated to strike averages may be taken to be fairly representative of all weavers using throw as well as fly shuttle, and weaving lower and higher counts of yarn. These averages, despite their short comings due to averaging, broadly indicate the general position. They may be relied upon to yield approximate if not accurate picture of the comparative situation of the differential earnings due to differences in organisation. In the more comprehensive picture available in the appendix, no firm assessment could be made because in that large forest of statistics it is likely that one cannot see wood for trees.

12.13. The most remarkable conclusion from the above table is the higher earnings of the individual independent weavers in nine out of the thirteen districts indicated by asterisks (*). The excess earnings are relatively high in Mathurai, Ramanathapuram, Madras and Coimbatore districts amounting to Rs. 4-4-0, 7-3-0, 6-12-0 and 3-7-0 respectively. Earnings of weavers working under master weavers are higher than in the other two organisations in Tiruchirapalli and South Arcot districts, being Rs. 1-10-0 and Rs. 2-14-0 respectively above the earnings of independent weavers. Weavers in Co-operative Societies are found to have higher earnings than their compeers in the other organisations in the two districts of Chingleput and Salem, the excess earnings being Rs. 0-8-0 and Rs. 2-11-0 respectively above the independent weavers. Further statistical analysis of the data relating to the earnings of weavers in the above three organisations has been done to find out the overall State position. The average monthly earnings of independent weavers work out to Rs. 33-14-0 compared with Rs. 33-0-0 for weavers working under master weavers and

Rs. 29-2-0 for weavers in Co-operative Societies. The standard deviation works out to 7·6, 8·8 and 6·0 respectively. (*Vide* Statistical Note at the end of the Chapter). They indicate one merit regarding earnings in the co-operative fold; they do not vary as widely from centre to centre as the earnings of independent weavers but it is the earnings of the weavers working under master weavers which vary most widely, showing both the cleverness of the master weavers in manipulating wages from time to time and place to place and the abject submission of the weavers working under them. These findings are not quite flattering to either master weavers or Co-operative Societies. The higher earnings of the independent weavers may be due to their better calibre as workers or to their more sound financial position. These two reasons will be evident to one conversant with the handloom weavers among whom it is the less solvent and the less self-reliant who tend to approach the master weaver or join the Co-operative Society. These findings incidentally throw light on another significant fact. The desiderata for rehabilitating the handloom weavers are solvency and a spirit of self-reliance. The Co-operative Societies appear to have reduced misery but have not yet improved the finance and morale of members. Their system of supplying warps and paying wages almost like master weavers is not conducive to the development of those two virtues that are necessary for a sense of independence and material well being.

EARNINGS OF WEAVERS—PAST AND PRESENT :

12·14. Besides this still picture of the earnings of weavers at the time of investigation in the various districts and according to different types of organisation, a better appreciation of the earnings situation calls for its comparison with a base period. It is necessary that this base period should have been normal enough to provide more or less the same volume of employment as 1956. The Report of the Court of Enquiry into Labour Conditions relates to 1946 which was one of abnormal shortage of yarn and severe under employment. No year after the cessation of the war has claims to be selected, on account of abnormalities of one kind or another. So we are compelled to go back to 1940 (Fact Finding Committee Report) which cannot be objected to as too distant a period although cataclysmic changes in the intervening period make it appear so. The Fact Finding Committee has reported on employment as fairly normal. It has also given earnings of weavers for nine out of the thirteen districts of the Madras State. For most of the districts both minimum and maximum earnings are reported. Comparable data from the present survey are given with them in the table opposite.

12·15. The percentage increase of the minimum and maximum wages in 1956 compared with 1940 is not uniform in all the districts. They vary from 140 per cent in the case of minimum earnings in Mathurai-Ramanathapuram districts to 440 per cent in the case of maximum earnings in Coimbatore district in respect of the earnings of independent weavers. Similar variations are from 141·6 per cent for minimum earnings in Tiruchirapalli, 566 for maximum earnings in Coimbatore in respect of weavers working under master weavers and from 140 per cent in the case of minimum wages in Mathurai-Ramanathapuram district to 366·6 in the case of maximum wages in Chingleput district for weavers belonging to the Co-operative fold. These percentage increases become meaningful only when they are juxtaposed with the cost of living index numbers of the respective zones for August 1956 given in column 11. There are available six series of cost of living index numbers for the six towns Madras, Cuddalore, Tiruchirapalli, Mathurai, Coimbatore and Kozhikode representing the six zones into which Madras State has been divided for this purpose. Weavers' earnings should be deemed fair if the increase in them is commensurate with the rise in the cost of living index numbers of the concerned zones. Applying this standard, it may be seen that earnings lag far behind the living costs in Chingleput, South Arcot, Tiruchirapalli, Mathurai-Ramanathapuram, Salem, South Kanara and Malabar in respect of both minimum and maximum earnings for weavers belonging to all the three organizations. Again minimum earnings are lower than warranted by living costs in Tirunelveli, and Coimbatore

XII–4. MONTHLY EARNINGS OF DIFFERENT CLASSES OF WEAVERS COMPARISON BETWEEN FACT FINDING COMMITTEE AND SAMPLE SURVEY

No.	District		Independent			Under master weavers			Co-operatives			Cost of Living Index August 1956
			F. F. C.	Survey	Per cent	F. F. C.	Survey	Per cent	F. F. C.	Survey	Per cnet	
1	2		3	4	5	6	7	8	9	10	11	12
1.	Chingleput	.. Min.	10 0 0	20 0 0	200	10 0 0	19 8 0	195	10 0 0	23 0 0	230	372·0
		Max.	15 0 0	40 0 0	266·6	12 0 0	41 5 4	344·3	12 0 0	44 0 0	366·6	..
2.	South Arcot	.. Min.	9 0 0	13 8 0	150	6 8 0	15 0 0	230·2	7 12 0	22 4 0	287·1	..
		Max.	N. A.	24 4 0	..	..	35 0 0	..	..	24 0 0	..	391·3
3.	Tiruchirapalli	.. Min.	12 0 0	21 8 0	179	9 8 0	22 11 6	238·8	11 8 0	24 0 0	208·7	..
		Max.	N. A.	36 10 0	..	..	40 11 6	..	..	35 0 0	..	372·2
4.	Mathurai-Ramnad	.. Min.	15 0 0	21 0 0	140	15 0 0	21 4 0	141·6	15 0 0	21 0 0	140	..
		Max.	20 0 0	55 0 0	275	..	46 0 0	..	20 0 0	31 0 0	155	374·1
5.	Tirunelveli	.. Min.	10 0 0	17 0 0	170	8 0 0	18 0 0	225	9 0 0	21 8 0	238·8	..
		Max.	12 0 0	35 4 0	293	10 0 0	36 0 0	360	11 0 0	34 5 4	311·9	374·1
6.	Coimbatore	.. Min.	7 8 0	17 0 0	226·7	7 8 0	17 8 0	233·3	..	20 0 0	..	..
		Max.	10 0 0	44 0 0	440	11 4 0	54 12 0	486·6	..	48 10 8	..	425·0
7.	Salem ..	.. Min.	12 0 0	19 5 4	160	9 0 0	20 0 0	222·2	10 0 0	23 4 0	232·5	..
		Max.	15 0 0	44 0 0	293·3	10 0 0	56 10 8	566·2	15 0 0	52 0 0	346·7	425·0
											262·5	
8.	South Kanara	.. Min.	12 0 0	38 2 0	325·0	10 0 0	25 0 0	250·0	12 0 0	31 8 0	..	..
		Max.	N. A.	44 9 0	..	..	32 10 8	..	..	32 6 0		437·6
											..	
9.	Malabar ..	.. Min.	5 4 0	17 10 0	..	..	15 0 0	..	..	18 4 0	..	..
		Max.	..	38 5 4	340	..	33 0 0	..	..	37 8 0		437·6
											..	
10.	Tanjore ..	.. Min.	..	34 0 0	..	36 0 0	36 3 8	..	..	35 3 2	..	..
		Max.	..	44 6 5	..	..	40 9 4	..	..	40 0 0		372·2

districts in the case of all groups of weavers. There are only three cases where the indices of earings are higher than those of cost of living index of the concerned zones : (1) maximum earnings of weavers under master-weavers in Tirunelveli, the indices being 493·6 and 374 respectively, (2) maximum earnings of independent weavers in Coimbatore, the indices being 440·0 and 425·0 respectively and (3) maximum earnings of weavers working under master weavers again in Coimbatore district the indices being 566 and 425 respectively. Obviously earnings are inadequate to meet the higher living cost, even to maintain the standards of living enjoyed in 1940 which were recognised to be highly unsatisfactory in those days. Earnings may be inadequate only under two circumstances of underemployment and underpayment. It has already been seen that there is near full employment. During this survey there was hardly any complaint about lack of employment. Logically, less than living wages are being paid. Why they are paid can be easily answered. More wages would mean more labour cost, leading to further increasei n the price of handloom fabrics, already too high to attract buyers in a free market. The above analysis thus makes it an inescapable conclusion that the earnings could not be raised without increasing productivity per man-day. This could be achieved only by a rationalisation of the process and improvement in technique.

WEAVER'S EARNINGS *Vis-A-Vis* HIS CONFRERES :

12.16. In the course of the present survey, it was found out that the universal ambition of the handloom weavers is to attain that amount of material well-being as enjoyed by the spinners and weavers in textile mills. Indeed some of their leading spokesmen at Gudiyatham, Palani, Aruppukotai and Tenkasi declared that if ever spinning or weaving mills were set up in their vicinity all the handloom weavers would be the first to offer themselves as workers. This climate of opinion has been created because of the gross inequalities in the earnings of the handloom weavers and their confrere in the mill sector. Against the average earnings of less than Rs. 40 a month, the mill operatives earn Rs. 68·5 per month (*vide* Indian Textile Journal—Centenary Souvenir P. IXXXVII).

12·17. Among the village artisans and craftsmen, masons, carpenters, potters, blacksmiths and goldsmiths enjoy the same status of skilled workers as the weavers. The potters' vocation is the most analogous to the weavers, both providing fairly regular employment at home with the assistance of family helpers young and old and both being subject to small interruptions owing to inclement weather. The potter is also being pushed to the wall by the advent of the aluminium and other metallic utensils as weaver by the mill output. So far there has been no proper study of the wages and earnings of potters. Among the other village craftsmen, the plight of the goldsmith is the least enviable and his vocation is at the vanishing point due to heavy concentration of goldsmithy in urban areas. The other craftsmen are generally underemployed and their daily wages have risen to Rs. 3 or more. Owing to lack of data no valid comparison of their earnings could be made. With regard to agricultural labourers, however, the recent All-India Enquiry into Agricultural Wages has provided reliable data of their earnings. Notwithstanding the fact that they are classified as unskilled, their earnings of Rs. 20 to Rs. 25 per month are on a par with and in cases in excess of the minimum earnings of the handloom weavers as revealed by the present enquiry.

12·18. The arguments and findings set forth above and in the preceding chapters inevitably lead to the conclusion that the earnings of handloom weavers are deplorably low. Without a radical reorganisation, no amount of subsidy or supply of yarn or the traditional loom could brighten up the bleak prospect before the handloom weavers. To preserve a great national heritage and to enable the great community of handloom weavers to live in reasonable comfort, the earnings of a weaver's family should be raised as a former Minister for Industries and Commerce pointed out to at least Rs. 3,000 a year. How the problem of the handloom industry should be tackled cannot be stated better

than in the words of Prof. W. Arthur Lewis (Theory of Economic Growth pages-138-139). "The prospect of small scale industry depends, next, upon improvement of its techniques. Often the tools in use have not changed for centuries, and it is possible to improve them very substantially, in the light of modern experience without altering the basic skills required by the craftsman. In small scale industry, efficiency and the prospect of survival are much enhanced if there are agencies charged with experimenting in improving the craftsmen's tools and techniques, and with spreading the new knowledge amongst them. Improvements in technique are not confined to equipment ; the craftsman can be introduced to better materials, e.g. for dyeing ; or to ways of testing his materials ; or of ensuring greater accuracy or standardization. Of course, the greatest revolution which has been made in techniques is to attach small electric motors to the craftsmen's tools, and to connect them to electricity; this alone multiplies output per man."

CONCLUSIONS :—

12·19. The problem of earnings could not be studied isolated from duration of employment. The present survey reveals that handloom weavers are enjoying near full employment varying from 20 to 28 standard days of 8 hours each per month. But earnings are not so satisfactory. The average earnings per month per weaver are Rs. 23 for weaving 2/20s, Rs. 21 for 20,s Rs. 31 for 40s, Rs. 38 for 80s and above.

12·20. It is apparent from the analysis of the data that in general the average monopoly earnings of independent weavers work out to Rs. 33-14-0 compared with Rs. 33 for weavers working under master weavers and Rs. 29-2-0 for weavers in the co-operative fold.

12·21. With reference to the costs of living weavers' real earnings in 1956 are slightly lower than those in 1940.

12·22. Compared with the textile mill operations the earnings of handloom weavers are less than 60 per cent. In several cases their earnings are as low as the earnings of unskilled agricultural labourers. Consequently the levels of living are low. They cannot be raised by paying higher wages as they are precluded by the findings of Chapter X. The only alternative is to increase their productivity.

STATISTICAL NOTE ON ANALYSIS OF THE MONTHLY INCOME OF WEAVERS

Handloom weavers have been classified under 3 major organisations *viz.* (1) Independent weavers (A), (2) Members of weavers co-operatives (B) and (3) Weavers working under master weavers (D). An analysis of the income of weavers belonging to each category is of practical value in revealing a true picture of the economic conditions and the standard of living of the wage earners and independent weavers which will be complimentary to the aspect reflected in 12·5 to 12·9.

The number of earners in the sample for whom reliable data relating to the monthly incomes were available includes 13,385 independent weavers, 11,223 belonging to co-operatives and 50,975 working under master weavers. The relevant table classifying the results of the investigation is given on page reverse. This indicates the monthly earnings of weavers belonging to each category.

The table reveals that the higher income groups exceeding Rs. 48 have a low frequency of 5 for the 1st category, varies from 5 to 89 for the 2nd and reaches upto 988 for the last category. The bulk of the income ranges between Rs. 21 to Rs. 44 for all the categories and no vital distinction between the different types is seen. If the sample which was taken with as much precision as possible can be considered as one reflecting the general

XII–5. FREQUENCY DISTRIBUTION OF EARNERS UNDER DIFFERENT ORGANISATIONS

Class interval	Independent weavers				Members of weavers co-operatives				Weavers working under master weavers			
	Maximum	Rs. 55–0–0	Minimum	Rs. 13–8–0	Maximum	Rs. 52–8–0	Minimum	Rs. 13–8–0	Maximum	Rs. 56–10–0	Minimum	Rs. 15–0–0
	f	d	fd	fd	f	d	fd	fd	f	d	fd	fd
13 – 16 ..	10	–5	–50	250	38	–5	–190	950	161	–5	–805	4,025
17 – 20 ..	753	–4	–3,012	12,048	307	–4	–1,228	4,912	2,851	–4	11,404	45,616
21 – 24 ..	784	–3	–2,252	3,756	1,973	–3	–5,919	17,757	8,050	–3	–24,150	72,450
25 – 28 ..	3,133	–2	–6,266	12,532	4,465	–2	–8,930	17,860	7,931	–2	–15,862	31,724
29 – 32 ..	876	–1	–876	876	1,114	–1	–1,114	1,114	5,555	–1	–5,555	5,555
33 – 36 ..	3,685	0	0	..	1,654	0	..	..	5,592	..	..	..
37 – 40 ..	1,178	1	1,178	1,178	1,279	1	1,279	1,279	8,705	1	8,705	8,705
41 – 44 ..	3,489	2	6,978	13,956	282	2	564	1,128	9,145	2	18,290	36,580
45 – 48 ..	644	3	1,932	5,796	17	3	51	153	1,061	3	3,183	9,549
49 – 52 ..	..	4	4	16	89	4	356	1,424	988	4	3,552	14,208
53 and above..	11	5	55	275	..	..	25	125	936	5	4,680	23,400
Total ..	13,385	..	–2,309	50,683	11,223	..	–15,106	46,702	50,975	..	–19,366	2,51,812

trend in the industry we will not be mistaken in concluding that it may be a normal distribution as far as the normal population is considered. Hence the range of variability of income has between—

$$33{\cdot}9 \pm \frac{3 \times 7{\cdot}6}{13385} \text{ i. e. } 33{\cdot}7 \text{ to } 34{\cdot}1 \text{ for } A^s$$

$$29{\cdot}1 \pm \frac{3 \times 6}{11223} \text{ i. e. } 28{\cdot}9 \text{ to } 29{\cdot}2 \text{ for } B^s$$

$$33 \pm \frac{3 \times 8{\cdot}8}{50975} \text{ i. e. } 32{\cdot}9 \text{ to } 33{\cdot}1 \text{ for } D^s$$

While at the low level Rs. 13 is available per head, the highest income group ranges from Rs. 53 to Rs. 56. But it must be added that the latter is limited to less than a dozen independent weavers, 5 society weavers and 936 in the last group. It may also be pointed out that if weavers belonging to the last 3 income groups were to be excluded from the frequency table the average will fall down with considerable reduction in the Standard deviation.

A comparative table bringing out the salient features of the industry among the 3 major divisions of weavers employed therein as given below :—

	A	B	D
	Rs.	Rs.	Rs.
Average ..	33 14 0	29 2 0	33 0 0
S. D. ..	7·6	6·0	8·8
Coefficient of dispersion ..	22·4	20·6	26·5

The following facts emerge from the above table:—

(1) Irrespective of the categories of workers the average income per weaver actually employed is practically the same, the lowest being Rs. 29-2-0 for the society weavers and the highest Rs. 33-14-0 for independent weavers.

(2) The range of variability for these average incomes does not show any highly marked fluctuations to distinguish one category from another.

(3) Looking at the average income available per member per month it is definitely low, the lowest being Rs. 13-8-0 and the highest Rs. 55-0-0. It is this aspect of the question that requires the greatest consideration in any attempt to raise the standard of living of the average Handloom weavers family.

(4) On an examination of the various samples and on the hypothesis that the samples chosen are perfectly random samples it is a matter for testing whether the population from which the samples have been drawn is normally distributed. But a scrutiny of the tables confirms this view.

Since the amount of variations by itself is not of any significance in comparing the dispersions of the 3 series an attempt to measure the coefficient of dispersion is made. This again confirms the fact that the 3 series do not differ much in their average magnitude and the absolute variation between them is considerably less.

CHAPTER XIII

HANDLOOM FACTORIES AND KARKHANAS

PLACE OF FACTORIES AND KARKHANAS :

13.1. Although handloom weaving is primarily a home industry there has been a significant growth of Factories and Karkhanas in the past three decades. As the Enumeration Survey has revealed, the estimated number of looms is 25,000 in about 700 factories and 31,000 in 1,200 Master Weavers' Karkhanas making up in the aggregate about 56,000 looms which represent more than 10 per cent of the looms in Madras State. This non-household sector is marked by certain distinct characteristics. Foremost among them is the essentially capitalistic organisation with its counterpart of an army of loomless proletarian weavers. This sector is also a typical manifestation of the merits and defects of unrestricted free enterprise. Private enterpreneurship has shown considerable initiative and enterprise in developing improved types of looms and a rich variety of new fabrics. The introduction of frame looms and fly shuttle on a large scale, dobby and jacquard equipments, adoption of new colour schemes and manufacture of new varieties like bed-sheets, furnishing fabrics, Turkey towels and shirting, conquest of new markets in Europe and America may be cited, as the achievements of this enterpreneur class. In the race of improving techniques and producing new lines, owners of factories generally led and the master weavers avidly followed. Few could have imagined at the beginning of the century that such enormous capital could be raised and invested in handloom factories. It is also generally found that Factories and Karkhanas provide more regular employment to the weavers. However, there is a feeling that factories exploit loomless weavers by depressing their wages unduly and the master weavers keep their weavers ever indebted to them.

13.2. The rapid development of factories has received a sudden set back after World War II on account of the general depression in the industry and stringent implementation of the Factory Act and the rising demands of organised weavers. Neither in their heyday nor at present have the factories received directly any substantial Government aid except for the indirect benefit that accrued from the war time boom in demand for handloom goods. The Master Weavers' Karkhanas did also contribute to increase employment and output in critical years of short supply of cloth. Under the present policy of subsidised expansion of co-operative movement to bring all the weavers into the co-operative fold and provide them with looms and finance even if they had neither, it is indeed difficult to forecast the future of Factories and Karkhanas alike. Their survival is reduced to a function of the failure to reach the proposed targets in regard to co-operative expansion. It is this unpredictable situation that lends topical interest to an investigation into their economic conditions.

SAMPLING PROCEDURE :

13.3. The Enumeration Survey, as already stated, covered 454 or about 60 per cent of the total number of factories having 15,661 looms and 60 or 5 per cent of the total number of Master Weavers' Karkhanas having 1,712 looms. The Economic Survey covers 168 or roughly 24 per cent of the existing factories and all the 60 Master Weavers' Karkhanas occurring in the Enumeration Survey. The number of factories has been so reduced as to obtain from the non-household sector a 15 per cent sample of looms.

It was because of the extremely heterogeneous character of the units in the non-household sector that a higher sampling fraction of 15 per cent as against 10 per cent in the household sector has purposively taken for enhancing the reliability of the findings.

Out of the 13 districts in the state, 4 had no factories at all and the fifth, Tirunelveli district, had three handloom establishments managed by the schools for the delinquents and the handicapped which hardly possess the business traits of a factory according to our concept. In the other eight districts the sample factories were chosen, allowing due weightage to the scatter, size and growth of factories in them. As a result the selected 168 factories have 5,893 looms.

13·4. As for the Master Weavers' Karkhanas it was decided to have all the 60 units enumerated as the sample for the Economic Survey, as they represented only 5 per cent of the estimated total number of Master Weavers' Karkhanas and a further reduction in the sample in this sector was considered undesirable. A special schedule was devised for Factories and Karkhanas to collect data relating to the classification of looms, fixed and working capital, labour employed, wages paid and the goods produced. (*Vide* appendix II). An analysis and interpretation of the data collected is attempted in this Chapter.

IDLE LOOMS IN FACTORIES AND KARKHANAS :

13·5. A general comparison of Factories and Karkhanas with the household sector in respect of active and idle looms has already been made in Part II. Further analysis of the data collected in the Enumeration Survey relating to Factories and Karkhanas is undertaken here. Relevant data are tabulated in the statement on pages 131 and 132. Of the total sample of 454 factories, 146 occur in Malabar, 89 in Tiruchirapalli, 71 in Coimbatore, 68 in Mathurai, 51 in Salem, 24 in South Kanara and less than three each in the other districts. These figures reveal broadly the order of importance of the various districts in respect of handloom establishments. This sample of 454 factories has 15,661 looms, of which 11,355 are active looms, the percentage of idle looms working out to 27·5. The sample of 60 Master Weavers Karkhanas is distributed in five districts, Malabar once again leading the rest. The total number of looms in them is 1,712 of which 1,568 are active looms, the percentage of idle looms working out to 8·4. The reasons for the low percentage of idle looms in the latter have been explained in Part II.

SIZE OF UNITS :

13·6. Factories as well as Karkhanas are found to be of varying size. The number of looms in the factories in the sample varies from 14 to 250 and that of Karkhanas from 11 to 85. It would be of interest to know what would be the optimum size in these two types of handloom establishments. For this purpose the sample units covered by the Enumeration Survey are arranged in a frequency table as shown below :—

XIII–2.

Class interval of looms.	No. of Factories.	No. of looms.	No. of Karkhanas.	No. of looms.
10 and Below	..	..	..	..
11 to 20	51	821	3	55
21 to 30	141	3,603	42	986
31 to 40	116	3,890	5	165
40 and above	146	7,347	10	506
Total ..	454	15,661	60	1,712
Median		31·9		28·8
Mode		29·9		27·2
Mean		33·9		29·6
General Average		34·5		28·5

District	No. Units	Looms Total	Looms		Per cent of idle to total	Looms per Unit	Weavers	
			Active	Idle			Males	Females
1. Madras	..	..	..	..	..	..	..	..
2. Chingleput	1	22	22	..	..	22	22	..
3. South Arcot	1	28	27	1	3·5	28	27	..
4. North Arcot	..	..	..	..	..	..	..	..
5. Salem	51	821	763	58	7·1	16	726	37
6. Tiruchirapalli	89	2,901	1,936	965	33·2	32·5	1,726	210
7. Tanjore	..	..	..	..	..	..	..	..
8. Mathurai	68	1,856	1,681	175	9·4	27·2	1,681	..
9. Ramanathapuram	..	..	..	..	..	..	..	..
10. Tirunelveli	3	114	104	10	9·8	38	104	..
11. Coimbatore	71	1,697	1,587	110	6·5	24	1,587	..
12. Malabar	146	7,347	4,776	2,571	35·0	50·3	4,774	2
13. South Kanara	24	875	459	416	47·5	36·4	459	..
STATE ..	454	15,661	11,355	4,306	27·5	34·4	11,106	249

XIII–1. PART II—ENUMERATION SURVEY-MASTER WEAVERS

District	Units	Looms			Per cent of idle to total	Looms per Unit	Weavers	
		Total	Active	Idle			Males	Females
1. Chingleput	9	220	177	43	19·5	24·4	177	..
2. Tanjore	10	506	506	..	..	56·6	467	39
3. Ramanathapuram	5	165	165	..	..	33·0	147	18
4. Malabar	33	766	668	98	12·8	23·2	668	..
5. South Kanara	3	55	52	3	5·4	18·3	52	..
STATE ..	60	1,712	1,568	144	8·4	28·5	1,511	57

13·7. Due to extreme variation in the size of units, whether the optimum size would be located near the average, median, more or mean could not be arbitrarily settled. Hence all these measures of central tendency were worked out. It may be seen that the median is 31·9 looms for factories compared with 28·8 for the Karkhanas. The general average is 34·5 looms for factories and 28·5 for the Karkhanas and the mean is 33·9 for the former and 29·6 for the latter. The optimum size may be assumed to fall between the mode and the median when all aspects of the distribution of the units are duly considered. In that case the optimum number of looms is between 28 and 32 for factories and between 27 and 29 for Karkhanas. It is remarkable that the optima in both groups of establishments, the modern factories and the traditional Karkhanas, are very close to each other. From their analysis, it is that the organised establishment should be of a moderate size in handloom industry unlike the mill sector.

THE RESULTS OF THE ECONOMIC SURVEY :

13·8. In the sample of 168 factories, there are 5,893 looms of which 4,005 are active and 1,888 idle, the percentage of the latter being 32. The sex composition of the weavers employed in the factories and the Karkhanas reveals one important fact. The percentages of employment of women in both is of very small significance, being 1·75 in the factories and 1·66 in the Karkhanas. Both the occupiers and master weavers do not encourage the employment of women as weavers. They find that women weavers are less regular than men. Moreover employment of women entails greater responsibility regarding the provision of special amenities and therefore more expensive.

CAPITAL OUTLAY ON BUILDINGS :

13·9. As indicated in an earlier chapter, the household weavers hardly invest on workshop facilities. But in the case of factories capital outlay on buildings is of great importance. The cost of buildings in respect of the 168 sample factories amounts to Rs. 12,56,912. The average cost per factory works out to Rs. 7,482. The total cost of buildings divided by the number of looms installed in these factories would give an idea of the cost of housing space per loom and this works out to Rs. 221. Dividing the average cost of building per factory by the optimum number of 30 looms, the cost of housing space per loom amounts to Rs. 249. The total cost of 5,893 looms and other accessories in the sample factories is shown as Rs. 7,22,668. This would mean that the average cost per loom and its accessories is Rs. 123. This rather high cost is due to the frame looms generally in use and better types of accessories. The cost incurred for its housing ranges from Rs. 221 to 249 or nearly twofold. This may appear to be disproportionately heavy investment on housing, which may be characterised as the evil consequence of a capitalistic venture.

13·10. But the cost of housing of looms in a factory should not be compared with the negligible costs incurred, if at all at present, by the household weavers but with the additional cost now deemed necessary for renovating, if not building anew, the existing hutments of the handloom weavers. Deducting the cost attributable to the provision of better home comforts to weavers, the direct costs for housing the looms would seldom be less than that of factories. It is necessary in this kind of comparison to examine the source from which the required capital comes for housing rooms in the factory and household sectors. In the case of factory it is provided by the private enterpreneour. In the case of household weavers, it has got to be mainly provided by the Government. Need it be added that ultimately this comparative study in search of intrinsic merits should rest on the magnitude of social costs involved.

13·11. Similar study in relation to the costs of buildings and looms of the Karkhanas are neither possible nor necessary. Since most of the Karkhanas as already mentioned, are flimsy thatched sheds or old ramshackle buildings, it is not possible to collect reliabe

data relating to costs of building. As for looms most of them are pit looms and hardly different from those of household weavers.

WORKING CAPITAL :

13·12. The working capital of factories consists of cost of yarn taking a lion's share cost of chemicals, starch, etc., and finally wages. The taxes, Local, State and Central, paid by them are important particularly in view of utter absence in the household sector. But they are not studied here. The sample of 168 factories has incurred an expenditure of Rs. 13,00,021 on yarn for working 4,005 active looms. The cost of yarn per loom on an average amounts to Rs. 324·6 which is much higher than Rs. 72 per loom in the household sector. This difference may be due to (i) the larger quantities of yarn necessary for weaving bedsheets and furnishing fabrics of lower counts. (*Vide* Chapter on cost of production), (ii) larger production per loom in the factory than in the household due to more continuous and intensive weaving, (iii) the greater cost of dyeing and preparatory processes necessary for making fabrics of fast colour saleable in distant and foreign markets and (iv) the necessity for putting warps much longer than 20 yards in the factories for the specialities woven by them. The sample of 60 Karkhanas is seen to have incurred an expenditure of Rs. 1,39,723 for working 1,568 active looms. The cost of yarn per loom works out to Rs. 89·1 and the excess of Rs. 17 above the average yarn cost per loom in the household sector may be attributed to a larger output per loom. The master weavers have been found to be more resourceful in providing fairly unbroken supply of yarn and work the looms more intensively than the household weavers.

COST OF OTHER MATERIALS :

13·13. The sample of 168 factories having 4,005 active looms are found to have spent Rs. 2,64,147 on purchase of materials other than yarn. On an average, expenditure under this head per loom works out to Rs. 65·9. The sample of 60 Karkhanas with 1,568 active looms spent Rs. 24,246 under this head, the average cost on other materials per loom being Rs. 15·5. These figures show that factories spend about Rs. 50 per loom more than the Karkhanas. This excess expenditure is attributable to calendering and finishing processes and miscellaneous expenses like advertisement, packing etc., incurred by factories.

LABOUR COST :

13·14. Labour cost for factories is represented by the wage bill. Data relating to wages paid are available for 160 out of the sample of 168 factories. These factories have also furnished the number of active looms and the number of working days in the year preceding the data of investigation. From these data, the total number of mandays worked in each factory is derived. From the aggregate of the number of days worked in all the 160 reporting factories on one side and the aggregate of their wages bill on the other, it is possible to work out the average earnings per working day per weaver. Near full or full employment in factories would mean employment for 20 and 25 days respectively in a month, these figures being derived from the study of the household sector in the present survey. In reality factory workers are employed for much fewer days. For purposes of valid comparison average earnings per month are estimated for 20 working days at Rs. 40 and for 25 working days per month at Rs. 50. These earnings are certainly higher than those prevailing in the household or master weaver sectors. (The earnings of weavers working under master weavers have already been studied in Chapter XII).

FABRICS PRODUCED :

13·15. It is noteworthy that the handloom factories in the West Coast as well as in Tamilnad have avoided the manufacture of superfine dhoties and sarees. But they concentrate on the manufacture of certain new varieties like furnishing fabrics, bedsheets, curtain

cloth, Turkey towels, shirting, napkins, coatings, net curtains, and dress materials. They generally consume yarns of medium and fine counts not exceeding 40s. An outstanding exception to this general pattern of fabrics and counts is the manufacture of Madras, handkerchiefs in the factory at Kosavanpetai in Chingleput District for which 60s are preferred.

MARKETING :

13·16. The handloom factories are fairly free from the two sore problems of financing and marketing with which the household sector is usually afflicted. They are in a position to get better accommodation from Commercial Banks in addition to their own resources for manufacturing expenses. In marketing, their technique is quite modern. They usually follow the methods of large scale industrial establishments. They also spend considerable sums on advertising their goods.

13·17. Despite their immunity from the common ills of the household weaver, their continued prosperity is in jeopardy on account of the growing industrial strife in recent years. Although their organisation is modelled on that of textile mills, most of them are of small size and economics of large scale production are hard to secure. Their opportunities of for making profits are as limited as those of household weavers, particularly after the war. It is not easy for them to provide as many facilities as the factories in the mill sector. In this situation the labour disputes are eating into their vitals. In view of the historic role of these handloom factories in the past, conflict between occupiers and workers should not be allowed to paralyse their operations. It would be a great national loss if they are forced to close down. Hence the issue of not only keeping them alive but also in efficient trim assumes major significance in any programme for overall rehabilitation of the handloom industry. It should be admitted that in the present *milieu* of socialist pattern, strident demand for higher wages, more closed days, less output, more labour and welfare legislation and consequent rising overheads, the prospect of the continuance as capitalistic concerns is not rosy. The conflict in the factory sector should be resolved for preserving this dynamic branch of the handloom industry and that could be done only by converting them into industrial co-operatives by suitable arrangements.

13·18. The Master Weaver's Karkhanas and the organisation of domestic weavers working under master weavers represent but the two halves of the same structure. In regard to financing, variety of fabrics produced and marketing, what has been said about one half *i. e.* about master weavers employing hired household weavers in the earlier chapters will apply *mutatis mutandis* to the other half. The master weavers are so astute that they do not allow their Karkhanas to present such an imposing facade of prosperity as the new fangled handloom factories. It is this clever management that keeps them free from labour trouble. The selfsame astuteness constitutes the chief source of strength for their survival, come what may. In this context it may be reiterated that a wholesale liquidation of the master weavers by the advance of co-operative movement is neither immediately practicable nor possible and the policy for sometime to come for co-operatives should be "live and let live."

PART IV

(Bk) VD-9—18 (Mono)

CHAPTER XIV

SUMMARY AND GENERAL CONCLUSIONS

14·1. The present survey in its two parts of Enumeration of looms and Economics of the handloom industry has necessarily ranged widely. It may therefore be helpful to present broadly the general conclusions derived from the findings of the preceding chapters.

Amazing Growth in Looms :

14·2. Since the turn of the century the handloom industry in Madras State has recorded three phases : (i) stationary phase between 1901 and 1921 ; (ii) steady growth between 1921 and 1941 and (iii) amazing growth between 1941 and 1955. In the first phase the number of looms has fallen by 6·3 per cent from 98,826 to 92,558. In the second phase there has been a rise of 107·2 per cent from 92,558 looms to 1,91,801 looms. In the third phase there has been an unprecedented rise of 150 per cent from 1,91,801 to 4,80,000 (rounded figures of the present survey). The phenomenal rise of the last phase is mainly due to the ill-conceived policy of yarn rationing based on looms resulting in the emergence of a host of idle looms. This artificial inflation in the number of looms is not only the cause and effect of underemployment but also responsible for distortion of the perspective. The unemployment of the looms has risen like a frankenstein monster swallowing the real issue of the unemployment of the weaver. Due to this nightmare of looms, frantic efforts are being made to provide full employment to looms ignoring the human factor. This looks like chasing the shadow, missing the substance. To make confusion worse confounded, targets of production are based on looms and not on weavers. If all the looms in existence are to be activised for the attainment of these targets a deliberate and organised effort to recruit and train an army of weavers to man the large host of idle looms will be inevitable. That would open up the vicious vista again of more men, more looms, aggravating and not solving the present problem.

14·3. In perspective planning, " weavers and their employment " is the only consideration that matters. The traditional weaving communities deserve an all-out help. But the large influx of outsiders in the last decade or so has complicated the problem. Lest this trend should become chronic, drastic measures to stop further infiltration are essential. This would be appreciated when it is known that the natural increase of the traditional weaving communities itself is higher than the general growth of population. The overall Weaver-Loom ratio is 1 : 1·5. This implies that about 1/3 of the looms is in excess of the requirements of weavers. From the welfare point of view, it is the weavers who should be provided with full employment. This cannot be solved by registering the looms which would once again unleash the old familiar evils of yarn distribution, producing hardly a ripple on the levels of employment and the earnings of individual weavers. There are only two steps to solve the problem of handloom weavers : One is to register them and prevent once for all artificial increase in their numbers and the other is to give them higher education and vocational training to enable them to seek fresh avenues of employment with a deliberate policy of progressively reducing the numbers depending on the industry.

Technical Superiority of the Mill Sector :

14·4. The technical superiority in weaving is overwhelming on the side of the mill sector in respect of most of the cotton fabrics. The present survey has revealed that handloom industry enjoys a fairly strong monopoly with regard to carpets, silk sarees of Conjeevaram type, solid bordered dhoties and angavastrams, coloured sarees of medium

counts of essentially utility type and common "double yarn" towels, lungis, kailies and Madras handkerchiefs. In the production of other fabrics, competition between the handloom and the mill sectors is getting progressively acute. It will not be possible for all the rebates, cesses and the aids in the repertoire of the Government to impart to handloom products of this group, the necessary competitive strength in a durable fashion. It is against this background that the constructive measures for the rehabilitation of the handloom industry will have to be designed.

14·5. The only way out of the hard realities of the situation set forth in the preceding paragraph appears to lie in the reduction of the cost of production of handloom fabrics, particularly in view of a highly price-sensitive consumers' market. The present survey has high-lighted two important components of the costs of production, namely yarn price and wages. The history of their trends since 1940 leaves no possibility of scaling them down. The rigidity of these cost factors is an unassailable fact. The only strategy of breaking the triangle of rigid costs, higher prices and low demand is to step up productivity per loom-hour of the handloom-weaver. This could be achieved only by the introduction of improved types of looms. From the purely economic standpoint of increasing social output and weavers' earnings, adoption of the power-loom is the only effective solution.

Introduction of Power-Loom :

14.6. It should be added that this conclusion relating to the adoption of power-loom pertains to the competitive group of fabrics. This means that the conversion into power-looms need not go the whole hog. As pointed out earlier, there are non-competitive fabrics which are woven by about 60 per cent of the looms in the State, silk-accounting for 8·5 per cent, cotton sarees 25·6 per cent, solid bordered dhoties and angavastrams 5·4 per cent, carpets 2·1 per cent, lungis and kailies, Madras handkerchiefs 19·2 per cent and towels 3·2 per cent. It is therefore only for the remaining 40 per cent that the introduction of power-looms appears to be inevitable, if not to ensure the prosperity of the weavers concerned, at least to prevent them from being squeezed out and cast into the morass of unemployment. In this limited scheme of conversion, finance could not be trumped up as a bottleneck in view of the recommendations of the Karve Committee for the development programme of the handloom industry from the public sector, estimated at Rs. 80 crores. As the Enumeration Survey has revealed, Madras State has about 4,80,000 looms which constitute 30·8 per cent of the total number, 1·55 million commercial looms (Kanungo Committee). Of the Rs. 19 crores ear-marked for investment by the Karve Committee, it is natural to expect 30·8 per cent or Rs. 5·7 crores to be assigned to Madras State. At the rate of Rs. 1,200 for the cost of power-loom, and Rs. 300 for installation and on the whole Rs. 1,500 per power-loom, 38,000 power-looms could be installed in this State. These power-looms will provide employment for 38,000 or 21·1 per cent of the estimated 1,80,000 weaving households in Madras State and their earnings would be increased six-fold. As it is possible to work two shifts on a power-loom, employment could be arranged for twice as many families *i. e.* 76,000 families. The economic consequences of this programme of conversion into power-looms can be summed up as follows :—

(i) 76,000 or 42·2 per cent of the estimated total number of 1,80,000 weaving families in the State will be provided with employment ;

(ii) The earnings per weaver will be raised three times ;

(iii) At the average rate of 1·7 weavers per household, the earnings per household will increase by 1·8 fold. In the new set up, out of 1·7 weavers per household one will be fully employed and he will earn 1·8 fold of the family earnings made with the help of handlooms ;

(iv) The release of 0·7 weaver per household in at least one out of five households, would mean the release of a woman weaver from the drudgery of sweating for her livelihood and release her for better housekeeping and tending the children, a social gain that defies economic calculus.

(v) According to the present survey, the 76,000 households will have 205,000 looms at the rate of 2·7 looms per household of which about 180,000 looms would have been active. They would have produced per day 9 lakhs yards of cloth. Against this, 38,000 power-looms working double-shift will be producing 19 lakhs yards.

(vi) If 0·7 weaver per household loses employment on account of the advent of the power-loom, the total unemployed weavers will be 53,200 of whom, one in five will be women and 42,500 men. Of this number of men, it may be possible for 2,500 persons to be absorbed in the preparatory processes at the rate of one man for 15 power-looms. It is only for the remaining 40,000 that alternative employment will have to be provided. If the programme of conversion suggested is staggered over five years, there would be a need for providing employment for 8,000 persons only per year.

(vii) Karve Committee has provided Rs. 42.5 crores for schemes of marketing etc., and Rs. 1·5 crores for organisation, publicity etc. Of this sum of Rs. 44 crores, the share of Madras as argued above would be Rs. 14.6 crores. The power-loom fabrics would be on a par with mill products, thus rendering the expenditure on these schemes unnecessary. Spread over five years half this amount (for the other half of Rs. 7·3 crores, *vide* paragraph 13·16) would be available at the rate of Rs. 1·4 crores per annum, which would mean Rs. 1,750 per weaver in the batch of 8,000 rendered superfluous in the handloom industry. This could be utilised as a good enough capital for any earnest unemployed weaver to start life afresh.

(viii) At the end of the five-year-period, the total number of handlooms will be reduced by 205,000 looms belonging to 76,000 families to 275,000 looms.

(ix) Application of the funds provided by the Karve Committee in this modified fashion will not result in (a) new investment in handlooms which in the longer run will succumb to the formidable competition of the mill sector; (b) expenditure on intangible overheads like marketing and publicity, difficult to organise and most open to malpractices and leakages, while it will lift the most vulnerable group of fabrics from hand-loom industry and fortify it with the help of the powerloom to face squarely the mill competition.

THROW-SHUTTLE LOOMS—A HARD CORE :

14·7. Before leaving the problem of improvements and equipment, it is necessary to refer to the suggestions regarding the conversion of throw-shuttle into fly-shuttle looms and pit-looms into frame-looms. According to the present survey, the throw-shuttle looms form 9·8 per cent of the total number of looms in the State. These looms have survived upto the present day, because they are indispensable for the production of silk sarees and solid bordered dhoties. The use of fly-shuttles has spread wherever it could, on account of its intrinsic merit of higher productivity. The data also indicate the raison d'tre for the hard core of throw-shuttles still surviving for over half-a-century after the advent of the fly-shuttle. Their preservation and encouragement will be helpful in maintaining the supply of the famous and traditional types of silk sarees and cholies and cotton fabrics, which so richly contribute to the variegated and luxurious output of the Madras handlooms. That may also lead to a lucrative export-trade earning the much-needed dollars, if this sector of the industry could be made alert and responsive enough to the Fifth Avenue fashion-designers of New York City.

FUTURE OF PIT-LOOMS :

14·8. The importance and practical utility of the pit-loom is strikingly brought out by the data collected, showing that they form 75 per cent of the total number of looms.

So far as productivity is concerned, there is virtually no difference between the pit and the frame-looms. A large scale-conversion of pit-looms into frame-looms is estimated to involve a tremendous cost for the mere process of substitution and much more for redesigning, if not rebuilding of houses. The proposal to introduce pedal-looms is less doctrinaire and more practical in its approach, but its implementation too will involve an equal, if not larger, capital outlay.

PROBLEM OF LOOMLESS WEAVERS :

14·9. In the existing labour-force of weavers, it is possible to discern three distinct categories of (a) loomowning weavers ; (b) loomless weavers and (c) women weavers. The first category, analogous to the class of peasant-proprietors in the agricultural sector, offers hardly any problem regarding ownership-management issue. From the Enumeration Survey it is estimated that there are about 1,55,000 loomless weavers in the State, of whom 100,000 are in the household and master-weaver sector and 55,000 in factories and Karkhanas. The elimination of the large army of loomless weavers—cent per cent in factories and Karkhanas and 27·8 per cent in the households should be given top-priority in the rehabilitation of the handloom industry. The present policy of helping loomless weavers to get looms of their own, lacks a comprehensive view as it turns a blind eye to its repurcussions on factories and Karkhanas. Simultaneously with this policy, an organised drive is necessary to convert factories and Karkhanas into industrial co-operatives.

PHASED WITHDRAWAL OF WOMEN WEAVERS :

14·10. According to the present survey, there is one woman weaver for every five men weavers. The total labour-force of women weavers in the State is estimated at 48,000. Its very size presents a crucial problem. The question whether they should continue to be employed as weavers has to be viewed from three standpoints—their earnings, their employment and their productivity. None disputes the fact that they do engage themselves in weaving only to augment the decidedly low family-pool of earnings. If the earnings of the adult males of the households are sufficient to ensure reasonable level of living, they would hardly take to weaving. Male weavers admit this fact and argue that their earnings should be on a par with those of their confrere in the mill sector. In essence, women's employment as weavers is a case of employment under duress and distress. The problem of the family-earnings will have to be tackled by stepping up the earnings of male weavers and not by compelling women weavers to do the arduous job of weaving. From the employment-point of view, they would be better employed in lighter jobs allowing greater scope for their legitimate duties as house-wives and mothers, which would be in consonance with the ideals of a welfare state. From the productivity standpoint, a sudden withdrawal of one-sixth of the labour-force is bound to upset targets. If the scheme of introducing power-looms is implemented, even productivity will not suffer and the power-loom programme could be carried out with minimum stress and strain on visible unemployment by an orderly withdrawal of women weavers. If this procedure is accepted, it would also guide us in locating the power-looms in the initial stages. Regions with a high percentage of women weavers offer the most congenial ground for the introduction of power-looms.

GROWING DEMAND FOR FINE YARN :

14·11. The problem of yarn-supply is no longer the live issue that it was a few years back. The present pattern of yarn consumption as revealed by the survey is that fine yarn is by far the most important forming 50·5 per cent of total consumption, followed by medium yarn-accounting for 29·1 per cent, Silk 8·6 per cent, Art silk 5·7 per cent, Coarse 4·4 per cent, mixed 1·7 per cent and staple 0.02 per cent. There has been a noteworthy change in this pattern compared with the pre-war, showing a sharp rise in the demand for fine yarn by the handloom industry. This change is not ephemeral but permanent. It will

become more and more pronounced with the growth of national income, increase in the per capital income of the lower income groups and rise in standards of living, all working together to improve and refine the sartorial preferences of the consuming public.

EMPLOYMENT AND EARNINGS :

14·12. The most pronounced characteristic of the handloom industry is the multiple activity status of the employed population. Subsidiary activities like winding, warping and sizing in which the weavers and their family-helpers are engaged, create an illusion of a high level of employment. Numerically the present survey has revealed that 55·3 per cent of the weaving population are gainfully employed against 31 per cent in the total population of the State (1951 census). In terms of intensity of employment and adequate earnings, the weaving population occupies one of the lowest rungs. As the piece wage system of remuneration does not permit of apportioning the earnings to each activity separately, estimate of the monthly earnings per family has been made. They vary from Rs. 23 for weaving coarse varieties to Rs. 38 for fine varieties, in cases of near full employment of 24 or 25 days in a month. Family earnings vary with the organisation to which weavers belong. Per month the average earnings are estimated at Rs. 33-14-0 for independent weaver, against Rs. 33-0-0 for weavers working under master-weavers and Rs. 29-2-0 for weavers in the co-operative field. The inadequacy of these earnings will be readily appreciated when it is known that they form about 1/3 of the total earnings of the operatives in textile mills. This comparison conclusively proves the illusory character of employment in the handloom sector. Even compared with the village artisans and Craftsmen, the handloom industry does not pay adequate wages per man-hour. Since 1940 the real wages in 1956 have declined a little due to the sharp rise in the cost of living.

14·13. The wages for winding are extremely nominal when it is viewed from the bulk of the labour-time involved ; warping is no better. Both could be organised in a central workshop. This amount of rationalisation may help men-weavers to concentrate on weaving and release women from sweated employment, without much deleterious effects of the family earnings.

14·14. Notwithstanding this reform, the handloom weaver's earnings would continue to be low. As seen earlier, organisational revolution like the substitution of mere master-weavers by co-operative societies is not likely to produce any spectacular results in the matter of earnings. Perceptible rise in his earnings chiefly hinges on stepping up his productivity by nothing short of a technical revolution. This applies particularly to the weavers engaged in producing competitive group of fabrics. Thus the policy is clear regarding what should be done but how and at what pace it should be done alone needs consideration.

HANDLOOM FINANCE :

14·15. The financial needs of the handloom industry may be grouped under three heads: fixed capital, working capital and marketing. Compared with the mill sector with its costly plants, financial requirements for fixed capital in the handloom industry are indeed very small. But finances for working capital for purchase of yarn etc., are as high as in the mill sector. The present survey has revealed that per household the total financial requirements are estimated to be Rs. 275·5 of which Rs. 80·9 are for subsistence and Rs. 194·6 for business. The average borrowings for subsistence amount to Rs. 32·1 per household or 40 per cent of the total. Loans for business purposes amount to Rs. 124·4 per month. Of this business loan, a major part consisting of Rs. 118·4 is utilised to purchase yarn. The financial requirements of the weaving community in Madras State are estimated at Rs. 491 lakhs per month of which Rs. 208 lakhs are self-financed and the balance of Rs. 283 lakhs is derived from lending agencies. Among the five important

lending agencies, master-weavers provide 40·6 per cent, money-lenders 11·4 per cent, exporters 28·1 per cent, co-operative societies 19·1 per cent and commercial banks 0·8 per cent. For marketing, the financial requirements of the handloom industry are indeed higher than the mill industry. The multitudinous varieties of fabrics produced in small quantities in thousands of homes of handloom-weavers, unable to carry even small stocks, render marketing difficult and specialised expert marketing agencies indispensable. Taking all the handloom fabrics together, master weavers are by far the most important marketing agency who carry 43·6 per cent of the entire trade compared with 22·9 per cent by co-operatives, 15·6 per cent by middlemen, 9·1 per cent by local market and 8·8 per cent by direct sale.

14·16. Thus in both these spheres of initial financing for production and final marketing of the produce, master weavers constitute by far the most dominent agency. The co-operativesare yet playing a limited role. According to the present survey, the total amount required for financing production is Rs. 5 crores per month (rounded) of which 20 per cent or one crore is the share of the co-operative societies. For effective elimination of the profit-seeking master-weaver, a sum of Rs. 4 crores is required. It is estimated that the external finance required for marketing the handloom output of about 4·2 million yards per month is Rs. 80 lakhs, allowing 18 per cent for weaver's own finance. Thus for financing both production and marketing, a revolving capital of Rs. 4·8 crores will be required. After utilising half the State's share of Rs. 14·6 crores (from Karve Committee's allotment for marketing) for the rehabilitation of the 8,000 weavers, forced out of employment, there remains the other half of Rs. 7·3 crores, which is more than adequate for the provision of the above-said revolving capital. Even here the policy of displacing the master-weavers from their well-entrenched position should be one of gradualness spread over five years. This programme would afford the necessary time to gain experience, consolidate the position and achieve the main objective of eliminating the usurious money-lenders and extortionate middlemen.

FACTORIES AND KARKHANAS :

14·17. Handloom factories and Karkhanas represent private capitalistic enterprise in the handloom industry. It has shown a remarkable initiative and enterprise in innovation, expansion and concentration of looms and in producing a variety of new fabrics. The present-day industrial strife should not be allowed to paralyse their operations. It would be a great national loss if they are forced to close down. Hence the issue of not only keeping them alive but also in efficient trim, assumes major significance in any programme for overall rehabilitation of the handloom industry. It should be admitted that in the present milieu of socialistic pattern, strident demand for higher wages, more closed days, less output, more labour and welfare legislation and consequent rising overheads, the prospect of their continuance as capitalistic concerns is not rosy. The conflict in the factory sector should be resolved for preserving this dynamic branch of the handloom industry and that could be done only by converting them into industrial co-operatives by suitable arrangements. This conversion could be carried out on an equitable basis by paying fair compensation if the balance of the Karve Fund for marketing etc., were applied to this purpose. As already indicated, there would be a balance of Rs. 2·5 crores after due investments are made for rehabilitating the weavers and financing the handloom industry.

14·18. The reorganisation of the handloom industry so far suggested in the general conclusion is based on the assumption that the recommendations of the Karve Committee would be implemented in their essentials. According to the scheme envisaged here, a total investment of Rs. 5·7 + Rs. 14·6 or Rs. 20·3 crores will have to be made in a period of five years which works out to Rs. 4·1 crores a year. Part of this investment will produce tangible assets in the shape of power-looms and the other part will be devoted to financing and marketing, where the investment would be covered by adequate security ; the third

part, utilised for rehabilitation of the weavers, would also be producing some assets in the shape of new instruments for retraining the weavers. Only the balance will go to imparting new skills and improvement of the intangible personal capital. On the whole the investment would, from a strictly business-point of view, be quite sound, even when the no less important standpoints of welfare and durable prosperity of the handloom industry are relegated to the background.

14·19. One more point remains to be considered. It is whether this large investment of the order of Rs. 4 crores per annum should be made under the auspices of the co-operative movement or a newly set up State Financing and Trading Corporation for the Handloom Industry. It needs scarcely be said that the form of the set up matters little, if the integrity, enthusiasm and drive of the leadership is secured.

APPENDICES

APPENDIX I

Copy of letter No. HB/17-54 (2)/2253 dated 3rd August 1954 from the Secretary, All India Handloom Board, Government of India, Ministry of Commerce and Industry, Bombay 1, to the Registrar, University of Madras, Madras.

As you are probably aware, the All India Handloom Board has been constituted for the purpose of advising Government generally on the problems of the handloom industry, to examine schemes for development of the handloom industry and to make recommendations for assistance from the handloom Fund.

2. One of the main handicaps which has faced the Board, ever since its inception, in examining the problems facing the handloom industry, is the lack of reliable statistical data regarding the Industry, which is known to be scattered throughout the length and breadth of the Indian Union. Estimates of the number of looms have, no doubt, been published in the report of the Fact Finding Committee (Handlooms and Mills, 1942 presided over by Dr. P. J. Thomas, but these figures very widely differ from those supplied by the State Governments and those collected during the last Census.

3. At the third meeting of the Board held on the 16th June 1954, the Hon'ble Minister for Commerce and Industry, Shri T. T. Krishnamachari suggested that the Board might approach University authorities with a view to take up sample surveys in representative centres of the industry. If the Universities could take up particular areas for a total count and a sample survey, the results could be utilised to arrive at an estimate of the total number of looms that exist. The Minister also stated that Government would probably be able to spare some money for this purpose.

4. The survey contemplated should deal broadly with the following aspects of the Handloom Industry :—

(a) *Structure and Organisation* :—
   - (i) The total number of looms in existence in particular areas and the numbers being actively worked ;
   - (ii) The number of looms employed on various types of textile fibres ; for instance, cotton, silk, art silk, wool or other fibres.
   - (iii) The manner in which the weavers are organised, *i. e.*, whether individually, through co-operative arrangements, Karkhanas or organised factories, etc.

(b) *Employment* :—
   - (i) Total number of weavers wholly employed in the handloom industry ;
   - (ii) number of weavers partially employed in the handloom industry ;
   - (iii) number of workers employed by the industry for ancillary processes like winding, warping sizing, yarn dyeing, etc. whether wholly or partially.

(c) *Economic Conditions* :—
   - (i) The earnings of a weaver wholly employed by the industry ;
   - (ii) Earnings of a weaver partially employed by the industry ;
   - (iii) Earnings of ancillary workers, *i. e.* those doing warping, winding, sizing, dyeing, etc.
   - (iv) Nature of the credit facilities available to weavers for the purchase of yarn and the sale of woven cloth.
   - (v) Facilities for finishing the woven cloth, if any, before it is marketed.

5. It will be appreciated that without fairly accurate statistical data under the above heads, it will be difficult to organise or develop the industry. I am accordingly to equire whether your university would be prepared to undertake sample surveys somewhat on the lines indicated above. If so, would you please be good enough to favour this office with a detailed plan for the survey in the territories coming within the jurisdiction of your University, together, with an estimate of the staff required and the expenditure likely to be involved in the conduct of the survey? An indication of the period within which the surveys could be completed would also be welcome.

6. An early reply will be appreciated.

Forwarded, by direction of the Vice-Chancellor, to the Professor of Economics for favour of urgent and immediate remarks.

(Sd.) × × ×
Ag. Registrar.

No. A-4370
University Buildings,
Chepauk, Madras,
18th September 1954.

(True copy)

SCHEME FOR A SAMPLE SURVEY OF HANDLOOMS IN RESIDUARY MADRAS STATE.

Prepared by :

DR. R. BALAKRISHNA,
Professor of Economics.

Past Enquiries and Censuses :

Estimates of the number of handlooms in the State of Madras and elsewhere have been made on previous occasions by various authorities, such as the Census Department, the Fact Finding Committee, the Director of Civil Supplies and the recent Textile Enquiry Committee appointed by the Government of India. Of these the figures as given by the Fact Finding Committee have gone out of date particularly on account of the war period that intervened, which gave a stimulus to an increase of handlooms to fill the lacuna caused by the scarcity of mill cloth.

Need for a Fresh Enquiry :—

The figures available from the Census and those of the Director of Civil Supplies do not agree with each other, as the latter have been deliberately swollen by weavers for acquiring a larger quota of yarn during the period of stress caused by the war. A large number of ghost looms have been included in the numbers estimated by the Director of Civil Supplies. So far as the enquiry conducted by the Textile Enquiry Committee is concerned, only the overall number of looms in the entire country was estimated and the zonal figures could not be estimated on account of the largeness of the survey executed within a short time. Therefore an enquiry like this has some justification, particularly because the State of Madras has a very large proportion of the handlooms in the country.

Sample Design :—

In each district 8 handloom centres, towns and villages, will be selected, having looms with probability proportional to the number of looms in each district. For purposes of investigation, the districts may have to be grouped as under in order to see that the work load of each Investigator would be round about 5,700 looms.

Field Work :—

The statement below gives the grouping of the districts, the number of looms to be counted and the number of Investigators to be assigned to each group :—

Provisional Grouping of Districts

	Grouping of Districts	No. of Looms in the sample	Investigators needed
1.	Chingleput	2,300	1
	South Arcot	2,500	
		4,800	
2.	Salem	12,000	2
3.	Coimbatore	8,000	
	Madura	2,800	2
	Madras	500	
		11,300	

Grouping of Districts			No. of looms in the sample	Investigators needed
4.	Tinnevelly	.. ..	3,750	
	Ramnad	.. ..	3,600	
	Tirichinopoly	.. ..	2,250	2
	Tanjore..	.. ..	1,250	
			10,850	
5.	Malabar	.. ..	2,900	
	South Kanara	.. ..	550	1
	North Arcot	.. ..	3,250	
			6,700	
		All groups ..	45,650	

Basic Statistics for the Sample Survey :—

In proceeding to make a survey of the handlooms in Madras State, the existing estimates of the number and the distribution among the Districts will be adopted as the frame for designing the sample. The figures supplied by the Madras State Handloom Weavers' Co-operative Society of the looms coming within their fold for the residuary State of Madras is 1,28,000. Since only about 25 per cent of the looms in Madras State have come within the co-operative fold, the total number of looms may be roughly estimated to be 4,56,500. If a 10 per cent sample of this is taken the total number of looms to be counted in the State would be 45, 650. The districtwise distribution of this number would be as follows:—

District-wise distribution of Looms

S. No.	District		Total Estimated No. of looms	Sample 10 per cent
1	North Arcot	.. ..	32,500	3,250
2	South Arcot	.. ..	25,000	2,500
3	Chingleput	.. ..	23,000	2,300
4	Coimbatore	.. ..	80,000	8,000
5	Kanara South	.. ..	5,500	550
6	Madras	.. ..	5,000	500
7	Madura	.. ..	28,000	2,800
8	Malabar	.. ..	29,000	2,900
9	Ramnad	.. ..	36,000	3,600
10	Salem	.. ..	1,20,000	12,000
11	Tanjore	.. ..	12,500	1,250
12	Trichinopoly	.. ..	22,500	2,250
13	Tinnevelly	.. ..	37,500	3,750
		Total ..	4,56,500	45,650

Staff of Investigators :—

The total number of Investigators would thus be 8 in number. Taking the work load as 500 looms per Investigator per month, the period required to complete the investigation would be 12 months including orientation.

Strength of the Unit :—

Besides the Investigators, the Unit would require 1 Assistant Director, 1 Statistical Assistant, 2 Senior and 2 Junior Tabulators, with clerical and menial staff. The period of investigation should be preceded by 2 weeks of orientation and succeeded by about 6 months for finalizing the tabulation and preparing the report. Four of the Investigators would be retained during the subsequent six months and used as additional Tabulators to finalize the tabulation.

Financial Requirements :—

Thus the financial commitments of the scheme would be as under :—

Financial Statement

I YEAR

Staff	Monthly Salary	Monthly Expenditure
	Rs.	Rs.
Assistant Director (1)	350	350
Statistical Assistant (1) ..	250	250
Senior Tabulators (2)	200	400
Junior Tabulators (2)	120	240
Investigators (8)	200 plus	1,720
(Conveyance allowance) ..	15	
Clerk (1)	100	100
Peon (1)	35	35
Salary for 1 month ..		3,095
Salary for the first 12 months ..		37,140

II YEAR (6 months)

Staff	Monthly Salary	Monthly Expenditure
	Rs.	Rs.
Assistant Director (1)	350	350
Statistical Assistant (1) ..	250	250
Senior Tabulators (2)	200	400
Junior Tabulators (2)	120	240
Investigators (4)	200	800
Clerk (1)	100	100
Peon (1)	35	35
Salary for 1 month		2,175
Salary for 6 months		13,050

Total Salary for 18 months ..	50,190
Stationery, Printing etc. ..	5,000
Travelling Allowances to Assistant Director and Investigtors ..	7,500
Grand Total Rs.	62,690
or Rs.	65,000

(True copy)

COPY OF LETTER No. HB/27-54/804 DATED 21ST FEBRUARY, 1955 FROM THE SECRETARY, ALL-INDIA HANDLOOM BOARD, GOVERNMENT OF INDIA, BOMBAY, TO THE REGISTRAR, UNIVERSITY OF MADRAS.

Subject :— Sample survey of the Handloom Industry in the Madras State.

With reference to your letter No. V. 4215 dated the 23rd October 1954, enclosing a scheme for the sample survey of the handloom industry in the Madras State, I am directed to state that the scheme has been approved, at a cost not exceeding Rs. 65,000. I am now to request you to arrange with Prof. Balakrishna to proceed with the work immediately. Prof. Balakrishna may kindly draw up the necessary questionnaire in consultation with the Director of the Central Marketing Organization, All-India Handloom Board, 1/155, Mount Road, Madras.

(True copy)

APPENDIX II

SURVEY OF HANDLOOM INDUSTRY IN MADRAS STATE

DEPARTMENT OF ECONOMICS,
University Buildings, Madras 5

DIRECTOR :
DR. R. BALAKRISHNA, M. A., PH.D. (LOND.)
Professor and Head of the Department of Economics.

ASSISTANT DIRECTOR :
U. ATYASAMI, B. COM. (HONS.)

Name of Investigator .....
Date of Investigation .....
Date of Despatch .....
Date of Receipt .....

I. ENUMERATION AND CLASSIFICATION OF LOOMS IN CENTRES

District : Taluka Centre

No. and characteristics of Looms	Serial Number of Households									
	1	2	3	4	5	6	7	8	9	10
Total No. of looms										
Owned										
Not owned										
Active										
Idle										
Usable										
Not usable										
(A)										
Throw — No. ..										
Throw — Age ..										
Fly — No... ..										
Fly — Age ..										
(B)										
Looms fitted with :										
No... ..										
(C)										
Types of fabrics :										
Products ..										
Counts ..										
Number of weavers :										
Male ..										
Female ..										
Children										
(D)										
Hired weavers :										
Male ..										
Female ..										
Children										
Community :										
(E)										
Economic status :										

(A)=Pit, Frame, Pedal, Semi-automatic etc.
(B)=Lever Dobby, Weavers Beam, Jacquard etc.
(C)=Cotton, Silk, Art Silk, Wool, Mixed figbres etc.
(D)=Children below 14.
(E)=Independent (A), Member of Co-operative Societies (B), Factory Worker (C) Working Under Master-Weaver(D).

Names of Heads of Households (with their addresses) covered should be attached to this Schedule.

Investigator.

APPENDIX II—(*contd.*)

No. and characteristics of Looms	Serial Number of Households									
	1	2	3	4	5	6	7	8	9	10
Total No. of looms										
Owned										
Not owned										
Active										
Idle										
Usable										
Not usable										
(A)										
Throw — No. ..										
Throw — Age ..										
Fly — No. ..										
Fly — Age ..										
(B)										
Looms fitted with :										
No. ..										
(C)										
Types of fabrics :										
Products ..										
Counts ..										
Number of weavers :										
Male ..										
Female ..										
Children ..										
(D)										
Hired weavers :										
Male ..										
Female ..										
Children ..										
Community :										
(E)										
Economic status :										

(A)=Pit, Frame, Pedal, Semi-automatic etc.
(B)=Lever Dobby, Weavers Beam, Jacquard etc.
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Names of Heads of Households (with their addresses) covered should be attached to this Schedule.

Investigator.

APPENDIX II—(*contd.*)

DEPARTMENT OF ECONOMICS,
University Buildings, Madras 5

DIRECTOR :
DR. R. BALAKRISHNA, M. A., PH.D. (LOND.)
Professor and Head of the Department of Economics.

ASSISTANT DIRECTOR :
U. AIYASAMI, B. COM. (HONS.)

Name of Investigator.....
Date of Investigation.....
Date of Despatch.....
Date of Receipt .....
Date on which remitted for tabulation.....

II. EMPLOYMENT

District : Taluka Centre :

Name of Weaver. Address :

Description	Members of Household Serial Number							
	1	2	3	4	5	6	7	8
1. Relationship to head								
2. Sex								
3. Age								
4. Marital Status								
5. Education								
6 Caste								
7. Hereditary/Non-hereditary								
8. Occupation—Main								
9. Occupation—subsidiary								
10. Period engaged in weaving								
11. Economic status*								
Occupational Ranking 12·1 Winding								
12·2 Warping								
12·3 Sizing								
12·4 Weaving								
12·5 Others								
13· Work days								
14. Idle days								
15. Average No. of working hours per day								
16·1 Average output per day								
16·2 Maximum output per day † ..								
17·1 Net earnings of weaving per mensem/week								
17·2 Average wages per day								
17·3 Maximum wages per day								

* (a) Independent, (b) Co-operative, (c) Kharkana/Organised factory, (d) Under Master Weaver.

† Specify the texture and weave of the cloth referred to.

APPENDIX II—(*contd.*)

III. METHODS OF FINANCING.

Categories	Own resources.	Loan Capital		
		Co-operatives	Banks	Money-lenders
Purchase of looms and other equipments				
Purchase of yarn				
Purchase of other raw materials ..				
Towards sale of finished goods ..				
For subsistence purposes				
Total ..				

IV. MARKETING.

Categories	Quantity	Value
Direct sale		
Sale through Middlemen		
Sale through Co-operative Societies ..		
Sale in Local Markets		
Exports to other Districts		
Exports to other States		
Exports to other Countries		
Total ..		

V. COST-STRUCTURE

Categories (1)	Dhoties (2)	Sarees (3)	Towels (4)	Sheetings (5)	Furnishings (6)	Shirting (7)	Lungis (8)	(9)
1. Cost of yarn								
2. Cost of dyeing								
3. Winding								
4. Warping								
5. Sizing								
6. Weaving								
7. Calendering/Bleaching/Finishing.								
8. Total cost of production ..								
9. Total production in yards ..								
10. SELLING PRICE.								
10·1 Ex-home								
10·2 Distress sale								
10·3 Wholesale								
10·4 Retail to consumer ..								

APPENDIX II—(*contd.*)

VI. SPECIFICATIONS AND DESCRIPTION

Categories (1)	Dhoties (2)	Sarees (3)	Towels (4)	Sheetings (5)	Furnishings (6)	Shirting (7)	Lungis (8)	(9)
1. Counts—Warp								
2. Counts—Weft								
3. Reeds								
4. Picks								
5. Width in inches								
6. Length in yards ..								
7. Weight per piece of.....yards								
8. No. of units per piece ..								
9. Time taken for weaving ..								

INSTRUCTIONS :—

1. Clearly describe in a separate note colour scheme, special features, textures, finishing, etc., of each type of fabric.
2. Select the most representative type of cloth on the basis of the largest quantity produced by the weaver.

VII. PRICES OF VARIOUS TYPES OF LOOMS AND OTHER EQUIPMENTS

Categories (1)	Price in 1939 (2)	Price in 1955 (3)	Categories (1)	Price in 1939 (2)	Price in 1955 (3)
1. Pit Loom ..			9. Country Chain Harness		
2. Frame Loom ..			10. Weaver's Beam		
3. Pedal Loom ..			11. Multiple Sley Box		
4. Semi-Automatic			12. Other mechanical devices		
OTHER EQUIPMENTS :			13. Bobbin		
5. Flyshuttle Sley ..			14. Pirn		
6. Throwshuttle Sley ..			15. Reed		
7. Lever Dobby ..			16. Heald		
8. Jacquard Harness ..					

VIII. WAGES SCHEDULE

Occupation	Monthly/Weekly Daily	Wages	Piece Rate	
			Unit	Rate
Winding				
Warping				
Sizing				
Weaving				

Investigator.

DEPARTMENT OF ECONOMICS,
University Buildings, Madras 5

DIRECTOR :
DR. R. BALAKRISHNA, M. A., PH.D. (LOND.)
Professor and Head of the Department of Economics.

ASSISTANT DIRECTOR :
U. AIYASAMI, B. COM. (HONS.)

Name of Investigator .....
Date of Investigation .....
Date of Despatch .....
Date of Receipt .....

Name and address of Master-weaver/Occupier :

INDUSTRIAL STRUCTURE, INPUT AND OUTPUT

Categories	Looms				Others specify	Looms fitted with		
	Pit		Frame					
	Throw 1	Fly 2	Throw 3	Fly 4	5	Lever dobby 6	Jacquerd 7	Sley box 8
Handlooms.								
1·1 Total No. of looms								
1·2 No. active								
1·3 No. idle								
1·4 No. in disrepair								
1·5 Year of purchase								
1·6 Original cost per loom								
1·7 Current market price per loom ..								
1·8 Expected life per loom								
1·9 No. using yarn								
1·10 No. Art Silk								
1·11 No. Silk								
1·12 Other fibres								
1·13 Common types of reeds ..								
1·14 Common types of picks ..								

	Number	Value
Capital structure		
1. Looms		
2. Bobbins and wooden tubes		
3. Healds		
4. Reeds		
5·1 Cost of building or rent		

	Counts	Quantity	Value
Raw Materials—Yarn			
6·1 Silk			
6·2 Art Silk			
6·3 Mixed			
6·4 Others			
7. Starch			
8. Chemicals			
9. Dyes			
10. Fuels			
11. Electricity			
12. Packing materials			
Total			

APPENDIX II—(*contd.*)

	Men	Women	Children
13. No. of working days during the year ..			
13·1 (Wages/Salaries paid during the year) ..			

WAGES SCHEDULE

Categories	Wages or salaries	Week month daily	Piece wages	
			Unit	Rate
Manager				
Clerks				
Watchmen, peon etc. ..				
Pirn winders				
Bobbin winders				
Foreman for Sizing				
Assistant Sizer				
Warp Tender				
Fireman				
Engine Driver				
Weaver				
Assistants				
Others				

APPENDIX II—(*concld.*)

OUTPUT

	Length	Quantity	Value Ex-factory
1. Woven goods			
2. Woven coloured goods			
3 Dyed goods			
4. Printed fabrics			
5. By-products			
6. Others			

Investigator.

APPENDIX III

SURVEY OF HANDLOOM INDUSTRY IN MADRAS STATE

QUESTIONNAIRE

DEPARTMENT OF ECONOMICS,
University Buildings, Madras-5.

DIRECTOR:
DR. R. BALAKRISHNA, M. A., PH.D. (LOND.),
Professor and Head of the Department of Economics.

ASSISTANT DIRECTOR:
U. AIYASAMI, B. COM. (HONS.)

Name of Investigator: .....

Date of Investigation: .....

Date of Despatch: .....

Date of Receipt: .....

Date on which remitted for tabulation: .....

A. GENERAL					
1.	What is the present economic position of handloom industry compared with the war years 1939-1945 in regard to				
1·1	Yarn Supply				
1·2	Employment				
1·3	Wages				
1·4	Profits				
1·5	Scope for further investment and expansion..				
2·1	Yarn supply				
2·2	Employment				
2·3	Wages				
2·4	Profits				
2·5	Scope for further investment and expansion..				
3.	How far have the recent measures adopted by Government for helping the handloom industry helped you.				
3·1	Reservation of certain types of cloth for handloom industry.				
3·2	Imposition of cess on mill cloth				

3·3	Financial aid through Co-operative Societies..
3·4	Facilities for loans to handloom weavers ..
3·5	Factories for introducing improved appliances for production.
3·6	Facilities for processing and finishing ..
3·7	Facilities for marketing .. ..
4.	Have these measures been fully successful in their objectives ? If not how far have they fallen short and why ?
5.	What suggestions do you have for further stabilising the handloom industry ?
6.	Do you think that the recent concessions to handloom industry have attracted persons from other occupations to handloom industry ?
7.	Is handloom industry pursued by certain caste and communities or is it a cosmopolitan occupation attracting persons from all castes and communities ?
8.	Is handloom industry giving you full employment ?
9.	If it does not, do you have any supplementary occupation ?
9·1	Agricultural .. .. ..
9·2	Fishing, Poultry, Dairy Farming ..
9·3	Non-agricultural occupations, specify ..
10.	If you have no supplementary occupation, is it due to.
10·1	Lack of land .. .. ..
10·2	Lack of capital .. .. ..
10·3	Lack of training .. .. ..
10·4	Lack of inclination .. .. ..
10·6	Other reasons, specify .. ..

A. GENERAL—*concld.*

11. If you are fully employed in handloom industry, does it mean that all the members of your family too are fully employed?

12. If they are not, what facilities are required to maintain them in full employment.

13. Has your net income from the handloom industry increased.

13·1 Since 1939 (before World War II) ..

13·2 Since 1950 (i.e., after a positive policy of help has been adopted by Government).

14. What are your plans for the future development of your business? Would you like to

14·1 Increase the number of looms .. ..

14·2 Increase the types of cloth you have been used to weaving

14·3 Increase the production of art silk fabrics ..

14·4 Change over to the reserved categories of cloth.

15. If you do not like to expand your business, do you want to

15·1 Continue the existing scale of operations ..

15·2 Reduce the scale of operations .. ..

15·3 Wind up the business .. ..

15·4 Do you like your sons to continue your business or change over to some other occupation?

16. If you want them to choose some other occupation, do you prefer

16·1 Agriculture .. .. ..

16·2 Agricultural Industries .. ..

16·3 Other Small Scale Industries .. ..

16·4 Clerical Work .. .. ..

16·5 Government Service .. .. ..

16·6 Transport—Bus or Railway .. ..

16·7 Others (Specify) .. .. ..

B. WARPING ·

17·1 What are the merits of street warping ? ..

17·2 What are the defects of street warping ? ..

17·3 Is cylinder or wheel drum warping better ? (Less space, no interruption, less man power).

17·4 If cylinder warping is better, what are the difficulties in the way of adopting it ?

C. SIZING ·

18·1 What are the traditional materials used for sizing ?

18·2 Are new materials adopted ? If so why ? Point out their advantages and disadvantages.

18·3 Is the cost of sizing significant in the cost of production of a cloth ? (Give percentage to total cost of production of cloth).

18·4 What kind of starch is in greatest use now for sizing ?

18·5 Are there cheaper substitutes coming now into use ?

18·6 Is overstarching resorted to for increasing the weight or improving the appearance or texture of cloth ?

18·7 Is this method capable of doing good to the occupation in the long run ? Is it not likely to spoil the reputation of a centre ? If so, are any social or communal efforts made to discourage this practice ? In short, are there attempts on the part of weavers themselves to exercise some sort of quality control ?

PICKS AND REEDS ·

19·1 What are the objectives governing the number of picks and reeds ?

PICKS AND REEDS—*contd.*

9·2 Are they adopted in response to consumer demand or middlemen's (those who place order) instructions ?

19·3 Is variation in reeds and picks resorted to for maximising profits ?

WEAVING :

20·1 What is the difference in rate of production in respect of throw and fly shuttle ?

20·2 If fly shuttle is more p oductive, why do you continue to use throw shuttle ?

20·3 What are the types of fabrics for which fly shuttle is not quite suitable ?

20·4 What is your scale of preference in the matter of various types of looms : Pit loom, Frame loom, Throw Shuttle, Fly Shuttle, Semi-automatic & Pedal loom. Describe their respective advantages and disadvantages for various kinds of fabric woven by you ?

20·5 Could you suggest any improvement to the looms now in use ? If so what will be the advantages ?

20·6 Could you suggest any improvement to the equipment now in use for Pirn winding, Bobbin winding, Warp joining, Sizing, etc.

20·7 In what ways will your suggestions reduce the time and difficulty of operations and reduce cost ?

C. YARN SUPPLY :

21·1 What kinds of yarn are in greatest demand ?

21·2 Is there any difficulty in getting them (a) in time, (b) in adequate quantities, and (c) in such counts as required ?

21·3 Is there regular supply of yarn ? If not indicate periods of large supplies and lean supplies ?

21·4 Have you experienced dearth of yarn supply causing interruption to weaving and enforced idleness in the past 6 years.

21·5 What are the agencies supplying you with yarn ?

21·6 In what proportions do they meet your demand ?

D. PRODUCTION

22·1 What are the fabrics you are producing now ?

22·2 Have you been producing the same in the same proportions and quantities before 1950 ?

22·3 Have you changed the kinds of fabrics or proportions in which they are produced ?

22·4 What are the reasons ?

22·5 What are the quantities you have been producing in respect of the following now and in 1950 ?

Type of cloth	1950				1955			
(a) Dhoties with borders containing coloured yarn exceeding quarter inch in width or with the use of Zari or Muga or art silk yarn in the border.								
(b) Lungi, Sarong and Gamcha with a check pattern or any cloth with a check pattern and having a width between 42" and 52" from which Lungis, Sarongs or Gamchas may be made.								
(c) Chaddars, Bed Sheets, Bed Covers and counterpanes.								
(d) Gauze, Bandage cloth and Jacquard cloth, or any medium or fine cloth (excluding Mosquito Netting, Leno Cloth and Mesh Cloth) in 40" width, which weighs in grey state below 2·5 ounces per square yard.								

D. PRODUCTION—*contd.*

(e) Table Cloth and Napkins.

(f) Dusters.

(g) Coarse cloth of plain weave (i.e., where warp and weft counts are 8s and below).

(h) Sarees with borders exceeding 2½" in width or with the use of real or imitation Zari or gold-coloured art silk yarn in the border, coloured saries or saries with a check pattern or with a heading exceeding 9".

22·6 What are the ratios in which cotton and other fibres are mixed to weave sarees and other fabrics ?

22·7 What is your experience regarding the use of mixed fibres in regard to ease of winding, sizing, warping and weaving ?

22·8 What is your opinion regarding the durability and finish of the fabrics made of mixed fibres ?

22·9 Is the use of mixed fibres leading to better wages and profits ?

22·10 What are the advantages and disadvantages of art silk, yarn, staple fibre?

22·11 Do you earmark any loom for weaving art silk fabrics or fine silk fabrics ?

22·12 Are weavers getting specialised in weaving art silk fabrics ?

22·13 Do you find it easy to switch over from weaving low counts to higher counts ?

22·14 Do you find it easy to switch over from cotton yarn to art silk yarn ? Does it entail any interruption to continuity of work or slow down the tempo of output ?

E. MARKETING :

23·1 How do you dispose of the cloth produced by you ?

23·2 What proportions are sold (a) straight to the consumers at your door, (b) in the bazaar to individual buyers, (c) in the bazaar to established cloth-dealers, (d) to local middlemen, (e) to travelling middlemen, and (f) to co-operative societies ?

23·3 Do you place your stock in co-operative ware, houses and get secured loans ?

23·4 Do you pledge your stock with privatye money lenders for getting immediate finance ?

23·5 What kinds of your product are sold locally and outside ?

23·6 Do you produce fabrics for distant and foreign markets ? If so, specify some of the centres where they are sent for ultimate sale ?

23·7 Is there any time-lag between production and sale of goods ?

23·8 Do you get always a fair price ?

23·9 If you sell below cost, do such periods of sale occur rhythmically.

23·10 If you are able to sell at good profit, is it because of the time factor or quality of your product ?

23·11 If time factor is favourable, which periods in a year afford you an advantage.

23·12 If it is quality, do you experience any difficulty in conforming to this quality, yielding good profit ?

F. FINANCE :

4·1 Have you borrowed any amount for business or subsistence ?

F. FINANCE—*contd.*					
24·2	If so from whom ?				
24·3	In what proportions from the various agencies ?				
24·4	What facilities do you get for short term and long term borrowing from the co-operative Societies ?				
24·5	How far do the terms of co-operative societies compare with borrowing from commercial banks, private money lenders and middlemen (cloth dealers) ?				
24·6	Are you able to get adequate finance for legitimate business purposes ? If not, what suggestion would you make to improve the position ?				
24·7	What is in your opinion the best form of financing agency ?				
24·8	Compare the merits and demerits of commercial banks and co-operative societies with private money lenders ?				
G. FACILITIES FOR FINISHING, CALENDERING, ETC.					
25·1	What are the methods adopted for bleaching, printing, calendering and finishing your fabrics ?				
25·2	Do you have dyeing, finishing and calendering establishments in the vicinity ?				
25·3	Do you get good service at moderate cost from them ?				
25·4	Is there a Co-operative establishment in the neighbourhood ? If not do you want a Co-operative establishment for rendering these services ?				

Investigator

APPENDIX IV

HANDLOOM INDUSTRY SURVEY IN MADRAS STATE
CONCEPTS AND DEFINITIONS.

Loom :—A frame for stretching and cross-wise interlacing of 2 or more groups of threads to form a plain or patterned fabric.

Pit Loom :—A receptable with 4 poles with a cross bar to support the sley and having a pit at the back for the weaver to sit.

Frame Loom :—A wooden structure of upright and cross beams erected above the ground level over which the warp of foundation threads can be stretched to the necessary tension for weaving. The weaver will sit on a raised platform or a stool.

Shuttle :—The implement containing supply of yarn for inserting the rows of weft through the shed.

Fly Shuttle :—A shuttle jerked across the warp by pulling a string attached to a lever.

Throw Shuttle :—A shuttle thrown by hand through the shed while weaving.

Semi Automatic :—Loom which is automatic in respect of picking, beating, taking up and shedding fitted with weft- stop, motion capable of manipulation both by mechanical and man power.

Beams :—The top bars of wood across the back and the front of the loom.

Bobbin :—The spool around which the weft yarn is wound to provide a continuous length of thread for weaving.

Shed :—The opening made by the separation of alternating warp threads through which the shuttle carrying the weft is passed.

Warp :—The lengthwise fibres or threads that form the foundation for weaving.

Weft :—The yarn that fills the spaces across the width of the warp.

Dobby :—A contrivance used for the production of simple patterned fabrics.

Jacquard :—A contrivance used in the production of fabrics with elaborate border designs and colour patterns. In this type of loom cards with preparations control the action of the heddles and consequently the pattern produced in the fibre.

Head of the Household :—Is the oldest male member or the person who is so described in the National register of citizens or voters list.

Active Looms :—Looms actively engaged in production at the time of investigation.

Idle Looms :—Looms that were not working at the time of investigation.

Usable :—Looms that could be activised when necessary.

Caste :—The community to which the head of the household belongs.

Period engaged in weaving :—The number of years the weaver is occupied in the process of weaving as a full fledged weaver.

Work days :—Number of days worked during the month preceding the date of investigation.

Idle days :—Number of days during the month preceding the date of investigation when there was no work.

Time taken for weaving :—Time taken for one weave length. This relates exclusively to weaving, irrespective of the preliminary processes.

(*A*) *Independent Weaver* :—An Independent Weaver is one who works on his own account *i. e.*, one who purchases raw materials out of his own or borrowed resources, weave the fabric on his loom and market the finished product.

(*B*) *Co-operative Society*:—Is a society of weavers registered under the Co-operative Societies Act which provides certain facilities to its members. For e. g. loans, distributions of yarn, co-operative production and marketing.

(*C*) *Factories* :—Handloom in institutions or Factories where weavers are employed for wages.

(*D*) *Weavers working under Master weavers* :—This class of weavers get their supply of yarn from the Master Weaver, weave the products for wages and deliver the finished product to the Master Weaver. They are entirely dependent on the Master Weavers for their employment and livelihood.

APPENDIX V

A STATISTICAL NOTE ON THE SAMPLING TECHNIQUE AND PROCEDURE

The sample survey was undertaken mainly with two important objectives in view *viz.*, (a) to intensively investigate 10 per cent of the existing number of looms in order to study the various problems of the Handloom Industry and (b) to carry out complete enumeration of looms in all the selected sample centres to obtain reliable estimate of the total counts and sampling variance for the entire State. The 10 per cent sample comprises 56,130 looms located in 104 sample centres spread over 13 districts of the residuary Madras State (Annexure—I).

SAMPLE DESIGN :—

The 'universe' to be sampled consisted of the latest estimates of the number and distribution of Handlooms supplied by the Director of Industries and Commerce and this constituted the sampling frame. Centres having looms below 100 had been omitted from the scope of the survey due to non-availability of primary data relating to them; appropiate allowance having however been made in the final estimate. The villages in each district were listed serially in the ascending order of the sizes (*viz.* number of looms) to facilitate the process of stratification. The first step in the design of the sample was to select one or more important and highly concentrated Handloom centres in each district in order to obviate the possibility of their escaping the random sample. The problem to be considered was to obtain a small sample from a wide area, using large primary sampling units and one or more stages of sub-sampling.

(*a*) *Stratification of Centres* :

Since the industry was found concentrated in certain centres in each district and the variation in the number of looms between centres being far from uniform even in the same district, stratified random sampling had to be adopted. Each district was broadly classified into 2 or more homogenous strata based on the size and nature of distribution. This was accomplished by such a process that the differences within each group were relatively small while at the same time differences between groups (measured by the difference between their averages) were large. Such a step was particularly effective in reducing the variance even in places where stratification of small clusters did not have a very significant effect and this was found to have had a definite bearing on the precision of the sample result.

In the absence of wide difference between extreme values in districts like Tanjore, South Kanara and Madras with a limited number of handloom centres and with comparatively lesser number of looms, stratification was dispensed with and the entire district was treated as a single stratum.

The final stratification as emerged is shown in Annexure-II.

(*b*) *Selection of sample centres* :

The next step after classification of the centres into strata was to select sampling units, 2 or more from each stratum to insure proportionate representation of the stratifying factors in the sample to that of the entire universe. The centres were selected on a random sampling basis having looms with probability proportional to the total reported number of looms in each district, the number of villages being determined by aiming at a fiducial limit of 10 per cent of the total number of looms in each of the 13 districts. Although the

estimate is likely to be a bit biased at the level of district estimate, error due to this bias is expected to be negligible. A differential (variable) sampling fraction was used for each stratum according to the concentration of looms in each group so that larger proportion of looms were selected from larger towns. A series of samples was drawn from the random digits selecting not less than 2 centres from each stratum, each of which was properly weighted for the proportionate incidence in the universe. Such a procedure was expected to minimise the chance of sampling error. The reason for taking more than one unit per stratum is to obtain a consistent estimate of the sampling variance from the sample itself. The names of the sample centres in each stratum are furnished in Annexure-II.

(c) *Sub-sampling within the selected centres* :

As a relatively few large centres account for a substantial proportion of the total in each district, sub-sampling of such of these centres where looms were highly concentrated was carried out by means of additional stages of sampling, depending on the basic data available and on the basis of preliminary investigation. The number and the names of the large centres selected for sub-sampling, together with the number of looms covered in each are given in Annexure—III.

Subsequent analysis of the sample data consisted of an analysis of the sampling variance and the estimation of the total counts in each district.

Wide discrepancies between the reported and the actual number of looms is revealed in few centres which is attributed to the inaccuracies of census records and time factor and high correlation is significant in certain other centres. But they tend to average out in the estimated total.

ESTIMATION OF THE TOTAL COUNTS :

The total for the district as a whole is derived from the total of the estimated looms in all the strata, its variance being the sum of the individual variance in each stratum.

There are two methods of estimating the ratio from the sample which are considered to be more relevant in the particular type of survey : One involves taking the ratio of estimated total or averages computed from a stratified sample ; the second involves computing the ratio of random variables for each stratum, and then obtaining a weighted average of these. Since the sample taken from each stratum is relatively small and the difference in the ratio *rh* not significantly wide, the ratio of estimated totals or average is more precise and better suited to the present survey.

The estimation of the district totals is made by summing up the separate ratio estimates of the total of each stratum. Since we are interested not in the ratio itself, but rather in the estimated total, the result arrived at is likely to be a reliable estimate; where high correlation exists between the recorded and the actual figures, the estimated total approximates to the recorded figure.

The following procedure was adopted in computing the ratio estimate :—

(1) The total number of looms actually found in the villages was divided by the number of sampled villages in each stratum and the sample mean obtained.

(2) The reported total number of looms was divided by the number of sampled villages in the same stratum and the reported mean obtained.

(3) The sample mean was divided by the reported mean and the ratio derived for the particular stratum.

(4) The ratio thus obtained was multiplied by the total number of reported looms in the stratum.

(5) The products obtained were summed up for all the strata in the sample to give the district figure.

Coming to the notation, let L denote the number of strata into which the district under consideration is divided.

N represent the total number of villages in the entire district.

N_h represent the number of villages in the h^{th} stratum.

Then $N = \sum_{h}^{L} N_h$

Similarly the size of the sample drawn from the h^{th} stratum will be designated by n_h.

$n = \sum_{h}^{L} n_h$ is the total size of the sample drawn from all the strata.

The reported and the actual number of looms in the i^{th} village from the h^{th} stratum will be designated by Y_{hi} and X_{hi} respectively; so that

$X_h = \sum_{i}^{n_h} x_{hi} \longrightarrow$ is the actual total number sampled in the h^{th} stratum.

And $Y_h = \sum_{i}^{n_h} Y_{hi} \longrightarrow$ the total number of looms recorded in the selected sample villages in the same stratum.

The subscript h indicates a particular stratum and the subscript i will designate the individual village, but the villages will be regarded as numbered separately within each stratum instead of throughout the district.

The sample mean and the reported mean of the stratum are given by

$$\bar{x}_h = \frac{\sum_{i}^{n_h} x_{hi}}{n_h} \text{ and } \bar{Y}_h = \frac{\sum_{i}^{n_h} Y_{hi}}{n_h}$$

respectively.

The ratio of the sample mean to the reported mean is obtained by computing

$$r_h = \frac{x_h}{Y_h} = \frac{x_h}{\bar{Y}_h}.$$

The sum total of the reported looms in the stratum is given by $Y_h = \sum_{i}^{N_h} Y_{hi}$.

$Y = \sum_{h}^{L} Y_h = \sum_{h}^{L} \sum_{i}^{N_h} Y_{hi}$ represents the aggregate of the reported totals of all the strata.

$x = \sum_{h}^{L} x_h = \sum_{h}^{L} \sum_{i}^{n_h} x_{hi}$ is the number of looms in all the strata in a sample of size $n = \sum_{h}^{L} n_h$.

The estimated total in the h^{th} stratum will be given by $X_h = \frac{\bar{x}_h}{\bar{Y}_h} Y_h = r_h Y_h$

Consequently $\hat{X} = \sum_{L} X_h = \sum_{L} r_h Y_h$

is an estimate of the total number of looms based on the ratio estimate for the respective district.

ESTIMATION OF THE SAMPLING VARIANCE :

A consistent estimate of Sr^2 (the variance of the ratio of the sample means) is obtained by making estimates from the sample itself by applying to each stratum the same procedures.

We define $s^2_{hx} = \frac{\sum^{n_h} (x_{hi} - \bar{x}_h)^2}{n_h - 1}$ as the variance of h_i in a particular sample of size n_h from the h^{th} stratum and $s_{hx} = \sqrt{\frac{\sum^{n_h} (X_{hi} - \bar{x}_h)^2}{n_h - 1}}$ as the sample standard deviation.

Similarly $s^2_{hy} = \frac{\sum^{n_h} (Y_{hi} - \bar{Y}_h)^2}{n_h - 1}$

The fraction of the universe included in the sample in the h^{th} stratum is $\left(\frac{n_h}{N}\right)$ and the sampling fraction for the entire district is $\left(\frac{n}{N}\right)$. Let these be denoted by f_n and respectively.

The standard error is referred to as the standard deviation of all the possible sample estimates of the mean estimated from samples. The square of the co-efficient of variation is defined as the relative variance. The co-efficient of variation of any sample estimate is equal to the standard error of the estimate divided by the value being estimated. Hence the coefficient of variation of the original variate is $V = \frac{s}{\bar{x}}$. The corresponding relative variances are the square of these expressions. Hence

$$V^2_{hx} = \frac{S^2_{hx}}{\bar{x}_h^{\,2}} \text{ and } V^2_{hy} = \frac{S^2_{hy}}{\bar{Y}_h^{\,2}}$$

V^2 is a consistent estimate of the variance and although not unbiased, the bias is trivial for large samples.

$$\rho'_h S_{hx} S_{hy} = s_{hxy} = \frac{\sum_i^{n_h} (x_{hi} - \bar{x}_h)(Y_{hi} - \bar{Y}_n)}{(n_h - 1)}$$

is the estimated covariance.

(ρ' is used to distinguish the correlation computed from sample data from the ρ for the population).

or $\rho'_h V_{hx} V_{hy} = \frac{S_{hxy}}{\bar{x}_h \bar{y}_h}$ and $r_h = \frac{\bar{x}_h}{\bar{Y}_h}$ and by putting these together we obtain

the variance of r_h given by $S^2_{r_h} = (1 - f_h) r_h^2 \frac{V^2_{hx} + V_{hy}^2 - 2\rho' V_{hx} V_{hy}}{n_h}$

which can also be stated as $S^2_{r_h} = (1 - f_h) \frac{\sum_{n_h} Y_{hi}^2 (r_{hi} - r_h)^2}{(n_h - 1) n_h \bar{Y}_h^2}$ Or

$$S^2_{r_n} = (1 - f_h) \frac{\sum_{n_h} (x_{hi} - r_h Y_{hi})^2}{(n_h - 1) n_h \bar{Y}_h^2} = (1 - f_h) \frac{S^2_{h\bar{z}}}{n_h \bar{Y}_n^2}$$

where $z_{hi} = (x_{hi} - r_h Y_{hi})$

All the 3 equations for $S^2_{r_h}$ give identically the same results.

Since Y_h is known and $X_h = Y_h r_h$ the variance of the estimated total in each stratum is given by $S_{hx}^2 = Y_h^2 S_{rh}^2$

and consequently $S^2_{x'} = \sum_h^L S_{hx}^2 = \Sigma Y_h^2 S_{r_h}^2$

for the whole district.

On the basis of the data collected in the present survey, the estimated number of looms, sampling variance and Standard Error have been calculated by the *ratio* estimate method for each district. (*Vide* Statement opposite).

To get the Madras State figure, the estimated number of looms in each district were added up

(*viz.*) $X = \sum_s \hat{X}_s$ where summation is over each district and subscript refers to the district.

The approximate variance for X has been calculated as $V(X) = \sum_s V\left(\hat{X}_s\right)$

The percentage error for the overall estimate has been worked out as $\frac{\sqrt{V(X)}}{X} \times 100$

The estimated number of looms in Madras State is found to be (479444 ± 8534), the Standard Error being 1·8 per cent.

STATEMENT SHOWING THE ESTIMATED TOTAL, SAMPLING VARIANCE AND STANDARD ERROR

Serial No.	District	No. of Hand Loom-Centres	Recorded Number of Looms inclusive of looms*	No. of sample centres	Recorded Number of looms in sample centres	Actual Number of looms in sample centres	Ratio estimate of total counts from sample	Variance	Standard Error about the mean	Per centage Error	Total Estimate	
1	2	3	4	5	6	7	8	9	10	11	12	
1	Madras ..	4	11,006	3	4,752	2,479	6,250	57,061	238	3·8	6,250	± 238
2	Chingleput ..	68	61,782	12	14,275	13,707	59,973	5,562,473	2,358	3·9	59,973	± 2,358
3	South Arcot ..	55	23,069	8	4,797	3,605	20,322	3,478,455	1,835	9·02	20,322	± 1,835
4	North Arcot ..	35	42,288	8	14,327	10,240	35,713	1,226,442	1,107	3·1	35,713	± 1,107
5	Salem	159	1,51,353	13	36,879	29,468	1,23,534	33,988,357	5,829	4·7	123,534	± 5,829
6	Tiruchirapalli ..	53	29,761	8	8,178	5,514	23,270	173,659	790	3·4	23,270	± 790
7	Tanjore ..	19	10,793	2	2,050	1,856	6,831	1,028,328	1,019	9·4	6,831	± 1,019
8	Madurai ..	34	39,281	8	17,749	15,178	32,979	1,167,658	1,080	3·3	32,979	± 1,080
9	Ramanadapuram ..	18	40,190	8	11,899	7,608	29,329	3,322,862	1,822	9·7	29,329	± 1,822
10	Tirunelveli ..	39	48,884	8	12,847	9,940	40,587	756,872	870	2·1	40,587	± 870
11	Coimbatore ..	116	49,309	12	10,300	8,713	39,959	4,117,339	2,029	5·1	39,959	± 2,029
12	Malabar ..	77	47,821	12	11,182	10,772	46,054	6,174,611	2,484	5·4	46,054	± 2,484
13	South Kanara ..	10	5,169	2	2,451	2,229	4,643	42,683	206	4·4	4,643	± 206
	STATE ..	687	5,60,704	104	1,51,686	1,21,509	4,69,444	60,125,383	8,534	1·8	4,69,444	± 8,534

*D. I. & C — Figures furnished by :
Director of Industries and Commerce, Madras.

*Recorded Number of looms inclusive of looms under co-operatives D. I. & C.

Estimated number of looms in centres having less than 100 looms .. 10,000

GRAND TOTAL 479,444 ± 8,534

ANNEXURE I

STATEMENT SHOWING THE 10 PER CENT SAMPLE IN EACH DISTRICT

Serial No.	District	Reported total Number of looms including Co-operative Societies	Number of looms 10 per cent Sample
1	2	3	4
1	Madras	11,006	1,160
2	Chingleput	61,782	6,180
3	South Arcot	23,069	2,306
4	North Arcot	42,286	4,228
5	Salem	1,51,353	15,136
6	Tiruchirapalli	29,761	2,976
7	Tanjore	10,793	1,080
8	Mathurai	39,281	3,928
9	Ramanathapuram	40,190	4,020
10	Tirunelveli	48,884	4,888
11	Coimbatore	49,309	4,930
12	Malabar	47,821	4,782
13	South Kanara	5,169	516
	Total ..	5,60,704	56,130

ANNEXURE II

List of centres with 100 looms and above selected for the sample survey and the number of looms as found by actual investigation and as reported in the various strata in each district

Madras District

Number of sample centres 3

Number of looms as estimated by Director of Industries. .. 4,752

Number of looms - actual count 2,479

Stratum and class intervals	Serial No.	Sample Centre	Number of looms	
			Estimated by the Director of Industries and Commerce	Actual count.
1. 100-2500	1	Mylapore	1,000	360
	2	Washermanpet	1,252	671
	3	Triplicane	2,500	1,448
		Total ..	4,752	2,479

Chingleput District

Number of sample centres 12

Number of looms as estimated by Director of Industries and Commerce 14,275

Number of looms - actual count .. 13,707

Stratum and class intervals	Serial No.	Sample Centre	Number of looms	
			Estimated by the Director of Industries and Commerce	Actual count.
I. 100-250	1	Moonankattalai..	190	147
	2	Nandivaram	192	217
	3	Kayapakkam	211	192
	4	Uthiramerur	226	188
II. 251-450	5	Gummudipoondi	285	291
	6	Orakadupettai	335	267
	7	Alandur	372	270
	8	Melpadapai	436	296
	9	Manampadi	438	334
III. 451 and above	10	Kosavanpettai	455	457
	11	Pullarambakkam	455	212
	12	Conjeevaram	10,680	10,836
		Total ..	14,275	13,707

ANNEXURE II—*contd.*

South Arcot District

Number of sample centres 7

Number of looms as estimated by Director of Industries and Commerce 4,581

Number of looms - actual count 3,805

Stratum and class intervals	Serial No.	Sample Centre	Number of looms	
			Estimated by the Director of Industries and Commerce	Actual count
I. 100-200	1	Thiruvamuthur	161	135
	2	Volakurichi	190	153
II. 201-500	3	Melpattambakkam	207	216
	4	Meenakshipettai	215	304
	5	Sangeethamangalam	249	372
III. 501 and above	6	Bhuvanagiri	1,637	750
	7	Cuddalore	1,922	1,875
		Total ..	4,581	3,805

North Arcot District

Number of sample centres 8

Number of looms as estimated by Director of Industries and Commerce 14,327

Number of looms - actual count 10,240

Stratum and class intervals	Serial No.	Sample Centre	Number of looms	
			Estimated by the Director of Industries and Commerce	Actual count
I. 100-250	1	Mansurabad	180	267
	2	Munnel	188	502
	3	Desur	200	274
	4	Valapandal	200	410
	5	Thiruparkkadal	230	224
II. 251 and above	6	Pudupakkam	300	149
	7	Gudiyatham	6,467	3,803
	8	Arni	6,562	4,611
		Total ..	14,327	10,240

ANNEXURE II—*contd.*

Salem District

Number of sample centres 13

Number of looms as estimated by Director of Industries and Commerce 36,879

Number of loom - actual count 29,468

Stratum and class intervals	Serial No.	Sample Centre	Number of looms	
			Estimated by the Director of Industries and Commerce	Actual count
I. 100-500	1	Alavaipatty	303	546
	2	Nallur	457	314
	3	Illaichipalayam	471	397
	4	Tho. Jedarpalayam	498	174
II. 501-2000	5	Kandanpalayam	631	504
	6	Pallipalayam	813	859
	7	Pachel	842	783
	8	Tholasanpatty	860	289
	9	Thoppur	920	368
	10	Salapalayam	951	926
	11	Pudupalayam	1,125	648
III. 2001 and above	12	Thiruchengodu	4,522	2,937
	13	Salem Town	24,486	20,723
		Total ..	36,879	29,468

ANNEXURE II—*contd.*

Tiruchirapalli District

Number of sample centres 8

Number of looms as estimated by Director of Industries and Commerce 8,178

Number of looms - actual count 5,514

Stratum and class intervals	Serial No.	Sample Centre	Number of looms	
			Estimated by the Director of Industries and Commerce	Actual count
I. 100–250	1	Kodanthur	111	51
	2	Kusiri	146	133
	3	Tiruchirapalli Fort	238	104
II. 251–500	4	Udayarpalayam	330	393
	5	Pudukottai	333	518
	6	Srirangam	378	377
	7	Tiruchirapalli Town	1,559	765
	8	Karur Town	5,083	3,178
		Total ..	8,178	5,514

Tanjore District

Number of sample centres 2

Number of looms as estimated by Director of Industries and Commerce 2,050

Number of looms - actual count 1,856

Stratum and class intervals	Serial No.	Sample Centre	Number of looms	
			Estimated by the Director of Industries and Commerce	Actual count
I. 100 and above	1	Tanjore	500	759
	2	Kumbakonam	1,550	1,095
		Total ..	2,050	1,856

ANNEXURE II—*contd.*

Mathurai District

Number of sample centres 8

Number of looms as estimated by Director of Industries and Commerce 17,749

Number of looms - actual count 15,178

Stratum and class intervals	Serial No.	Sample Centre	Number of looms	
			Estimated by the Director of Industries and Commerce	Actual count
I. 100-500	1	P. Pudur	104	80
	2	Periakulam	118	135
	3	Vadipatti	125	70
	4	Sillamarathupatti	128	151
	5	Narikalapatti	133	197
II. 501 and above	6	Palani Town	978	799
	7	Chinnalapatti	3,732	3,579
	8	Madurai City	12,431	10,167
		Total ..	17,749	15,178

Ramanathapuram District

Number of sample centres 8

Number of looms as estimated by Director of Industries and Commerce 11,899

Number of looms - actual count 7,608

Stratum and class intervals	Serial No.	Sample Centre	Member of looms	
			Estimated by the Director of Industries and Commerce	Actual count
I. 100-500	1	Sevalpatti	128	134
	2	Samsikapuram	203	304
	3	Kallursandai	234	342
	4	Sankarapandiyapuram	280	262
II. 501 and above	5	Ramachandrapuram	586	974
	6	Karaikudi	1,168	1,065
	7	Srivilliputtur	4,504	971
	8	Paramakudi	4,796	3,556
		Total ..	11,899	7,608

ANNEXURE II—*contd.*

Tirunelveli District

Number of sample centres 8

Number of looms as estimated by Director of Industries and Commerce 12,847

Number of looms - actual count 9,940

Stratum and class intervals	Serial No.	Sample Centre	Number of looms	
			Estimated by the Director of Industries and Commerce	Actual count
I. 100–500	1	Velanguli	360	201
	2	Sawyerpuram	367	395
	3	Puthiamputtur	387	419
	4	Pudur	488	268
II. 501 and above	5	Palayamkottai	780	795
	6	Tirunelveli	3,580	1,195
	7	Tenkasi	1,700	1,749
	8	Melapalayam	5,185	4,918
		Total ..	12,847	9,940

Coimbatore District

Number of sample centres 12

Number of looms as estimated by Director of Industries and Commerce 10,300

Number of looms - actual count 8,713

Stratum and intervals class	Serial No.	Sample Centre	Number of looms	
			Estimated by the Director of Industries and Commerce	Actual count
I. 100–250	1	Vellankoil	107	72
II. 251–500	2	N. M. Palayam	232	149
	3	Perode	306	157
	4	Sivigiri	416	534
III. 501 and above.	5	Kangayam	470	300
	6	Dharapuram	514	106
	7	Pollachi	900	47
	8	Bhavani	972	1,604
	9	Kollegal	1,109	270
	10	Erode	1,306	959
	11	Tirupur	1,966	1,366
	12	Coimbatore	2,002	3,149
		Total ..	10,300	8,713

ANNEXURE II—*concld.*

Malabar District

Number of sample centres 12

Number of looms as estimated by Director of Industries and Commerce 11,182

Number of looms - actual count 10,772

Stratum and class intervals	Serial No.	Sample Centre	Number of looms	
			Estimated by the Director of Industries and Commerce	Actual count
I. 100—250	1	Naduvattam	106	106
	2	Kottayam	167	175
II. 251—500	3	Kannirode	337	640
	4	Kannadiparamba	340	438
	5	Coyalammannam	371	199
	6	Payyanur	414	431
	7	Pazhambalacode	429	326
	8	Dharmadam	435	287
III. 501 and above.	9	Tellicherry	918	948
	10	Kozhikode	1,244	1,309
	11	Elayavoor	2,048	2,258
	12	Chirakal Amsom	4,373	3,655
		Total ..	11,182	10,772

South Kanara District

Number of sample centres 2

Number of looms as estimated by Director of Industries and Commerce 2,451

Number of looms - actual count 2,229

Stratum and class intervals	Serial No.	Sample Centre	Number of looms	
			Estimated by the Director of Industries and Commerce	Actual count
I. 100 and above.	1	Talipodi	198	237
	2	Mangalore	2,253	1,992
		Total ..	2,451	2,229

ANNEXURE III

STATEMENT SHOWING THE SUB-SAMPLING IN LARGE CENTRES

Serial No.	District	Centre	Number of looms	
			Enumerated	Intensively Investigated Sub-sample
1	2	3	4	5
I	Madras ..	Madras ..	2,479	1,160
II	Chingleput ..	Conjeevaram ..	10,836	3,309
III	South Arcot ..	Cuddalore ..	1,875	376
IV	North Arcot ..	Arni	4,611	1,388
		Gudiyatham ..	3,803	1,014
V	Salem ..	Tiruchengodu ..	2,937	1,001
		Salem	20,723	8,409
VI	Tiruchirappalli ..	Tiruchi Town ..	765	393
		Karur Town ..	3,178	1,012
VII	Tanjore ..	Kumbakonam ..	1,095	519
VIII	Mathurai ..	Chinnalapatti ..	3,579	375
IX	Ramanathapuram ..	Paramakudi ..	3,556	770
		Karaikudi ..	1,065	428
X	Tirunelveli ..	Melapalayam ..	4,918	923
		Tenkasi ..	1,749	692
XI	Coimbatore ..	Tirupur ..	1,366	605
		Erode	959	422
		Bhavani ..	1,604	623
		Coimbatore ..	3,149	1,690
XII	Malabar ..	Elayavoor ..	2,258	416
		Chirakal Amsom ..	3,655	554
		Kozhikode ..	1,309	262
XIII	South Kanara ..	Mangalore ..	1,992	279
		Total ..	93,628	28,776

APPENDIX VI

DISTRICTWISE DISTRIBUTION OF NUMBER OF HOUSEHOLDS ACCORDING TO COMMUNITIES

District	Total	Mudaliars	Saurashtras	Devangars	Muslims	Padmasaliars	Chalians	Naickers	Naidus	Padayachis	Gownders	Nattars.	Thiyas	Nairs
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1 Madras	804	77	105	60	346	194	..	..	12	..	..	..	..	..
2 Chingleput	6,094	3,081	419	298	250	725	..	524	279.	3	1	..	..	..
3 South Arcot ..	1,284	614	..	220	..	...	..	..	27	203	..	..	..	..
4 North Arcot ..	4,057	2,606	185	..	12	..	..	3	67	..	275	88	..	..
5 Salem	9,743	4,433	957	2,324	11	124	..	..	181	180	492	..	..	..
6 Tiruchi	1,012	244	333	217	1	16	..	..	9	93	21	..	..	..
7 Tanjore	791	5	785	..	..	..	..	..	..	..	..	..	..	..
8 Madurai	3,874	258	2,374	991	1	44	..	2	..	..	2	..	..	..
9 Ramnad	2,904	297	6	283	38	15	..	..	..	..	..	..	..	..
10 Tirunelveli	4,649	681	426	117	3,150	2	..	..	..	..	..	..	..	..
11 Coimbatore	2,483	634	..	992	..	..	..	88	..	133	72	..	..	..
12 Malabar	876	220	..	..	16	..	478	..	..	..	..	..	136	25
13 South Kanara ..	210	..	..	4	13	..	..	..	..	..	..	..	3	1
STATE ..	38,781	13,150	5,590	5,506	3,838	1,120	478	617	575	612	863	88	139	26

APPENDIX VI—*contd.*

District	Chettiars	Pillais	Moopans	Saliy	Christians	Kannada seniars	Reddiars	Udayars	Kannams	Acharis	Talayaris	Valliars	Yadhavas	Harijans	Gramanis	Nadars	Tambirans
1	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
1 Madras	..	..	..	..	..	..	10	..	..	..	..	..	..	..	..	..	..
2 Chingleput ..	..	113	..	..	..	171	70	2	1	1	1	8	6	1	26	31	28
3 South Arcot ..	..	63	..	1	..	..	1	26	..	..	..	..	9	..	3	..	..
4 North Arcot ..	560	4	..	..	..	..	7	..	..	..	..	..	9	..	1	..	1
5 Salem	272	187	..	..	..	..	..	3	2	1	..	..	..	19	..	132	..
6 Tiruchi	..	11	..	66	1	..	..	..	..	..	..	..	..	..	..	..	..
7 Tanjore	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
8 Madurai	3	52	71	..	66	..	..	..	..	..	..	..	..	2	..	..	..
9 Ramnadapuram ..	255	5	283	1,661	61	..	..	..	..	..	..	..	..	..	..	..	..
10 Tirunelveli ..	..	153	..	..	120	..	..	..	..	..	..	..	..	..	..	..	..
11 Coimbatore ..	466	..	..	..	..	..	..	2	..	..	..	..	..	..	..	..	..
12 Malabar	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..
13 South Kanara ..	..	..	..	..	..	66	..	..	..	..	..	..	..	..	..	..	..
STATE ..	1,557	588	354	1,728	248	237	88	33	3	3	1	8	24	22	30	163	29

APPENDIX VI—*concld.*

District 1	Iyers 33	Pattus Salar 34	Saha 35	Oddars 36	Devars 37	Parvada Rajakulam 38	Thattars 39	Sattanis 40	Singhs 41	Pandaram 42	Baghavathars 43	Barbers 44	Thevers 45	Shettigars 46	Billavas 47	Gowdas 48	Kshattias 49	Kotteris 50	Nayaks 51	Pagayas 52	Mulliyas 53	Bhants 54
1 Madras	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
2 Chingleput	2	41	8	2	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
3 South Arcot	..	..	..	..	..	113	1	1	1	1	..	..	..	..	..	..	..	..	..	..	..	..
4 North Arcot	..	..	..	..	..	..	..	..	..	72	167	..	..	..	..	..	..	..	..	..	..	..
5 Salem	..	..	..	..	..	..	..	..	..	424	..	1	..	..	..	..	..	..	..	..	..	..
6 Tiruchi	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
7 Tanjore	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
8 Madurai	..	..	..	..	1	..	..	..	..	..	..	..	7	..	..	..	..	..	..	..	..	..
9 Ramanathapuram ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
10 Tirunelveli	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
11 Coimbatore	..	..	..	..	..	..	..	..	..	96	..	..	..	..	..	..	..	..	..	..	..	..
12 Malabar	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
13 South Kanara	1	..	..	..	..	..	..	..	..	..	..	..	..	80	26	3	4	1	3	2	2	1
STATE ..	3	41	8	2	2	113	1	1	1	593	167	1	7	80	26	3	4	1	3	2	2	1

APPENDIX VII-1

POPULATION ACCORDING TO AGE GROUPS

Sample compared with Census

District	Males		Females		0-14 Males		0-14 Females	
	Census	Sample	Census	Sample	Census	Sample	Census	Sample
1	2		3		4		5	
1 Madras	52·0	52·2	48·0	47·8	16·4	19·2	14·9	18·7
2 Chingleput	50·1	51·3	49·9	48·7	17·0	16·8	17·7	17·4
3 South Arcot	50·1	51·3	49·9	48·7	18·0	16·7	18·0	22·6
4 North Arcot	49·9	51·4	50·1	48·6	18·9	16·0	18·9	16·2
5 Salem	50·2	50·1	49·8	49·0	18·4	18·3	19·3	20·3
6 Trichinapalli	49·6	51·3	50·4	48·7	17·6	18·1	17·7	18·7
7 Tanjore	49·2	51·0	50·8	49·0	17·2	16·1	13·9	16·7
8 Mathurai	49·8	55·0	50·2	45·0	18·8	15·8	18·7	14·2
9 Ramanathapuram	47·9	51·2	52·1	48·8	19·8	15·3	16·2	17·1
10 Tirunelveli	48·6	51·4	51·4	48·6	17·5	17·5	18·2	16·8
11 Coimbatore	50·2	49·4	49·8	50·6	18·4	21 5	18·3	19·2
12 Malabar	48·6	50·9	51·4	49·1	18·9	16·0	18·2	17·3
13 South Kanara	48·1	45·4	51·9	54·6	19·9	17·8	17·9	26·4
STATE ..	49·5	51·0	50·5	49·0	18·3	17·5	17·7	18·3

APPENDIX VII-2

POPULATION ACCORDING TO AGE GROUPS

Sample compared with Census

District	0-14		15 and above		15 and above		15 and above	
	Total		Males		Females		Total	
	Census	Sample	Census	Sample	Census	Sample	Census	Sample
1	6		7		8		9	
1 Madras	31·3	37·9	35·6	33·0	33·1	29·1	68·7	62·1
2 Chingleput	35·6	34·2	32·2	34·5	32·2	31·3	64·4	65·8
3 South Arcot	36·0	39·3	32·1	34·5	31·9	26·2	64·0	60·7
4 North Arcot	37·8	32·2	31·0	35·3	31·2	32·5	62·2	67·8
5 Salem	37·7	38·6	31·8	31·8	30·5	29·6	62·3	61·4
6 Tiruchi	35·3	36·8	32·0	33·2	32·7	30·0	64·7	63·2
7 Tanjore	34·1	32·8	32·0	34·9	33·9	32·1	65·9	67·2
8 Mathurai	37·5	30·0	31·0	39·2	31·5	30·8	62·5	70·0
9 Ramanathapuram	36·0	32·4	28·1	35·9	35·9	31·7	64·0	67·6
10 Tirunelveli	35·7	34·3	31·1	33·9	33·2	31·8	64·3	65·7
11 Coimbatore	36·7	40·7	31·8	27·9	31·5	31·4	67·3	59·3
12 Malabar	37·1	33·3	29·7	34·9	33·2	31·8	62·9	66·7
13 South Kanara	37·8	44·2	28·2	27·5	34·0	28·3	62·2	55·8
STATE ➡	36·0	35·8	31·2	33·5	32·8	30·7	64·0	64·2

APPENDIX VIII

STANDARDS OF EDUCATION OF LITERATE POPULATION

(Sample compared with Census)

	Total		Males		Per cent to Total		Females		Per cent to toal	
	1951 Census	Sample Survey	1951 Census	Sample Survey	1951 Census	Sample Survey	1951 Census	Sample Survey	1951 Census	Sample Survey
1	2	3	4	5	6	7	8	9	10	11
Literate	50,83,327	15,713	38,90,910	12,751	22·2	27·8	11,92,417	2,962	6·7	6·7
Middle School	4,31,977	1,387	3,16,714	1,297	1·8	2·8	1,15,263	90	0·6	0·2
Secondary	2,23,938	434	1,85,309	423	1·1	0·9	38,629	11	0·2	0·4
University Degree and Diploma.	1,09,049	19	89,818	19	0·5	0·05	19,231	..	0·1	..
Total Literates ..	58,48,291	17,553	44,82,751	14,490	25·6	31·55	13,65,540	3,063	7·6	6·94
Total population ..	3,54,22,760	89,772	1,75,46,764	45,771			1,78,76,396	44,001		

APPENDIX IX

EMPLOYED PERSONS—OCCUPATIONAL RANKING

District	Winding			Warping			Sizing			Weaving		
	Males	Females	Total	Males	Females	Total	Males	Females	Total	Males	Females	Total
1	2	3	4	5	6	7	8	9	10	11	12	13
II												
Madras	37	534	571	454	12	466	..	..	..	470	13	483
Chingleput ..	91	22	113	3,118	77	3,195	281	3	284	..	..	..
South Arcot ..	108	31	139	56	116	172	1	..	1	14	..	14
North Arcot ..	..	..	..	..	..	..	..	..	..	..	..	..
Salem	..	..	..	..	..	..	..	..	..	..	..	..
Tiruchirapalli ..	9	19	28	157	27	184	49	1	50	3	9	12
Tanjore	137	..	137	..	..	..	..	..	..	..	..	..
Mathurai	..	..	..	..	..	..	..	..	..	..	..	..
Ramanathapuram ..	..	..	..	..	..	..	..	..	..	..	..	..
Tirunelveli ..	..	..	..	..	..	..	..	..	..	..	..	..
Coimbatore ..	395	90	485	3,374	1,256	4,630	282	..	282	..	..	..
Malabar	147	293	440	541	752	1,293	402	33	435	..	..	..
South Kanara ..	51	..	51	137	..	137	..	..	..	..	..	..
Total ..	975	989	1,964	7,837	2,240	10,077	1,015	37	1,052	487	22	509
III												
Chingleput ..	225	39	264	308	3	311	2	..	2	..	..	..
South Arcot ..	32	1	33	86	1	87	6	54	60	2	..	2
Tiruchirapalli ..	1	..	1	1	..	1	133	1	134	..	1	1
Total ..	258	40	298	395	4	399	141	55	196	2	1	3
IV												
Chingleput ..	18	2	20	..	..	..	..	..	..	..	..	..
South Arcot ..	1	..	1	..	..	..	10	1	11	1	2	3
Total ..	19	2	21	..	..	..	10	1	11	1	2	3

APPENDIX X

AVERAGE NUMBER OF WORKING DAYS PER MONTH AND WORKING HOURS PER DAY

Centre-wise

Serial No. 1	District and Centre 2	Average Number of working days per month 3	Average Number of working hours per day 4
	I. MADRAS DISTRICT		
1	Madras	24	8
	II. CHINGLEPUT DISTRICT		
1	Kosavanpettai	25	8
2	Pullarambakkam	20	8
3	Gummudipoondi	20	8
4	Alandur	21	9
5	Melpadapai	20	9
6	Moonankattalai	23	8
7	Manapadi	24	10
8	Uthiramerur	24	9
9	Nandivaram	20	8
10	Kayapakkam	23	8
11	Orakadupetai	20	8
12	Conjeevaram	24	8
	III. SOUTH ARCOT DISTRICT		
1	Melpatambakkam	20	8
2	Moonaxipettai	23	9
3	Villupuram	26	8
4	Thiruvamuthur	26	10
5	Bhuvanagiri	27	10
6	Velakurichi	24	8
7	Sangeethamangalam	27	8
8	Cuddalore	24	8
	IV. NORTH ARCOT DISTRICT		
1	Desur	25	8
2	Tiruparkadal	24	8
3	Munnel	25	8
4	Valapandal	24	8

APPENDIX X—*contd.*

Serial No. 1	District and Centre 2	Average Number of working days per month 3	Average Number of working hours per day 4
5	Mansurabad	25	8
6	Pudupakkam	23	8
7	Arni	22	8
8	Gudiyatham	23	8
	V. SALEM DISTRICT		
1	Pudupalayam	26	9
2	Salapalayam	25	9
3	Illaichipalayam	26	9
4	Pallipalayam	24	8
5	Kandanpalayam	24	10
6	Nallur	24	10
7	Pachel	24	9
8	Tiruchengode	24	9
9	Alvaipatti	28	9
10	Tho. Jedarpalayam	26	8
11	Thoppur	23	6
12	Tholasampatti	23	7
13	Salem Town	24	7
14	Ponnammapet	24	6
15	Shevapet	24	7
16	Ammapet	23	6
17	Arisipalayam	23	6
18	Gugai	25	7
	VI. TIRUCHIRAPPALLI DISTRICT		
1	Fort	24	8
2	Srirangam	23	7
3	Musiri	22	7
4	Pudukotai	22	7
5	Udayarpalayam	25	8
6	Kodanthur	25	8
7	Tiruchi Town	22	6
8	Karur	22	8

APPENDIX X—*contd.*

Serial No. 1	District and Centre 2	Average Number of working days per month 3	Average Number of working hours per day 4
	VII. TANJORE DISTRICT		
1	Tanjore	23	7
2	Kumbakonam	20	8
	VIII. MATHURAI DISTRICT		
1	Vadipatti	24	9
2	Sillamarathupatti	24	10
3	Periakulam	20	10
4	P. Padur	28	10
5	Narikalapatti	24	10
6	Palani	24	10
7	Chinnalapatti	20	10
8	Mathurai..	24	8
	IX. RAMANATHAPURAM DISTRICT		
1	Sovalpatti	16	7
2	Kallursandai	24	10
3	Karaikudi	24	10
4	Arupukottai	24	9
5	Samusigapuram	28	10
6	Sankarapandiyapuram	28	10
7	Ramachandrapuram	28	10
8	Srivilliputtur	30	10
	X. TIRUNELVELI DISTRICT		
1	Sawyerpuram	24	6
2	Palayamkottai	24	6
3	Vellangulli	25	8
4	Pudiamputtur	25	8
5	Pudur	28	8
6	Melapalayam	26	12
7	Tirunelveli Town	25	10
8	Tenkasi	25	8

APPENDIX X—*concld.*

Serial No. 1	District and Centre 2	Average Number of working days per month 3	Average Number of working hours per day 4
	XI. COIMBATORE DISTRICT		
1	Coimbatore	24	10
2	Erode	24	10
3	Perode	24	10
4	Sivigiri	24	10
5	Vellankoil	24	10
6	Kangayam	20	8
7	Tirupur	24	8
8	Dharapuram	24	8
9	Kollegal	24	8
10	N. M. Palayam	24	10
11	Bhavani	25	8
12	Pollachi	22	10
	XII. MALABAR		
1	Elayavoor	23	9
2	Naduvatam	23	9
3	Pazhambalacode	23	9
4	Kozhikode	22	9
5	Coyalmannam	23	9
6	Dharmadom	28	9
7	Tellicherry	26	9
8	Kottayam	23	9
9	Kannirod	23	9
10	Kannadiparmba	23	10
11	Chirakal	22	9
12	Payyanur	23	10
	XIII. SOUTH KANARA		
1	Mangalore	23	9
2	Talipadi	23	7

APPENDIX XI

AVERAGE MONTHLY EARNINGS OF WEAVERS UNDER DIFFERENT ORGANISATIONS

Serial No.	District and Centre	Independent weaver	Co-operative Society member	Weaver working under Master Weaver
1	2	3	4	5
	I. MADRAS	Rs. a. p.	Rs. a. p.	Rs. a. p.
1	Madras	44 0 0	40 0 0	37 4 0
	II. CHINGLEPUT			
1	Kosavanpettai	..	..	22 10 8
2	Pullarambakkam	..	..	22 10 8
3	Gummudipoondi	..	26 10 8	26 6 0
4	Alandur	27 0 0	30 0 0	..
5	Melpadappai	..	30 0 0	34 0 0
6	Moonankattalai	..	..	27 10 8
7	Manampadi	23 5 4	23 10 8	20 0 0
8	Uthiramerur	21 10 8	13 8 0	19 8 0
9	Kayapakkam	28 0 0	..	26 10 8
10	Nandivaram	..	23 0 0	28 4 0
11	Orakkadupettai	20 0 0	..	26 0 0
12	Conjeevaram	40 8 0	44 0 0	41 5 4
	III. SOUTH ARCOT DISTRICT			
1	Villupuram	..	..	35 0 0
2	Bhuvanagiri	24 4 0	22 4 0	22 8 0
3	Meenaxikettai	23 8 0	23 4 0	21 12 0
4	Melpattambakkam	22 8 0	..	27 7 0
5	Thiruvamuthur	21 0 0	..	21 4 0
6	Velakurichi	13 8 0	..	15 0 0
7	Sangeethamangalam	20 8 0	24 0 0	21 0 8
8	Cuddalore	22 8 0	..	27 8 0
	IV. NORTH ARCOT DISTRICT			
1	Desur	26 0 0	..	..
2	Tiruparkadal	26 0 0	..	24 10 8
3	Munnel	..	24 0 0	25 8 0
4	Valapandal	..	..	23 4 0
5	Mansurabad	24 0 0	27 4 0	22 8 0

APPENDIX XI—*contd.*

Serial No.	District and Centre	Independent weaver	Co-operative Society member	Weaver working under Master Weaver
1	2	3	4	5
		Rs. a. p.	Rs. a. p.	Rs. a. p.
6	Pudupakkam	..	..	28 8 0
7	Arni	..	..	24 8 0
8	Gudiyattam	22 0 0	20 0 0	22 0 0
	V. SALEM DISTRICT			
1	Alavaipatti	27 8 0	29 4 0	..
2	Tholasampatti	34 9 7	52 0 0	38 8 0
3	Thoppur	40 5 4	34 8 0	36 8 0
4	Tho. Jaderpalayam	28 4 0	34 5 4	36 4 0
5	Pudupalayam	35 10 8	35 0 0	39 5 4
6	Pallipalayam	36 10 8	38 0 0	56 10 8
7	Salapalayam	28 0 0	36 0 0	22 0 0
8	Illaichipalayam	..	..	27 12 0
9	Kandanpalayam	22 0 0	23 8 0	22 10 0
10	Nallur	20 0 0	23 8 0	22 10 0
11	Pachel	19 5 4	23 4 0	27 10 8
12	Tiruchengode	25 8 0	25 0 0	24 0 0
13	Ammapet	33 12 0	39 8 0	38 0 0
14	Ponnammapet	27 0 0	32 8 0	29 0 0
15	Shevapet	28 8 0	..	32 4 0
16	Arisipalayam	40 0 0	38 8 0	34 0 0
17	Salem Town	41 8 0	35 0 0	34 8 0
18	Gugai	27 0 0	30 0 0	36 4 0
	VI. TRICHY DISTRICT			
1	Trichy Town	30 4 0	35 0 0	33 12 0
2	Trichy Fort	33 12 0	..	37 0 0
3	Srirangam	32 0 0	.. ..	35 0 0
4	Kodanthur	..	24 0 0	27 8 0
5	Pudukottai	26 8 0	28 0 0	32 1 4
6	Musiri	30 0 0	..	26 1 5
7	Udayarpalayam	21 8 0	26 9 10	22 11 6
8	Karur	36 10 0	..	40 11 6

APPENDIX XI—*contd.*

Serial No.	District and Centre	Independent weaver	Co-operative Society member	Weaver working under Master Weaver
1	2	3	4	5
		Rs. a. p.	Rs. a. p.	Rs. a. p.
	VII. TANJORE			
1	Tanjore	34 0 0	35 3 2	36 3 8
2	Kumbakonam	44 6 5	40 0 0	40 9 4
	VIII. MADURAI			
1	Vadipatti	38 0 0	..	26 8 0
2	Sillamarathupatti	28 8 0	..	23 4 0
3	Narikalapatti	.. ..	30 0 0	34 8 0
4	Periakulam	28 0 0	..	46 0 0
5	P. Pudur	31 8 0	..	32 12 0
6	Palani	32 4 0	31 0 0	36 12 0
7	Chinnalapatti	36 0 0	..	31 10 8
8	Madurai	36 0 0	28 0 0	40 12 0
	IX. RAMANATHAPURAM			
1	Sevalpatti	55 0 0	22 0 0	24 12 0
2	Kallursandai	..	21 4 0	23 6 0
3	Karaikudi	30 0 0	27 8 0	26 4 0
4	Aruppukottai	28 0 0	24 8 0	27 2 8
5	Samusigapuram	24 4 0	22 8 0	21 4 0
6	Sankarapandiapuram	21 0 0	23 12 0	..
7	Ramachandrapuram	..	27 8 0	..
8	Srivilliputhur	..	25 4 0	..
	X. TIRUNELVELI			
1	Sawyerpuram	17 0 0	21 10 8	23 0 0
2	Palayamkottai	25 10 8	28 12 0	29 4 0
3	Pudur	35 4 0	34 5 4	36 0 0
4	Pudiamputhur	22 8 0	15 0 0	18 0 0
5	Vellanguli	23 12 0	..	26 0 0
6	Tenkasi	35 0 0	28 8 0	25 12 0
7	Melapalayam	22 8 0	25 0 0	20 0 0
8	Tinnevelly Town	23 12 0	21 8 0	22 8 0

APPENDIX XI—*concld.*

Serial No.	District and Centre	Independent weaver	Co-operative Society member	Weaver working under Master Weaver
1	2	3	4	5
		Rs. a. p.	Rs. a. p.	Rs. a. p.
	XI. COIMBATORE			
1	Erode	17 0 0	21 0 0	17 0 0
2	Perode	..	..	31 8 0
3	Sivagiri	..	22 10 8	23 0 0
4	Vallankoil	..	..	27 0 0
5	Bhavani	..	..	25 0 0
6	Kollegal	44 0 0	..	44 8 0
7	Coimbatore	39 8 0	37 0 0	38 8 0
8	N. M. Palayam	..	20 0 0	18 0 0
9	Tirupur	42 12 0	33 0 0	54 12 0
10	Pollachi	55 0 0	48 10 8	49 0 0
11	Dharapuram	..	30 4 0	33 0 0
12	Kangayam	24 0 0	45 10 8	42 8 0
	XII. MALABAR			
1	Payyanur	19 12 10	21 0 0	19 12 0
2	Chirakkal	30 8 0	33 0 0	29 6 5
3	Elayavoor	29 11 8	37 8 0	33 0 0
4	Kanadiparamba	..	..	31 8 0
5	Kannirode	31 6 5	19 2 3	30 0 0
6	Kottayam	24 4 0	22 13 4	21 0 0
7	Dharmadom	38 5 4	..	..
8	Kozhikode	19 6 5	18 4 0	..
9	Naduvattam	19 3 2	22 12 10	..
10	Pazhambalacode	17 10 8	22 12 10	..
11	Coyalmannam	20 5 4	23 12 0	21 2 8
12	Tellicherry	32 15 0	20 0 0	20 11 5
	XIII. SOUTH KANARA			
1	Mangalore	44 9 0	31 8 0	25 0 0
2	Talipodi	38 2 0	32 6 0	32 10 8

APPENDIX XII

FACTORIES

Wages Bill

Serial No. 1	Active Looms 2	Working days per annum 3	Number of Mandays worked per annum 4	Wage Bill per annum 5
1	20	336	6,720	14,040
2	30	336	10,080	26,988
3	9	300	2,700	8,078
4	13	300	3,900	11,588
5	15	300	4,500	11,864
6	23	300	6,900	15,495
7	20	300	6,000	9,865
8	50	275	13,750	16,500
9	15	280	4,200	4,000
10	4	288	1,152	1,200
11	15	300	4,500	3,784
12	15	300	4,500	7,200
13	4	300	1,200	1,200
14	4	312	1,248	1,300
15	30	310	9,300	7,800
16	24	288	6,336	8,640
17	22	288	6,336	8,640
18	14	280	3,920	3,756
19	19	280	5,320	8,328
20	55	280	15,400	30,000
21	14	280	3,920	5,760
22	25	276	6,900	17,736
23	120	280	33,600	12,996
24	5	280	1,400	3,672
25	25	280	7,000	8,880
26	35	280	9,800	12,000
27	11	280	3,080	6,000
28	17	252	4,284	6,768
29	6	288	1,728	4,800
30	25	280	7,000	12,696

APPENDIX XII—*contd.*

Serial No. 1	Active Looms 2	Workings days per annum 3	Number of Mandays worked per annum 4	Wage Bill per annum 5
31	23	276	6,348	9,600
32	11	280	3,080	4,500
33	10	288	2,880	4,836
34	22	288	6,336	12,000
35	55	288	15,840	24,996
36	50	288	14,000	27,612
37	25	288	7,200	10,800
38	65	288	18,720	30,000
39	31	280	8,680	15,000
40	30	288	8,640	9,600
41	45	288	12,960	27,300
42	69	288	3,456	8,328
43	12	288	3,456	8,328
44	36	288	10,368	21,828
45	25	288	7,200	8,640
46	50	288	14,000	54,000
47	36	288	10,368	21,828
48	53	288	15,264	32,292
49	30	288	8,640	17,400
50	27	288	7,775	11,136
51	17	288	4,896	9,972
52	21	288	6,048	13,152
53	75	288	21,600	36,000
54	13	288	3,744	4,620
55	6	288	1,728	1,920
56	11	288	3,168	4,800
57	51	288	14,688	36,000
58	35	300	10,500	21,000
59	20	288	5,760	5,904
60	18	288	5,184	5,820
61	10	240	2,400	3,012
62	14	288	4,032	5,460
63	7	264	1,848	3,240

APPENDIX XII—*contd.*

Serial No. 1	Active Looms 2	Workings days per annum 3	Number of Mondays worked per annum 4	Wage Bill per annum 5
64	10	240	2,400	3,564
65	8	240	1,920	3,216
66	8	240	1,920	3,216
67	20	288	7,488	13,812
68	6	288	1,728	3,252
69	5	240	1,200	1,344
70	4	240	960	1,284
71	4	240	960	1,584
72	50	288	14,400	11,448
73	34	300	10,200	12,120
74	20	300	6,000	6,876
75	20	300	6,000	6,960
76	22	300	6,600	7,496
77	30	300	9,000	10,260
78	5	144	720	564
79	21	301	6,321	12,576
80	41	301	12,341	29,784
81	25	300	7,500	10,488
82	11	306	3,366	12,672
83	21	301	6,321	28,296
84	6	200	1,200	7,560
85	100	302	30,200	1,01,280
86	4	288	1,152	4,200
87	25	305	7,625	19,308
88	33	304	10,032	45,624
89	15	305	4,575	33,336
90	30	312	9,360	39,504
91	13	300	3,900	7,164
92	10	240	2,400	4,896
93	4	218	832	2,328
94	2	216	432	888
95	8	240	1,920	4,644
96	1	240	240	576

APPENDIX XII—*contd.*

Serial No. 1	Active Looms 2	Workings days per annum 3	Number of Mondays worked per annum 4	Wage Bill per annum 5
97	9	312	2,808	4,812
98	22	312	6,864	18,360
99	4	240	960	2,664
100	8	240	1,920	4,416
101	2	240	480	1,200
102	5	240	1,200	2,880
103	242	300	72,000	74,400
104	8	312	2,496	4,512
105	7	312	2,184	5,268
106	14	312	4,368	10,092
107	10	240	2,400	4,176
108	9	312	2,808	6,468
109	13	312	4,056	10,176
110	35	300	10,500	25,728
111	22	288	6,336	13,044
112	22	288	6,336	15,000
113	20	288	5,760	12,864
114	52	228	11,856	43,428
115	100	282	28,200	51,492
116	4	240	960	3,132
117	29	288	8,352	18,720
118	30	288	8,640	22,320
119	13	288	3,744	9,600
120	25	240	6,000	10,656
121	15	240	3,600	4,740
122	17	288	4,896	6,180
123	7	240	1,680	4,428
124	35	240	8,400	34,296
125	17	240	4,080	10,524
126	6	240	1,440	3,552
127	4	240	960	2,172
128	6	240	1,440	5,340
129	9	240	2,160	5,016

APPENDIX XII—*contd.*

Serial No. 1	Active Looms 2	Working days per annum 3	Number of Mondays worked per annum 4	Wage Bill per annum 5
130	10	240	2,400	5,376
131	7	240	1,680	4,200
132	2	240	480	1,332
133	8	240	1,920	4,320
134	6	240	1,440	2,784
135	7	336	2,352	6,048
136	3	288	864	2,028
137	5	288	1,440	3,000
138	12	336	4,032	8,280
139	18	312	5,616	13,452
140	125	312	39,000	74,676
141	250	312	78,000	1,82,976
142	31	312	9,672	24,072
143	9	312	2,808	6,576
144	110	312	34 320	68,340
145	40	312	12,480	41,856
146	18	312	5,616	15,840
147	30	312	9,360	23,256
148	7	240	1,680	3,636
149	6	240	1,440	3,696
150	30	312	9,360	17,784
151	20	312	6,240	14,220
152	11	240	2,640	5,280
153	14	240	3,360	6,300
154	7	240	1,680	3,624
155	10	312	3,120	6,780
156	12	240	2,880	5,940
157	40	300	12,000	32,388
158	43	294	12,642	31,440
159	4	240	960	2,616
160	3	240	720	1,956
Total	3,926		11,65,061	23,40,706