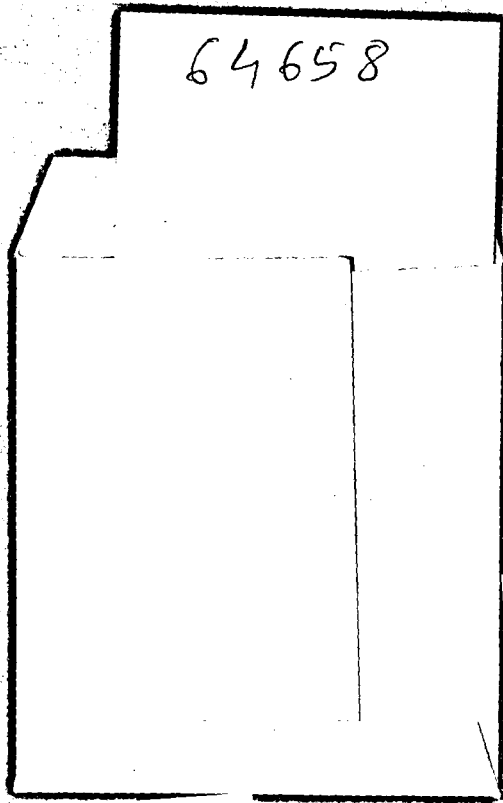


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*Supervisor-in-charge of the Field Operations conducted under the
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Report on the Survey of Hand-loom Weaving Industry in Bengal, 1936.

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Report on the Survey of Hand-loom Weaving Industry in Bengal.

Part I

Hand-loom Weaving and the present Survey.

CHAPTER I.

Introductory.

1. **Importance of the Industry.**—The Hand-loom Weaving Industry is the oldest and most important cottage industry of the province. The industry was well-known in India even in Vedic times and as early as the 4th century B.C., the industry had come to assume such importance that a "Superintendent of Yarn" had to be maintained to look after the yarn producing industry. (Arthashastra of Kautilya, Chapter XXVI.) The fame of Bengal hand-loom products at one time spread over the whole world, and a very large number of people maintained themselves or augmented their income by working as weavers or spinners. Cotton fabrics of Bengal were undoubtedly Bengal's principal export during the Moghul and early British period. Since the beginning of mass production by machineries the hand-loom industry has suffered a steady decline both in its economic return and in its following. But even now, nearly a fourth part of the total cloth demand of Bengal is supplied by the hand-loom weavers.* An attempt will be made to trace the historical background of the industry in the final Report†, to analyse the causes of the rise and the reasons for the decline of the industry so that we may profit by the experiences of the past in formulating our future policy. But such a study is beyond the scope of this Report.

2. **Circumstances leading to the initiation of the Survey—Inadequacy of available information.**—Attempts have been made from time to time, principally by the Government, to help the industry in diverse ways. But since the beginning of the economic depression in 1929, the need for a resuscitation of the Cottage industries has been more acutely felt. For the past few years, the Government of India have been giving grants and Provincial Governments using their available resources to effect a revival of the different cottage industries. In this campaign, the Hand-loom Weaving Industry naturally came to have a very prominent part and in the Sixth and Seventh Industrial Conferences held under the auspices of the Government of India, numerous plans for improvement of this industry were submitted by local governments and discussed. But detailed information about the position and possibilities of the industry was singularly lacking, especially in Bengal. No accurate and dependable data had ever been collected about the different aspects of the economic life of weavers and of their

*Vide paragraph 147.

†A provisional draft of this Historical Retrospect prepared by Rai J. M. Ghose Bahadur, Secretary of the Board of Economic Enquiry, Bengal, is circulated separately.

industry. There exists a number of publications containing valuable information of general nature, but such information is in most cases based on the impressions and observations of individuals and consequently have not the authority which attaches to the deductions based on authentic primary data scientifically collected and analysed.

3. **Divergent opinion about possibilities of the industry.**—Another difficulty which faced the intending workers in the field was that amongst the economists and other thinkers, there was no unanimity about the possibility of any improvement of the industry. Some thinkers opined that in these days of mass production by machines the hand-loom products cannot have any economic possibilities and any attempt to make the hand-loom weaving a paying industry must end in a failure. Another school of thinkers maintains that though the industry cannot hold its own as a primary occupation in these days of mill competition, it certainly has a good future as a subsidiary occupation and can, in that way, give the rural population just that supplementary income which makes all the difference between comfort and want. A third party of thinkers consider, that if the rural families who have the time and opportunity, do no more than weave only such clothing as may supply their family needs, it would make a great difference in the economic life of the rural population. Now, no detailed statistical and other information of authoritative nature was available to examine the respective merits of these theories and when economists held such divergent views, the Government and workers hesitated to launch any expensive campaign for helping the industry and even to decide what policy should be followed in doing the same.

4. **Initiation of the Survey.**—This was the situation when the Board of Economic Enquiry, Bengal, obtained permission from the Government (in July, 1935) to make a Statistical sample survey of the economic condition of the weavers and of their industry. The intention was to follow the general principle for such surveys recommended by Professors Robertson and Bowley, with such modifications as the circumstances might require. In this Report, it will be out of place to enter into the details of the method and procedure of survey but a general description would, perhaps, not be out of place, as this would help the readers in forming an idea about the dependability of the results which are being presented.

5. **Difficulties in adopting the method of random sampling.**—The initial difficulty in having random samples for survey was that the Board had incomplete information as to the villages in the province where hand-loom weaving is done. Even the number of such villages in each district, or in the province was not known. The Secretary of the Board, on information available from existing records, etc., found that there are 613 such villages in the whole province, but this was so palpably incorrect that it was considered necessary to obtain a detailed report on the subject from the Collectors of districts which was done through the Director of Industries, Bengal. When these reports were received, it was found that (excluding Murshidabad and Darjeeling districts and Sadar and Bashirhat subdivisions of 24-Parganas district, of which no reports have been received so far) there are 2,444 villages where weaving is done by 48,950 families. Adding by estimate for the areas for which no report has been received, the province, therefore, according to the Collector's reports, has about 2,674 villages, with about 53,559 families employed in the

Hand-loom Weaving Industry. (For brevity such villages are being termed "Weaving Villages" hereafter.) A list, showing the distribution of these villages in different districts, is given in Table I. Weaving villages have been divided into six categories, according to numerical strength of weaving families. In class I are villages with more than 300 weaving families; in class II, 201—300 families and so on. The total number of villages of each class in each district and the total number of families therein, as reported by Collectors, are shown in this table (Table I).

Table I (vide paragraph 5).

Number of Weaving Villages and Families reported by Collectors.

Name of District.	Class I. (More than 300 Families). No. of.—		Class II. (201—300). No. of.—		Class III. (101—200). No. of.—		Class IV. (51—100). No. of.—		Class V. (26—50). No. of.—		Class VI. (1—25). No. of.—		Total number of—	
	Villages.	Families.	Villages.	Families.	Villages.	Families.	Villages.	Families.	Villages.	Families.	Villages.	Families.	Villages.	Families.
Dacca ..	1	353	1	279	8	1,196	23	1,613	33	1,219	126	1,210	192	5,870
Nadia ..	1	536	..	..	..	..	5	325	7	232	37	392	50	1,485
Bangpur ..	..	..	..	..	..	..	..	..	2	100	21	240	23	340
Bogra ..	..	..	..	..	..	..	1	91	9	321	90	644	100	1,056
Rajshahi ..	..	..	..	..	..	..	1	52	3	108	13	96	17	256
Malda ..	..	..	..	..	1	179	3	235	8	268	18	103	30	785
Midnapore ..	..	..	..	..	2	292	2	200	6	230	54	436	64	1,158
Jessore ..	..	..	1	250	2	350	3	245	9	339	130	1,266	145	2,450
Total of 8 Districts..	2	889	2	529	13	2,017	38	2,761	77	2,817	489	4,387	621	13,400
Khulna ..	1	500	1	300	1	150	3	207	5	176	122	991	133	2,324
Mymensingh ..	..	..	2	507	6	787	12	837	25	895	118	1,048	163	4,074
Pabna ..	..	..	1	213	6	856	20	1,444	37	1,386	240	1,378	304	5,227
Noakhali ..	..	..	..	..	..	..	9	563	36	1,315	143	1,384	188	3,262
Birbhum ..	2	1,564	..	..	2	300	4	370	9	813	138	561	155	3,108
Total of 5 Districts..	3	2,064	4	1,020	15	2,093	48	3,421	112	4,035	761	5,362	943	17,995
Total of 13 Districts..	5	2,953	6	1,549	28	4,110	86	6,182	189	6,852	1,250	9,749	1,564	31,395

Bankura	..	..	..	2	500	..	..	2	176	2	73	89	648	95	1,397
Bakerganj	..	..	..	..	..	2	245	4	320	6	216	123	842	135	1,623
Burdwan	..	..	..	..	..	..	..	2	150	11	395	57	413	70	958
Chittagong	..	..	..	..	..	1	169	3	231	1	47	29	342	34	789
Dinajpur	..	..	..	..	..	3	519	2	137	5	199	98	567	108	1,422
Faridpur	..	..	..	1	211	8	1,025	18	1,306	21	748	90	667	138	3,957
Howrah	..	..	..	..	..	..	..	..	..	3	95	14	80	17	175
Hooghly	..	..	..	1	300	6	1,014	7	485	8	277	56	509	78	2,585
Jalpaiguri	..	..	..	..	..	..	..	3	192	6	219	30	271	39	682
Tippera	..	..	..	1	220	3	396	8	588	34	1,254	118	1,456	164	3,914
24-Parganas (reported)	..	..	..	..	..	..	..	..	..	1	42	1	20	2	62
Estimate for unreported Subdivisions.	..	..	..	..	..	..	..	..	..	..	..	30	600	30	600
Darjeeling and Murshidabad, by estimate.	..	..	..	..	..	..	..	..	..	100	3,000	100	1,000	200	4,000
Total of remaining 13 Districts not surveyed.	..	..	..	5	1,231	23	3,368	49	3,585	198	6,565	835	7,415	1,110	22,164
Total (Brought forward) of 13 Districts surveyed.	5	2,953	6	1,549	28	4,110	86	6,182	189	6,852	1,250	9,749	1,564	31,395	
Provincial Total	5	2,953	11	2,780	51	7,478	135	9,767	387	13,417	2,085	17,164	2,874	53,559	

CHAPTER II.

Analysis of Cost and time of survey.

6. **Original estimate for the survey and of its probable cost.**—An estimate was at first drawn up by the Sub-Committee of the Board entrusted with this survey, to survey 10 per cent. (about 61) of the total number of villages, then estimated at 613, at a cost of about Rs. 19,000 and the Board in November, 1935, directed that a third part of this survey (20 villages) should first be done at a cost not exceeding Rs. 8,000. When the Collectors' reports were received by end of January, it was found that a 10 per cent. sample of one-third of the districts would necessitate enquiry in over 62 instead of 20 villages. The original idea of 613 villages led to the belief that, one and a half lakh of weavers, distributed in these villages, would give from 200 to 300 families (workers?) on the average per village. It was found, however, that even on the Collectors' reports, there were hardly 2 per cent. weaving villages with over a hundred weaving families. A sample of 20 villages would have given us at most 1,000 families and in a random selection process, probably much less. Besides, when the actual enquiry started, it was further found that even the Collectors' reports were not exhaustive and a large number of villages were found which had not been included in these reports.

7. **Actual selection of units of survey.—Why unions instead of villages were taken as Units?**—The position, therefore, was that we had not a complete list of all the weaving villages from which we could take samples at random so that the sample could be statistically acceptable. The existence of over 4,000 weaving villages in the province (and nearly 1,074 in the eight districts first taken up) would have needed survey of 107 villages instead of 20, to take a 10 per cent. sample and this was hardly possible with the Rs. 8,000 sanctioned by the Board, as all these villages would be situated away from each other necessitating large expenditure on travelling allowance, waste of time in journeys, etc. It was found, however, that most of the bigger weaving villages had been reported by Collectors but that the villages with small number of weavers had usually been missed. The likelihood, therefore, was that, as practically all the important weaving villages had been included in the Collectors' list and as these mostly fell in different unions, these lists would fairly cover the whole of the "universe" of which the weaving unions were the units. But we had no lists showing the names of unions. We, therefore, selected a number of villages at random from the Collectors' lists of villages and then took up the unions in which these villages fell, as our units. In this method practically all the "Weaving unions" which constituted the "Universe" to draw the sample from, were covered and besides the big and small weaving villages of different degrees of importance had equal chance of representation in the samples selected. It was also possible, by this method, to estimate the extent to which the Collectors' lists had been incomplete. Thirty-six units were thus selected, in the eight selected districts, for intensive survey, in addition to five others, Dacca City, Santipore, Siddhipassa (Jessore), Chandrakona (Ghatal) and Tarabo (Dacca), selected, also at random, as special samples from the

most famous centres of the industry. Table II (A and B) gives details about the areas and families selected for survey.

8. Staff: Pay and allowances—Changes of original plan—Cost of Survey.—The original idea was that investigators, on Rs. 50 (consolidated pay) per mensem, will fill up the general portions of the family schedule forms for weaving families in each village taken up (after preparing a list of all weavers) and then inspectors on Rs. 100 (consolidated pay) per mensem would fill up the more difficult and technical portions of the same. After some experience was gained, the Sub-committee altered this to some extent for effecting economy. A party of assistant investigators on Rs. 35 per mensem was employed to prepare the family lists and obtain general statistical and other informations from union board records, record-of-rights and by local enquiries. The more difficult calculations about income, expenditure, crop and food, yarn production and other technical matters covered by the family schedules, were done by investigators on Rs. 50 per mensem instead of inspectors on Rs. 100 and only two inspectors on Rs. 75 were appointed for inspecting and co-ordinating the work of investigators and making enquiries about the markets, effects of the activities of the Department of Industries, Co-operative movements, etc. On the other hand, as workers were intended to make long journeys and work in several districts instead of working in one or two villages only (30 investigators were to have worked in 60 villages, according to the original plan of work) they were given a single inter-class rail and steamer fare, and actual bus fare and a small boat allowance (1 anna per mile or 2 annas per day) in river districts. But for this reduction of pay and other economies effected, the cost would have been much more than Rs. 8,000. As it is, the cost has been Rs. 7,300 for the actual survey of 6,042 families of 173 weaving villages in 41 units of 8 districts. A list showing the distribution of these villages is given in Table IIA. If the preliminary arrangements, etc., could have been completed before the appointment of the staff, we might save a few hundred rupees and the actual cost of survey in eight districts, including one week for training of workers, would have been roughly Rs. 7,000 for 6,042 families or about Re. 1.15 per family. Including Rs. 2,600, the expenses on supervision, and the amount which we could not save for want of previous experience in such survey, the cost has been Rs. 1.64 per family. With the experience that has been gained it seems possible to conduct similar surveys in future at a cost of Rs. 1.4 per family, provided the number of families be reasonably large. The tabulation cost of Rs. 1,000 has not been included in the above.

9. Work theoretically commenced about the middle of December 1935, when the first supervisor was appointed, but the actual working time for 12 investigators has been from about the middle of March to end of July (including 1 week for training) or 137 days, which works out to 3.6 families per worker per day. Including the overlapping families (some families enquired into twice for purposes of check of results), over 600 in number, the real overall progress has been about 4 families a day. In actual work, however, the average outturn was 5.5 to 6 families a day, but the period spent on journeys reduced the overall average to 4. The workers, on the average, worked from 8 to 10 hours a day (inclusive of time in fair copying the results). It may

be noted here that though we had no previous experience in a survey of this type, yet, the original plan of work drawn up by Professor Mahalanobis and accepted by the Sub-committee and the Board was found to surprisingly agree with the procedure of work which eventually we found most suited for the survey and his estimate of the progress of work at six families a day has also been found entirely correct. Only his plan visualised larger number of workers and less wastage of time on journeys.

Table IIA (vide paragraph 7).

Total Villages and Families and Weaving Villages and Weaving Families in Unions surveyed.

Name of district.	No. of unions.	Total No. of villages.	Total No. of families.	No. of Weaving villages.		Total No. of families in weaving villages.	Total No. of weaving families.		Families enquired into—	
				Reported by Collectors.	Found on enquiry.		Reported by Collectors.	Found on enquiry.	Weaving (*).	Non-weaving.*
1	2	3	4	5	6	7	8	9	10	11
Dacca ..	13	130	25,700	32	53	12,625	1,762	2,264	1,386 (24)	709 (4)
Nadia ..	4	31	9,751	11	13	6,862	732	1,169	332(605)	137 (—)
Rangpur ..	4	33	5,415	7	10	1,733	177	157	97 (—)	272 (1)
Bogra ..	3	60	4,579	12	13	1,739	199	299	241 (3)	71 (1)
Rajshahi ..	3	35	4,459	5	8	2,216	165	185	164 (3)	110 (2)
Malda ..	5	76	10,300	11	21	4,496	634	672	517 (7)	256 (5)
Midnapore ..	5	84	6,841	13	41	4,315	338	493	288 (6)	199 (2)
Jessore ..	4	52	5,995	9	14	2,799	245	310	278 (5)	315 (2)
Total ..	41	501	73,040	100	173	36,785	4,252	5,549	3,303 (653)	2,069 (17)

(*) The numbers shown within brackets are, except for about 600 factory workers in Nadia, families which were enquired into but the cards for which had to be rejected during tabulation for some unaccountable error in fair copying or filling up by workers. These figures are exclusive of the numbers shown as tabulated.

Table IIB (vide paragraph 7).

Units, Villages and Families Subjected to Survey.

Name of union.	Total No. of villages.	Total No. of families.	No. of weaving villages.		Total No. of weaving families.	
			Reported by Collector.	Found on enquiry.	Reported by Collector.	Found on enquiry.
1	2	3	4	5	6	7
<i>District Dacca (1).</i>						
1. Panchasar	5	2,600	2	2	27	36
2. Kathadia	4	1,293	1	2	40	47
3. Kalma	9	3,362	3	4	52	108
4. Kolapara	8	2,845	4	4	197	190
5. Shyamsiddhi	5	1,977	3	2	86	97
6. Kealn	12	2,214	3	3	16	15
7. Nayabari	11	1,700	2	3	234	287
8. Joypara	11	2,527	2	7	530	766
9. Baruakhali	27	1,383	5	11	104	173
10. Kanchan	6	1,628	1	3	279	271
11. Khusura	25	1,935	3	6	96	92
12. Abdullapur	6	2,279	2	2	64	145
13. City	1	37	1	1	37	37
Total	130	25,700	32	53	1,762	2,264
<i>District Bogra (2).</i>						
1. Chhatingram	17	1,795	3	3	78	85
2. Nasaratpur	23	1,423	8	8	81	162
3. Majhattha	20	1,361	1	2	40	52
Total	60	4,579	12	13	199	299
<i>District Nadia (3).</i>						
1. Santipur Municipality	5	4,750	5	5	536	837
2. Meherpur Municipality	5	1,768	3	3	76	40
3. Kaya	12	1,548	2	3	100	164
4. Barkhada	9	1,685	1	2	20	128
Total	31	9,751	11	13	732	1,169
<i>District Rajshahi (4).</i>						
1. Chandipur	9	1,560	1	2	9	14
2. Boslia	13	1,379	1	2	52	50
3. Khatteswar-Raninagar	13	1,520	3	4	104	121
Total	35	4,459	5	8	165	185

Name of union.	Total No. of villages.	Total No. of families.	No. of weaving villages:		Total No. of weaving families.	
			Reported by Collector.	Found on enquiry.	Reported by Collector.	Found on enquiry.
1	2	3	4	5	6	7
<i>District Rangpur (5).</i>						
1. Mirganj	6	1,115	2	3	44	40
2. Satgara	10	1,667	3	3	33	22
3. Dahaband	7	1,372	1	2	50	57
4. Thetrai	10	1,261	1	2	50	38
Total	33	5,415	7	10	177	157
<i>District Malda (6).</i>						
1. Sahapore	16	753	1	2	9	25
2. Nayanaobhanga	10	1,102	1	1	70	91
3. Sibganj	17	1,753	7	9	246	221
4. Kallachak	16	2,930	1	6	179	280
5. Milki	17	3,757	1	3	130	75
Total	76	10,300	11	21	634	672
<i>District Midnapore (7).</i>						
1. Birshha	18	1,614	1	1	44	50
2. Ramjibanpur	4	1,199	4	3	150	125
3. Sauri	23	1,058	2	4	44	59
4. Chandrakona	6	1,395	6	6	100	62
5. Contal No. 14	33	1,575	..	22	..	197
Total	84	6,841	13	41	338	493
<i>District Jessore (8).</i>						
1. Siddipasa	4	1,804	1	2	100	182
2. Shyamkur	19	1,594	2	6	13	60
3. Joypur	12	1,286	3	3	32	32
4. Purulia	17	1,311	3	3	100	56
Total	52	5,995	9	14	245	310

CHAPTER III.

Forms, procedure and method of survey.

10. **Forms for survey, family Schedules.**—The family schedules, during trial stages underwent extensive modifications before it came to be what it now is. A few of the earlier editions which were printed are attached (*vide* Appendix A) to show how the form developed in

different stages on the basis of experience. Professor Mahalanabis gave many hours of anxious thought to the development of the form in such a manner that the largest amount of relevant primary data could be incorporated in it, in a way that they might easily be statistically tabulated and analysed. It would be seen that a very large variety of data, on all aspects of the economic and technical side of the industry, have been made available in the shape of figures in a small sized form and it is hoped that in all future surveys of similar nature, this form will be a very helpful guide. It may be noted also that when data about agriculturists' debts were collected, we used big forms but in them we had to make numerous remarks to elucidate the meanings of entries in all cases where anything out of the way turned up. In the form devised this time, there was no room for or need of such remarks though we collected nearly six times as many items of information as was done in that case.

11. **Other forms.**—Besides this, there were the union note forms (comprising of a general questionnaire and schedules about some general information—retail prices, union rates, wages, etc., etc.), a form for report on the consumption of cloth, market survey reports and special reports for important fabrics, important centres of industry, *ex*-district export by rail and steamers of hand-loom products from some selected stations, etc. These reports cover hundreds of manuscript pages, which have not yet been closely studied and analysed and the result of such study can only be presented in the final report of the survey.

12. **Difficulties of workers: appreciation of their work.**—Workers had no holidays and they worked in a season when heat and rains alternately afflicted them. The difficulty of overcoming the usual fear of the weavers of being assessed at a loom tax was great but has everywhere been successfully overcome and their confidence and co-operation won. The union boards, Circle officers and other local officers in most places gave valuable assistance and co-operation. All the district boards agreed to give the workers free accommodation in their bungalows—but this concession could rarely be used and workers had most often to live in huts in the villages, spared by local people with difficulty. All the workers worked under great strain and faced the difficulties of constant touring and the hardships of village camp-life with admirable fortitude—seeing that they had almost always to work hard all the day and cook and serve for themselves in addition. Not infrequently, they had to go without one of two and occasionally both meals in a day. At the headquarter office the inspector and clerk-typist had equally hard work and it was seldom possible for them to leave office, specially when I was not out on tour, before 8 or 9 p.m. But for the devotion to duty of the field and head office workers it would have been very difficult to complete the programme of survey in a little over four months' time (for eight districts).

13. **How primary data were collected.**—In filling up the family schedules, the head or some other working member of each family was personally examined by the worker in the former's house, and by questions, cross-questions, inspection of the weavers' work and progress for sometime, the condition of his meals, huts and dress, the figures in different columns were calculated or estimated and checked. It is well-known that the rural people are in general too ignorant to be able to give nearly accurate information even on such simple point as their age. The workers had to work hard and to test and check every statement

with the help of the knowledge of the neighbours of each 'subject' and of their own experience and common sense. Still, it can hardly be claimed that individual results, have been always accurate, specially where estimation and not information has been the bigger element in the enquiry. The personal bias and intelligence of individual workers also affected the results. But from the half sample and other tests of accuracy applied, it may well be claimed that the overall results represent a degree of accuracy which is very near the standard that can be reached in any enquiry of this nature. The standard deviations and probable errors have not yet been worked out but when these are worked out, it is hoped that the results will be found statistically accurate and acceptable for all practical purposes.

14. Tabulation of the data.—The general tabulation of the primary data has been done under the general direction of Professor P. C. Mahalanobis, M.A. (Cantab), B.Sc. (Cal.), I.E.S., F.S.S., Secretary of the Sub-Committee in the Statistical Laboratory of the Presidency College. Mr. Subhendu Sekhar Bose, M.Sc., P.R.S., Senior Research Assistant of Professor Mahalanobis and Mr. Sudhir Chandra Bannerjee, Assistant in charge of the Computation Branch of the Laboratory, have very kindly superintended the tabulation work in which I and my Head-quarter Inspector, Babu Satyabrata Ray, M.A., assisted in advisory capacity only. The general tables appended to this report have been obtained from the Statistical Laboratory—though the Subsidiary Tables in the report have been prepared by myself and my assistants. I should mention also that Mr. Subhendu Sekhar Bose, M.Sc., P.R.S., has also kindly revised Chapters IV and VII of this report to make the statistical aspects of the points discussed therein and Professor Mahalanobis' intended system of work, quite clear.

15. Results presented are of the first eight districts' work only, out of 13 districts surveyed.—It may be noted here that after the survey in eight districts, the Board directed a further survey of about 3,500 families in 26 unions of 5 more districts (Pabna, Mymensingh, Khulna, Noakhali and Birbhum) to be done, so that half the districts of Bengal may be covered. This has been done during the period 1st August to 10th October. But the general tabulation of the results of these districts have not been done yet. This report thus deals with the results of the first eight districts only, viz., Dacca, Nadia, Rangpur, Bogra, Rajshahi, Malda, Midnapore and Jessore.

CHAPTER IV.

Scope of the Report and Matters left over for Final Report.

16. Scope of this Report.—Of the three parts following, Part II deals with the general economic condition of the weavers and their industry as found in our survey with occasional comparison with that of the non-weavers, Part III gives the information ascertained about the different aspects of the industry and Part IV deals with some of the problems confronting any attempt to revive or bring out economic improvement of the industry and some general observations as to how, in my opinion, such problems ought to be or can be tackled.

17. **The general and unstatistical nature of this report.**—One point I should make clear is that the primary data collected have not yet been subjected to a scientific and statistical analysis. Neither have the standard deviations, probable errors, etc., been yet worked out. This was due to the fact that the number of trained computors, of calculating machines and also accommodation in the Statistical Laboratory are all limited and consequently the tabulation work, specially the analytical side of it, has not progressed as fast as we all had wished. Besides, Professor Mahalanobis who has had to work for hours on many days to help and guide us, had to do so in addition to his other multifarious duties and analytical work of this nature takes much more time than he could give to it.

18. The drawbacks of writing even a Preliminary Report of a statistical survey without any strictly statistical analysis, are obvious. We have prepared the totals and averages of the more important items of information collected and on the basis of these, only a general idea of the subject can be presented. It is likely that such a presentation will give very few information not already known. The real value of such a survey lies in the wealth of details which it brings to light and economic implications which such details disclose as a result of a thorough and careful statistical analysis from all possible points of view. Such an analysis is essential specially as our objective is as vague as it is, viz., "How to effect economic improvement of the Industry". Had the problem been a definite one, such as ascertaining the profit earned by weavers from different products, or the amount and varieties of yarn used, we might give a definite reply right away. But "How" is a question which requires examination of every single aspect of the industry and that in a comparative light. If we, for instance, find that the whole-time weavers earn more per weaving man month than part-time weavers, or weavers of one region or community earn more than those of another region or community, the reason for this, when found out, may constitute a reply to the query—"How can weavers' income be increased". It can also suggest a plan of work for effecting the necessary improvement. But to find this reason, each link of the economic chain which goes to form the profit of the industry has to be examined. Such a task involves very intricate statistical calculations and—consequently time and labour. It is not possible to do so in this report, written practically with part of the actual survey still in progress (actual field work closed on 10th October 1936) but it is hoped that when the final report comes to be written—it would be possible to examine and estimate the value of all these details and to state the solutions which they suggest for our problems.

19. I would give one illustration to explain the value of detailed analysis in relation to the results of such a survey. An attempt may be made, from the statistical point of view, to determine the comparative contribution to production by men, women and children, as also by the looms utilised in the process. Let the total production in a family, be given by—

$P = aL + b_1M + b_2W + b_3C + f$ where P = Total production in quantity.

L = Total loom months (i.e., the total actual time the looms were worked).

M=Extra man months (i.e., the total actual time men in the family worked in weaving outside the loom).

W=Women months given to weaving.

C=Child months given to weaving.

Evidently, "a" represents the share of production contributed by one man working on a loom for one month, "b₁" is the production by one man working for one month outside the loom, "b₂" and "b₃" are similar rates of production for women and children and "f" is a constant.

Each family gives a normal equation of the form shown above and by pooling together families using a given type of machine and turning out a particular quality of commodity, we can make the best estimate of a, b₁, b₂, b₃, and f. It is then easy to compare the relative importance of men, women and children in the weaving pursuit of the family. The process may be repeated for families using different types of machinery. The values obtained for each type would show with great accuracy the relative efficiency of any one type over the other. Given the production by each individual factor, it is easy to convert it into incomes contributed by each of them.

20. Let the value of 1 lb. of the manufactured goods be "i₁" and the cost of yarn and other articles necessary for the production be "i₂" then the profit, "i" earned on 1 lb. of production is given by "i"=(i₁-i₂). The weaving income of the family from each factor is then obtained as follows:—

		Production.		
		Per unit.	Total.	Total income.
Loom-months	..	a	aL	aLi
Extra man-months		b ₁	b ₁ M	b ₁ Mi
Woman-months	..	b ₂	b ₂ W	b ₂ Wi
Child-months	..	b ₃	b ₃ C	b ₃ Ci
Total		..	P	I

Taking the value of "f" to be zero, we have—

$$I=i P=i (a L+b_1M+b_2W+b_3C).$$

Since the prices of yarn and manufactured goods vary from time to time, the income earned by the individual factors or the family as a whole vary but the rate of production, depending on the ability of the individual workers, remain practically constant; hence at any level of prices the income may always be calculated.

21. **Statistical possibilities of the data collected.**—Again, we know that the different occupations followed by people of a country keep a sort of economic balance in relation to one another. If weaving gives a better economic return than agriculture, agriculturists who know

weaving would take to that occupation, while if agriculture gives a better return weavers will in large number become agriculturists, if, of course, they can get lands to cultivate. In either case, the followers of the occupation will increase until the profit level of the two becomes more or less equal. Now to ascertain if there is any greater scope for weavers in agriculture or *vice versa*, it is essential to determine the present levels of income from each occupation and the plane in which the equilibrium has now been affected. If agriculture and weaving had been of same nature, the comparison would have been easy. But, for agriculture, the capital involved (value of land) in making the profit is an element which makes a direct comparison impossible and we would therefore have to compare the relative efficiency of land and labour for each occupation at varying levels of agricultural possession.

22. Let us assume that the contribution to profit in a family is "a" for each man-month and "b" for each acre of land. Then a family possessing L_1 acres of land and capable of employing M_1 man-months in the season would earn an agricultural profit P_1 given by the expression—

$$aM_1 + bL_1 + c = P_1$$

where c is a third constant, representing income from sources outside land and labour. Each family supplies a normal equation from which the best values of a , b and c may be obtained by the method of least squares.

23. A similar equation may be deduced for the weaving group with slight modifications. The weaving income is derived chiefly by labour and hence in this case we formulate our equation as follows—

$$a_1M_1 + c = P_1.$$

where a_1 is the contribution to weaving income per man month represented by M_1 and P_1 the weaving income of the family. It is now easy to study the value a and a_1 , for testing the comparative efficiency of labour in the two pursuits under discussion.

24. In fact, the matter may be pushed much further than this. We may find out the relative efficiency (economic contribution) of man-months, woman-months and child-months with regard to the total earning of the family, be it agricultural or weaving, simply by evaluating the above equations in the form—

$$(a_1M_1 + a_2W + a_3C) + bL + c = P_1$$

where a_1 , a_2 , a_3 are the contributions to income per man-month, woman-month and child-month respectively.

25. There is another aspect of the analysis that is more useful and important. It is quite likely that with a given amount of cultivable land, agricultural pursuit may be more paying than weaving so long as the labour available from the family is more than that required for adequately managing the land but as the supply of labour from home is increased (as in a family of large size) the contribution per

man-month is expected to diminish and may be less than the corresponding return from weaving pursuits. A tentative system of curves is shown in figures below:—

(Graph not printed.)

26. **What are the type of results we can expect by statistical study of the data.**—The family of lines $A_1, A_2 \dots$ represent the relation between man-months and income when the family is in possession of $A_1, A_2 \dots$ acres of land respectively. W_1 represents the corresponding relation for the weavers. We infer that (1) with A_1 acres of land, agriculture is never so paying as weaving; (2) with A_2 acres, agriculture is more paying so long as the supply of labour does not exceed OX_1 ; above this level, weaving is more profitable, and so on for the other lines. On the basis of analysis made of a very large number of families in the one crop and two crop areas separately we would be in a position to say definitely that families with workers and lands up to a certain limit or proportion would find it more profitable to engage themselves exclusively on agriculture and others should follow weaving. In any future plan of expansion or consolidation of the industry, this information will be the most important if not the guiding factor.

26A. It may be asked that if we advise weavers of certain categories to give up weaving and take to agriculture—on the result of such an analysis where shall we find land to give them. The Annual Report of the Department of Agriculture, for 1933-34, gives the following figures as to lands available for cultivation:—

				Acres.
Culturable waste	..	..	..	6,433,255
Current fallow	..	..	..	4,949,669
Total available for cultivation	..	..	..	11,382,924

Personally, I think this estimate to be too high to be correct—but some lands must still be available. Besides we need not have to advise or ask these weavers to migrate to such areas, as they mostly of this are scattered in small plots all over the province. If we have, as a result of the analysis, to advise some people to give up weaving it would only be those who already have sufficient lands to employ their man power more profitably in agriculture alone. This will reduce the output of hand-loom products to some extent the advantage of which is to be taken up by the other families for whom weaving would be found to be more paying as a full time occupation. This is only one of the obscure points in which light will be thrown by the proposed analysis. We can get innumerable similar scientific results to help us in formulating plans and accurately judging the present position both absolutely and also in relation to the other available occupations. It is needless to say that we cannot judge the position and possibilities of the industry except in relation to the other occupations open to the people and other factors bearing upon the industry.

27. **The strictly limited scope and authority of this report.**—I have explained the above in some detail, lest it may be thought that because this preliminary report does not contain anything but general information much of which was probably already known, the Rs. 17,000 or so spent by the Board on the survey has been useless. This report gives more a general idea of the work done and data collected than a detailed analytical exposition of such data and it is quite possible that some, if not many, of the general conclusions drawn will not stand the statistical test when the detailed analysis of the data is completed. This report, it is hoped, will be read with this reservation and the utility of the survey should not be judged on its basis.

CHAPTER V.

Materials not yet examined.

28. I should mention here that apart from the general and important sections of the data which have been tabulated so far, there is a very large amount of information which it has not yet been possible to study closely. The family budgets of about 1,000 families, a specimen whereof is attached as Appendix B, when statistically studied, will give a great deal of useful information on many aspects of economic life of the weavers in particular and of the rural Bengal in general. The fertility and fecundity data, data about the use of staple food, cattle assets and about yield of crop, were collected for all families. The extracts of union board assessment lists taken would, when the assessments are compared with the income as found by us, be an interesting study in respect of the burden and equitability of the distribution of local rates. The information about retail prices of commodities in different parts of the province during different parts of the year, about the variation of the wages of rural labour, communication, marketing, educational and medical facilities, etc., collected for each union, would give extremely valuable information on many subsidiary aspects of the rural economic life. The hundreds of pages of special reports on important areas and notable industries, particularly in respect of the different aspects of weaving industry, await to be studied for yielding detailed information on many of the local and special aspects. All these will require a great deal of time and labour and some expenses as well. As this is expected to take a long time to be finished, this "Preliminary Report" is being submitted to give some general information on the results obtained.

29. It has to be noted further that as there has been no time to submit this report for the approval of the Board's Weaving Survey Sub-Committee, the Chairman and Members thereof are not responsible for any of the remarks, etc., made herein.

CHAPTER VI.

Units and Families Surveyed.

30. *Table IIA* gives in abstract the number of units, villages and families taken up by us for survey and *Table IIB* gives details about the various units. A list of the actual villages surveyed in different districts is given in *Appendix C* of this Report while *Table IIIA* gives the number of families in different classes and districts. It would be seen that in the 41 units selected for survey, we have found altogether 501 Mauzas. Of these, the Collectors reported 86 only as having weaving families numbering 4,102. 14 other villages were reported by them to have 150 more weaving families, but on enquiry we found no weaving families in these. The Collectors' reports thus contained 100 weaving villages with 4,252 families in these units, but on enquiry we have found 173 weaving villages in these units with 5,549 families. In some units, the number of families was so large that it was not

possible, without giving up some of the other samples of the district, to take up all, for enquiry and hence, in such unions a random sub-sample was taken of a sufficiently large number of families so that the results may be representative. Along with the weaving families, about half their number of non-weaving families living in same environments were also selected at random to enable comparison of the respective economic condition being drawn. Thus, 3,956 weaving and 2,086 non-weaving families have been enquired into. In fact, 4,100 weaving families were selected but over a hundred families, were, during enquiry, found to have given up weaving sometime ago. It would be seen that in the weaving unions (units) there are 5,549 (or 7·2 per cent.) weaving families in a total of 73,040, that there are about 1,815 families in each unit (on the average), excluding Dacca city, and in the weaving unions, 34·6 per cent. of the villages have weavers and average number of weavers per weaving village is 32. It should be noted that in Municipal units, the Municipalities have been treated as Unions and wards as Mauzas.

31. The census of 1931 does not give the number of weaving families in the Province or in the districts, etc. An estimate has been made in paragraph 59 from other known factors. It has been found that there are, on the average, 5·5 persons in a weaving family of which 2·75 are workers and 2·45 weaving workers. Table IIIB gives details of the variations of number of persons and workers per family in different districts. The average size is 4 larger than the provincial average for all classes of population and even amongst the weavers, the district variations are from 3·8 to 6·1 per family. The number of workers in weaving families is just half the size, as compared to 1·64 workers in 5·2 persons per family, 5·2 amongst the non-weaving classes and this shows that weaving gives scope for more people (specially women) to contribute towards the family income.

31A. One noticeable factor in the size of families is that it decreases with the decreasing proportion of women in the family. Another prominent factor is that the number of women and child workers per family is more than male workers in Rajshahi and equal in Bogra and Rangpur. The women folk of Muslim workers (who predominate in these areas) are thus more helpful than in Hindu families.

32. The list in Appendix D will show the unions and villages of importance from weaving point of view. It may be noted that, out of the 4 villages reported by Collectors as having 500 or more weaving families, none was on enquiry found to contain more than 185. The largest number we have found in a single village, is 387 in Jaypara of Dacca district.

Table IIIA (paragraph 30).

Class Distribution of families subjected to Survey.

District.	Distribution by classes (See paragraph 64).							Percentages to total.			
	I	II	III	IV	All weavers I—IV.	Non-weavers.	Total number of families surveyed.	Weavers of—		Non-weavers of—	
								Hindu weavers.	Muslim weavers.	Hindu non-weavers.	Muslim non-weavers.
1	2	3	4	5	6	7	8	9	10	11	12
Dacca	482	669	85	200	1,386	709	2,095	21.4	78.6	40.1	59.9
Nadwa	182	99	12	39	332*	137	469*	24.1	75.9	32.9	67.1
Rangpur	10	60	15	12	97	272	369	47.4	52.6	40.8	59.2
Bogra	16	183	42	..	241	71	312	11.2	88.8	23.9	76.1
Rajshahi	4	96	64	..	164	110	274	..	100.0	10.0	90.0
Malda	63	209	24	221	517	256	773	34.2	65.8	27.3	72.7
Midnapore	57	83	32	116	288	199	487	100.0	..	97.5	2.5
Jessore	18	97	7	156	278	315	593	59.4	40.6	41.3	58.7
Eight districts ..	782	1,498	281	744	3,303	2,069	5,372	32.7	67.3	41.7	58.3

*N.B.—600 more family cards of this district (of II factory workers) are being tabulated separately.

Table IIIB (paragraph 31).

Average Size of Families and Workers.

(Weaving Families only.)

District.	Total families.	Persons per family.						Grand total.	Workers per family.				Total number of weaving workers as per 1931 Census.	Total number of weaving workers surveyed.	District figures obtained by multipliers worked out as described in Chapter VII.		
		Adults.		Minors.		Total.			Adult.		Minors.	Total workers (all work).			Families.	Population.	Workers.
		Male.	Fe-male.	Male.	Fe-male.	Male.	Fe-male.		Male.	Fe-male.							
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
Dacca ..	1,386	1.8	1.6	1.4	1.4	3.2	3.0	6.2	1.6	1.1	.5	3.2	20,898	3,959	8,177	50,350	23,358
Nadia ..	332*	1.5	1.5	1.3	1.0	2.8	2.5	5.3	1.4	.4	.2	2.0	5,068	620	3,088	16,387	5,766
Rangpur ..	97	1.5	1.3	1.2	1.0	2.7	2.3	5.0	1.5	1.0	.5	3.0	697	250	398	1,993	1,025
Bogra ..	241	1.7	1.5	1.0	1.0	2.7	2.5	5.2	1.5	1.1	.4	3.0	3,076	647	2,000	10,450	5,370
Rajshahi ..	164	1.4	1.3	1.0	1.0	2.4	2.3	4.7	1.4	1.0	.4	2.8	1,192	383	787	3,706	1,838
Malda ..	517	1.4	1.4	1.4	1.2	2.8	2.6	5.4	1.4	.8	.3	2.5	4,110	1,165	2,482	13,469	5,592
Midnapore ..	288	1.4	1.0	.8	.6	2.2	1.6	3.8	1.3	.5	.1	1.9	14,068	532	8,048	23,058	11,172
Jessore ..	278	1.5	1.3	1.2	1.0	2.7	2.3	5.0	1.4	.6	.2	2.2	8,224	540	5,727	28,552	11,124
Eight districts ..	3,303	1.6	1.4	1.3	1.2	2.9	2.6	5.5	1.4	.9	.4	2.7	57,333	8,096	26,094	1,43,014	63,958

*About 600 more cards of this district dealing with mahajans and workers working in factory system, are being tabulated separately.

CHAPTER VII.

Samples in relation to Estimates for Districts: The Multipliers.

33. Before we can proceed to examine the results of the survey, it is necessary to determine in what relation they stand to the district or "universe" as a whole. If it had been a survey of the village population as such, as we know the total population and total number of villages in each district and in the eight districts under survey, we could have obtained district figures easily as the proportion of our sample to the whole "universe" would have been fairly accurately known to us. But weaving population is not evenly distributed nor are the weaving villages. Our knowledge of the "universe" from which we have taken samples, is, as has been explained before, extremely defective. And yet the survey will lose much of its value if we could not give figures for each district as a whole and for the eight districts together.

34. In making large-scale estimates, as for example, the national wealth of a country, there are two methods available—(1) the method of complete enumeration in which every unit of the country is observed; (2) the method of sampling in which a fraction of the country is surveyed and by a process of extrapolation, the estimate for the country as a whole is obtained by calculation. It is obvious that the first method is the more precise and reliable; it is, however not always possible to make complete enumeration for want of time and resources and also high precision are not sometimes necessary for the purpose in view. In such cases, the method of sampling is always adopted. The complete entity is called the universe out of which a fraction—the sample—is under observation. Thus if the total number of families in a country be N , out of which 'n' families has been surveyed in full for a particular purpose, the size of the universe is said to be N and that of the sample 'n'. Sampling factor is defined to be the ratio (N/n) ; the total estimates for the sample as a whole need be multiplied by the sampling factor for obtaining the estimate for the universe and hence a sampling factor is sometimes called a multiplier.

35. In the present survey, we adopted the method of sampling and hence, for making over-all estimates, we must calculate the necessary multipliers. This calculation can however be made from a variety of direct and indirect statistical data that are known for the area as a whole. In the following paragraph, an attempt has been made to derive the multiplier by five different methods.

36. **By census number of workers.**—The 1931 census shows the number of workers (principal and subsidiary occupations—males and females) in the area under consideration to be 57,333, while in the unit surveyed 8,096 workers have been found. Hence the size of the universe, $N=57,333$ and the size of the sample, 'n'=8,096. So that the sampling factor $K=57,333 \div 8,096=7.1$.

37. **By consumption of yarn.**—Again the Special Tariff Board of 1935-36 estimated from the figures of import and export statistics and statistics of mill production and consumption that in 1934-35 48.2 million lbs. of cotton yarn was available for the hand-loom industry in Denga. The Board did not make allowance for wastes and for yarn used in

hosiery and other small machine industries and in making fishing nets, etc. Making allowance for these at 25 per cent. of the above, roughly 36 million lbs. of yarn may be said to have been used in actual hand-loom industry (the home-spun yarn is not taken into account as in the areas under survey in the eight districts we have not found such yarn used, though in some areas, not falling in our samples a very insignificant quantity was found to be in use). Assuming also that this 36 million lbs. of yarn is consumed in even proportion between the eight districts-block and the other 19 districts, the total estimated yarn consumption would be about 10.7 million lbs. in these districts. In our survey we have found the total yarn consumption by 3,303 families to be 1.04 million lbs. Hence the sampling factor $K = 10.7 \div 1.04 = 10.2$ (cotton yarn only has been taken into account.)

38. **By production of fabrics.**—The Special Tariff Board estimated that four yards of cloth is produced from every lb. of yarn. On this basis, the total production in the eight districts from 10.7 million lbs. of cotton yarn should be about 42.8 million yards. Our sample survey records a production of 6.7 million yards, so that the sampling factor $K = 42.8 \div 6.7 = 6.4$.

39. **By Number of families.**—The Collectors' reports show that there are 4,252 families in the area surveyed by us whereas we have actually found 5,549 families in the same. If, for every 4,252 families reported by the Collectors, there are 5,549 families engaged in weaving, there must be about 17,487 families in these eight districts as the Collectors reported a total of 13,400 families only (*vide* Table IIA). The tables presented herewith deal with 3,303 (of the 3,956) weaving families, so that sampling factor in this case will be $= 17,487 \div 3,303 = 5.3$.

40. The last method is slightly complex, for it includes the idea of sub-samples and may be explained as follows. It is sometimes necessary to examine not the whole of the sample but a part of it—called the sub-sample. Take for example, a district out of which a number of villages have been selected for survey; it is found that all the families living in the villages need not be studied for the purpose in view; a part of it only is required. Here the number of villages (N) in the district is the size of the universe, the number of villages (n) chosen for survey gives the size of the sample and the number of villages actually surveyed (n^1) is the size of the sub-sample. The sampling factor is evidently N/n^1 .

41. **By number of villages.**—Taking the eight districts together, we have seen that, of the 173 villages found in the 41 units surveyed by us, the Collectors' reports contained only 100. As this extent of omission was found from random selection of units, it may be assumed as a first approximation that for every 100 villages reported by the Collectors, there are in fact 173. The Collectors reported the existence of 621 villages in eight districts. The estimated actual number would therefore be about 1,074. Of these, we took up 173 for survey. But as we have not been able to survey all the families of these 173 villages, this number will have to be reduced in the proportion of the total number of weaving families found, to number of weaving families surveyed, i.e., 5,549 to 3,303. Thus, in this case, the size of the universe, $N = 1,074$; the size of the sample $n = 173$ and the size of the sub-sample $n^1 = 173 \times 3,303 \div 5,549 = 103$. Hence the sampling factor $K = 1,074 \div 103 = 10.4$.

42. We have thus the following range of multipliers for the eight districts taken as a whole: 7.1, 10.2, 6.4, 5.3, 10.4. Taking the mean of these, we may thus take 7.9 with a standard error=0.90 as a fairly accurate multiplier for the results of eight districts taken as a whole. It is true that each individual estimate of a multiplier would have been of very little value by itself but when we find that the variations of the multiplier are within a reasonable limit, the mean of all the five may reasonably be accepted as a correct multiplier for all practical purposes.

43. Following the principles stated above, the multipliers for all the districts have been worked out and are shown in *Table IV* attached. It should be noted that the assumption of even distribution of yarn consumption, which could be made when eight districts out of 27 were taken as a block unit, cannot be the basis of calculation for the consumption of yarn for different districts of varying importance. The 10.7 million lbs. of yarn, for purposes of calculating this multiplier for each district, has therefore been distributed between the eight districts in proportion of the number of workers shown in each in the 1931 census.

Table IV.

Multipliers for the districts and the province.

District.	Multipliers obtained by method explained in paragraphs—					Mean multiplier accepted.	Total workers calculated by accepted multiplier.	Number of workers as per census of 1931.
	36	37	38	39	41			
1	2	3	4	5	6	7	8	9
Dacca ..	5.3	5.4	3.8	5.4	9.8	5.9	23,358	20,898
Nadia ..	8.2	9.6	5.8	7.1	15.8	9.3	5,766	5,068
Rangpur ..	2.8	4.2	5.1	3.1	5.3	4.1	1,025	697
Bogra ..	4.7	13.4	7.5	5.4	10.3	8.3	5,370	3,076
Rajshahi ..	3.1	11.1	4.5	1.7	3.8	4.8	1,838	1,192
Malda ..	3.5	10.6	4.6	1.6	3.5	4.8	5,592	4,110
Midnapore ..	26.4	120.2*	43.6	5.9	8.3	21.0	11,172	14,068
Jessore ..	15.2	43.7	15.1	11.1	18.0	20.6	11,124	8,224
Total of figures of eight districts.	..	..	..	..	Mean	9.8	65,245	57,333
Eight districts ..	7.1	10.2	6.4	5.3	10.4	7.9 (±0.9)‡	62,947	57,333
Bengal ..	24.2	34.6	21.5	21.1	44.9	29.33	237,213†	192,440

*This figure has been rather unusual. The fact is that in Midnapore, our samples have included mostly the finer work which require yarn of higher counts and consequently of less weight. Those whom we have found using yarn of lower counts are also mostly part-time weavers. It was for this that the average output in Midnapore was found to be 836 square yards as against the eight districts' average of 2,112. It was for this combination of circumstances that this multiplier has become very high. For the multiplier of this district, we have therefore excluded this figure and taken the average of the other four estimates.

†For the apparent increase from 1931 figures, please see Chapter IV.

‡±.99 is the standard error of the mean sampling factor.

N.B.—It would be seen from the above that the number arrived at by working district totals differ from the figure arrived at by using the "eight district" multiplier only by about 3.5 per cent. This also would show that our estimates are reasonably accurate.

CHAPTER VIII.

Spinning and Hand-loom Weaving as Occupation.

44. No reliable figures are available to show the number of workers in the hand-loom industry in pre-British days. The estimates found made by writers for early British period are mere guesses and these also exist for certain areas only. It will be seen later that we have made an estimate of the present *per capita* consumption of cloth which is 15·9 (+·1) yards. The Bombay Mill Owners' Association estimated it to be 16·3 yards (*vide* Report of the Special Tariff Board, 1936, page 135). If 16 yards be the estimate for the present, with the simpler tastes of those days, we may take 12 yards to have been the average *per capita* consumption in early 18th century. Assuming further that the population of the present districts of Bengal was about 25 millions then, the total consumption was in the region of 300 million yards. These estimates are of course excluding the consumption for purposes other than wearing.

45. We have also found that the present average production per family is 2,112 yards or, excluding the unusual Kanchan production, 1,361 yards. Allowing for the better appliances of the present times and considering the finer work of those days, we may reasonably assume the average production per weaving family in those days to have been 1,300 yards. There were, therefore, over 237,000 families then engaged in this industry, for supplying the needs of the province. With the export trade then enjoyed by the province in cotton and silk fabrics, the production was somewhat more and therefore the number of families must have been in the region of 250,000. If we include the non-wearing apparel consumption, the number would come to nearly 300,000.

46. There were, besides, the spinners. All the yarn was in those days home-spun and spinning was mostly followed as a subsidiary occupation by the women of all walks of society. In the "Artha-Sastra" of Koutilya (4th century B.C.) it was laid down that spinning should ordinarily be done by widows, cripple women, girls, mendicant or ascetic women, women compelled to work in default of paying fines, mothers of prostitutes, old women servants of the king and girls dedicated to temple service who had ceased to render such service (a). The couplet "*Charka Amar Bhatarput*", etc., is also well-known. Practically all the families earned something by spinning from the earliest times and the skill of their traditional work made it possible for them to spin yarn over 500s, an achievement which has not yet been attained by the best machinery devised by modern science. To supply only the 250,000 weaving families, at least six times as many families must have been engaged part or whole-time—and followers of the industry in those days must have been over 2 millions.

47. **Variation of weaving population, 1872-1931 census figures.**—In recent times, the variation of the number of weaving workers is obtainable from the seven decennial census reports of 1872, 1881, 1891, 1901, 1911, 1921 and 1931. Figures for the eight districts under

(a) "বিধবান্যাক্ষকন্যাপ্রব্রজিতা দণ্ডপ্রতিকারিণীভীরুপাঙ্গীবামাতৃকাভিবৃদ্ধরাগদাসীভিবৃপরতোপস্থানসেবনাসীভিঃ কর্তব্যে।"

report and for the province as a whole (the 27 districts now in Bengal, including Calcutta) are given in Tables VII (A and B), in the former with the male and female division and the latter separately, for principal and subsidiary occupation (for period from 1901 to 1931 only). The figures include, as nearly as possible from the divergent occupational groups of the different censuses, the number of hand-loom weavers, sizers and spinners only. The following summary will be useful:—

Table V.

Workers (Male and Female). Census Reports, British Territory.

Year.	Eight districts.	Province.
1872	120,106	364,751
1881	146,282	445,797
1891	212,158	602,336
1901	71,912	431,516
1911	73,302	216,035
1921	52,210	212,069
1931	57,333	192,440

48. **Nature of variation.**—It would be seen from the above that there was a steady increase in the number of weaving workers from 1872 to 1881 and 1881 to 1891 both in the eight district-block and in the province. Between 1891 and 1901 there was suddenly a fall of about 65 per cent. in the eight districts and about 28 per cent. in the province. Between 1911 and 1921, the fall was about 30 per cent. in the eight districts but only about 2 per cent. in the province—thus righting the anomaly of the previous two censuses to some degree. Again, between 1921 and 1931, there was a rise of about 10 per cent. in the eight districts with a nearly 10 per cent. fall in the province as a whole.

49. **Census figures of doubtful accuracy—Peculiar fluctuations in the number of women workers.**—The above variations are too strange to be accepted as correct for the basis of any discussion about their economic implications. It is well-known that from 1872 to 1881, there has been a steady increase in the import of piece-goods and therefore it is difficult to account for the marked rise in weaving population. Again, while there were only 71,000 female workers to 294,000 males in 1872, the number of female workers rose by 108,000 to 179,000 in 1881, while there was a fall in the number of male workers from 294,000 to 266,000. In 1891, while the number of male workers shows an increase of only about 19,000, that of females rose by 137,000 making the number of women workers 316,000 as against 285,000 males. All this happened before even the Swadeshi movement days and no economic factors are known which might have occasioned such changes in the weaving industry.

50. **Probable error due to incorrect figures for women workers.**—One explanation, however, suggests itself. Women, we have found in the present survey, play a very important part in the weaving

industry. With the practically total extinction of home spinning, we have found that for every woman weaving worker there are 1.47 (.99 to 1.46) male weaving workers, assuming that workers amongst the children are divided in proportion of the adults between the two sexes. This being so, the abnormally low number of women workers in 1872 (70,920 to 293,831 males) must have been wrong. This error, if rectified, would bring the real number of workers in 1872 in the region of 500,000 and then the 1881 number of 445,000 would represent a fall. The number of women workers was, on the other hand, probably a over-estimate in 1891.

51. The period 1891 to 1901 represents a transition, in which there was a fall from 602,000 to 431,000. In this also, we find that there was an increase in the number of male workers from 285 to 313 thousand, while the number of women workers fell from 316 to 118 thousand. None of these, again, can be accounted for by any economic factors affecting the industry in this period. On the whole, therefore, the census figures show too strange fluctuations to enable any reliable deductions being drawn therefrom. When the final report is written, an attempt will be made to compare these figures with the figures of imports of yarn and piece-goods to examine more closely and ascertain what the more accurate degree of variation was.

52. **Recent changes in weaving population.**—Between 1901 and 1911, many of the silk filatures were closed while the Swadeshi movement gave an impetus to the use of country-made goods. The mills also began to grow in number in India. The effects of these different factors it is not easy to determine, but it is clear that the information about women workers affected the figures of these censuses as well. Between 1901 and 1911, the eight districts show an increase from 71,912 to 73,302 but in reality there was a decrease in the number of male workers from 61,421 to 51,293 with an increase of female workers from 10,491 to 22,009, which accounts for the increase in the total number. Here, again, the number of women workers is palpably wrong, while 1911 figures were somewhat more, though not perhaps quite, accurate.

53. **Test of the recent census figures.**—Between 1911 and 1921, the number of male and female workers fell by nearly one-third. The Bombay Mill Owners' Association estimated (Special Tariff Board Report, page 135) that the total hand-loom production in 1912-13 was 1,234 million yards, in 1920-21, 1,373 million yards and in 1921-22, 1,425 million yards. The decrease in number of workers in Bengal is, therefore, rather surprising. During the war, however, owing to European and other foreign imports being greatly restricted, the Indian mills and hand-loom weavers both enjoyed a period of boom in their trade. But this was in respect of prices only and not for production because import of yarn had been restricted while mills were trying to increase their cloth output to the maximum and most of the available imported yarn was consumed by them. The result was that in 1916-17 and 1917-18, the production of hand-loom fabrics was reduced to 904 and 971 million yards. But this, later, increased gradually to 1,602 million yards in 1922-23, and the post-war years of prosperity saw a revival in spite of the increased mill production. It is, in the circumstances, difficult to believe that during this period the number of weavers should fall to such an extent. The 1921 census has fortunately given us an opportunity to check these numbers. A census of hand-loom was taken in this year

along with the population census. This shows that there were a little over 213,000 looms in the province. Now, the same census gives the total number of male and female workers in the industry (excluding about 13,000 mill workers) as 199,000 of which about 147,000 were males. Now it is well-known that only the male workers ordinarily work on looms and then also the sizing, beaming, etc., are practically always done by them. The women only help in winding, warping and such other work. This being so, even all the 147,000 male workers could not have been working on looms. If the total number of persons working on looms (including a few females here and there) were about 145,000 only, how could they work 213,000 looms? Either, therefore, there were nearly 60,000 idle looms or the number of looms shown was in excess or the number of workers shown was much less than the actual number.

54. If the fall between 1911 and 1921 had been a marked one (instead of being only from 216,000 to 212,000) we might have expected such a large number of idle looms. It would be going too far to suppose that the idle looms were being kept up from before 1911. Now, in taking a census of looms the possibility hardly was for any person not having a loom saying that he had one. On the other hand, in 1921, when the non-co-operation movement and Mr. Gandhi's *khadi* propaganda was at its height, the possibility is that there were a very large number of part-time workers in the industry, who, not being engaged in weaving at the exact period of the census, were not returned as weaving workers. It follows, therefore, that there was a notable under-estimation in respect of the number of workers.

55. **Study of variation shows a steady decline—Present estimates.**—Whatever may be the state of the census, it cannot be denied that during the last 40 years with the continuous increase in the number of mills in Bengal and in India and with the growing popularity of the Indian mill-made cloth, there has been a steady decline in the number of workers following the hand-loom industry. The results of our survey, when statistically worked out (by the use of the multiplier for the eight districts and for the province as noted in Table IV), give the present number of weaving workers as follows: as against the 1931 census figures noted:—

	1931.		1936.	
	Eight districts.	Province.	Eight districts.	Province.
Male	45,751	154,208	38,110	141,343
Female	11,582	38,232	25,848	95,870
Total	57,333	192,440	63,958	237,213

56. **Present estimates tentative.**—It should be emphasised, however, that this is only a rough estimate. The number of weaving families vary so markedly from district to district that no statistically-accurate estimate can be made for the whole province on the results of survey in eight districts only. But for present purposes, it may be accepted as a fairly workable estimate. The variation on this basis would, between 1901 and 1936, be as follows, for male workers only.

(As I have tried to show above, the estimate for female workers in the census reports are too unreliable to give any correct idea).

1911	..	..	..	161,719*
1921	..	..	..	156,958†
1931	..	..	..	154,208‡
1936	..	..	..	141,343 (hand-loom weavers only).

57. **Weaving castes following traditional occupation.**—According to the 1931 census, there were 8·23 lakhs of Hindu and 2·70 lakhs of Muslim persons of weaving castes in the province. Taking the total number of such persons in 1936 to be a little over 11 lakhs, and 5·5 persons per family, there are just over 2 lakhs of such families in the province. As the 1936 figures of workers give a total of 237,213 workers representing 96,778 families, about 103,000 families, who once earned their living by weaving, have given up their traditional occupation. On the basis of present net average income of a little over Rs. 92 per family per year, the net economic loss for the province has been in the region of 94·76 lakhs of rupees, so far as this industry is concerned.

58. **Two slightly different estimates based on different methods of calculation.**—The 1931 census does not give the number of families following hand-loom industry as occupation. Following the 1·46 male weaving workers per family basis (as obtained by us in the present survey), there were 105,622 families in the province and 31,336 families in the eight districts in 1931. On the same basis, we find that there are 26,103 families in the eight districts and 96,810 families in the province now. By multiplying the 3,303 families by 7·9 the eight district-multiplier, and 29·3, the province-multiplier, we get 26,094 and 96,778, respectively, the slight difference being due to the adjustment of workers number to two places of decimals.

59. **Estimates accepted for present purposes.**—We can thus take the present number of families and workers, in round figures, as follows:—

			For 8 districts.	For the province.
Workers	..	..	64,000	237,000
Families	..	..	26,100	96,800

The decrease in the eight districts (on the basis of family figures—as the women workers' figures for census were probably not accurate) has been 16·7 per cent.

60. **Reasons for decline in number.**—As regards the reasons for the decline, it seems that it began from before the duty on yarn was imposed. The first duty, 5 per cent. *ad valorem*, was imposed by Act XVI of 1894, but by Act III of 1896 the duty was abolished. No further duty was imposed till 1922 when, by Act XII of 1922, the 5 per cent. duty was reimposed. This was changed to 5 per cent. or

* Includes mill workers, number unknown.
 † Includes about 10,000 male mill workers.
 ‡ Includes about 15,000 male mill workers.

1½ annas per lb. from 22nd September 1927 by Act XXIII of that year and was enhanced to 6¼ per cent. or 1½ annas per lb. from 30th September 1931 by the Finance (Supplementary and Extending) Act of 1931. The duty on yarn has been of short duration and during the period it has been in force, it has apparently had no influence on the hand-loom industry except that the use of Indian mill made yarn became increasingly wide-spread.

61. On the other hand, the protective tariff on cotton piece goods had a marked influence on the industry. The first protection of 5 per cent. duty imposed on 27th December 1894 by Act XVI of that year, gave an advantage to the Indian (specially the Bombay) mill industry. On 3rd February 1896 this duty was reduced to 3½ per cent. but raised to 7½ per cent. in 1917 (3rd March 1917, Act VI) and to 11 per cent. on 1st March 1921 (Act VI). From 1930, the duty was further raised from 15 per cent. to 20 per cent. (1st March 1930, Act XV). There were rapid changes from 1930, and the duty on non-British foreign goods was raised to 50 per cent. in 1932 (August 30) and 75 per cent. on 7th June 1933 (both by order under Act VIII of 1894) and again reduced to 50 per cent. in 1934 (8th January 1934). Now, the protection, which these duties gave to the mill industry, rapidly increased the Indian mill production. It would appear from the statement of the Bombay Mill Owners' Association submitted to the Special Tariff Board of 1935-36, that the approximate all-India outturn of hand-loom products fell from 1,416 million yards in 1914-15 and 1,301 mill. yards in 1915-16 to 904 and 971 million yards respectively in 1916-17 and 1917-18, in spite of the war conditions. In 1918-19, the estimated outturn was 1,252, while in 1919-20 it was 674 million yards. These fluctuations, as has been stated in paragraph 53, were due to the fact that most of the available yarn was used by the Indian mills and Indian mill production of yarn was not sufficient to meet the demand of the hand-loom industry. The increased hand-loom production after 1922-23 (as shown in Table VI) was partly due to the fact that the European trade in piece goods was restricted to a great extent by the increased duty and the Indian mills took full advantage of it—and yet could not supply the whole demand. In 1931-32 and 1932-33, the production rose to 1,808 and 2,056 million yards, and this synchronises with the raising of import duty on foreign piece goods to 50 per cent. and 75 per cent.

Table VI.

Year.	<i>Hand-loom production.</i>				Million yards.
1923-24	1,200
1924-25	1,502
1925-26	1,353
1926-27	1,549
1927-28	1,583
1928-29	1,373
1929-30	1,679
1930-31	1,655
1931-32	1,808
1932-33	2,056
1933-34	1,725
1934-35	1,793

62. This advantage, however, did not last long. The Indian mill with the advantage of Tariff, increased in number rapidly and increase

10. Babu Kanti Ranjan Banerjee, B.A.
11. Babu Debendra Nath Dasgupta.
12. Babu Adhir Chandra Chakravarti.
13. Moulvi Reza Hossein, B.A.
14. Babu Bijoy Madhab Mukherjee.
15. Babu Haripada Banerjee.
16. Babu Paresh Chandra De, M.A.
17. Babu Bishnupada Paul, A.G.W.I.
18. Babu Premananda Kundu, A.G.W.I.
19. Babu Ramsankar Ganguli, B.A.
20. Moulvi Faizar Rahaman.
21. Babu Paritosh Kumar Mukherjee.
22. Babu Sukhendu Bikas Datta, B.Sc.
23. Babu Jibendra Kumar Gupta, B.A.
24. Babu Dinesh Chandra Biswas, M.A.
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4. Babu Jitendra Nath Chakravarti.
5. Moulvi Kaffiluddin Sikdar.
6. Babu Abani Mohon Datta.
7. Babu Satish Chandra Acharyee.
8. Babu Ratneswar Chakravarti.
9. Babu N. N. Paul.
10. Babu Bimal Kumar Bhattacharya.
11. Moulvi Abdul Barek Talukdar.
12. Babu Nripati Mohan Bose.
13. Babu Brajendra Mohan Chakravarti
14. Babu Birendra Nath Gope.
15. Babu Gopi Mohan Acharyee.
16. Babu Sailendra Nath Chakravarti.
17. Babu Makhanlal Chakravarti.
18. Babu Suchandra Mukherjee.
19. Babu Amulya Chandra Chakravarti.

Table VIIB (Paragraph 47, Chapter VIII).

Hand-loom Weaving as Principal and Subsidiary Occupation.

District.		Census of—							
		1901.	Per cent.	1911.	Per cent.	1921.	Per cent.	1931.	Per cent.
Dacca ..	Principal	15,484	89.3	14,436	91.3	14,877	90.6	19,404	92.8
	Subsidiary	1,859	10.7	1,370	8.7	1,553	9.4	1,494	7.2
	Total	17,343	..	15,806	..	16,430	..	20,898	..
Nadia ..	Principal	7,589	95.2	8,141	94.9	6,510	82.6	4,973	98.1
	Subsidiary	378	4.8	437	5.1	523	7.4	95	1.9
	Total ..	7,947	..	8,578	..	7,033	..	5,068	..
Bangpur ..	Principal	425	93.8	326	85.6	454	90.3	587	81.3
	Subsidiary	28	6.2	55	14.4	49	9.7	130	18.7
	Total ..	453	..	381	..	503	..	697	..
Bogra ..	Principal	1,341	90.6	1,461	92.2	1,902	90.3	2,189	71.2
	Subsidiary	139	9.4	106	6.8	205	9.7	887	28.8
	Total ..	1,480	..	1,567	..	2,107	..	3,076	..
Rajshahi ..	Principal	5,486	91.5	2,583	91.1	992	88.7	925	77.6
	Subsidiary	505	8.5	251	8.9	126	11.3	267	22.4
	Total ..	5,971	..	2,814	..	1,118	..	1,192	..
Malda ..	Principal	5,398	86.3	12,541	98.2	6,549	92.5	3,707	90.2
	Subsidiary	856	13.7	226	1.8	533	7.5	403	9.8
	Total ..	6,254	..	12,767	..	7,082	..	3,110	..
Midnapore ..	Principal	14,906	81.2	15,827	80.5	8,674	82.1	11,372	80.8
	Subsidiary	3,450	18.8	3,835	19.5	1,902	17.9	2,696	19.2
	Total ..	18,356	..	19,662	..	10,576	..	14,068	..
Jessore ..	Principal	13,208	93.6	10,686	91.1	6,787	91.3	7,587	92.3
	Subsidiary	900	6.4	1,041	8.9	594	8.7	637	7.7
	Total ..	14,108	..	11,727	..	7,381	..	8,224	..
Eight districts	Principal	63,797	88.7	65,981	90.02	46,725	89.5	50,724	88.5
	Subsidiary	8,115	11.3	7,321	9.98	5,485	10.5	6,609	11.5
	Total ..	71,912	..	73,302	..	52,210	..	57,333	..
All districts ..	Principal	382,538	88.6	194,572	90.1	193,910	91.5	171,903	89.3
	Subsidiary	48,978	11.4	21,463	9.9	18,159	8.5	20,537	10.7
	Total ..	431,516	..	216,035	..	212,069	..	192,440	..

Part II

General Economic Conditions.

CHAPTER IX.

Classification of families surveyed: General Tables.

63. **The families surveyed.**—As has been stated before, we have surveyed altogether 6,042 families. Originally we selected 4,100 weaving and 1,942 non-weaving families; but in course of the enquiry, 144 families out of the 4,100 were found to have given up weaving and thus 3,956 weaving and 2,086 non-weaving families were surveyed. Of these 1,695 and 869, respectively, were Hindus and the rest Muslims. The cards of 53 weaving and 17 non-weaving families had to be rejected as they contained errors in copying by the workers which could not be corrected or accounted for. Cards of 600 more, who work in factory system, are being tabulated separately. Informations about the remaining 3,303 weaving and 2,069 non-weaving families, of which 1,080 and 862, respectively, are Hindus and the rest Muslims, are thus being presented in this report. (Tables II and III give details of the families of different classes surveyed in different areas).

64. **Classification of families.**—The weaving families, for purposes of tabulation were divided into four different economic classes.

In class I were put weavers whose exclusive occupation is weaving. (Some of these have a little land besides homestead whence they get some agricultural produce for family consumption but none in this class has any agricultural or other cash income.)

In class II have been put those whose principal occupation is weaving, but who derive some cash income from agriculture or other sources as well. Persons who do not weave, but derive the larger portion of their income by employing wage-earning weavers have been included in this class (excluding those in Nadia who own small handloom weaving factories).

In class III come those who have some other occupation as principal means of livelihood but derive some income by weaving in leisure hours.

In class IV have been included those who work on wages, and supply fabrics to *Mahajans* who advance them yarn.

In Class V has been included all the non-weaving families. It is proposed to divide these families into sub-classes for agriculturists, traders, artisans, labourers and "others"—hereafter, if the Board approve.

65. **The General tables.**—The General tables were prepared as follows:—Cards of each village and prepared by each worker were tabulated separately first, class by class. Abstracts were then prepared for each union, class by class (and for Hindu and Muhammadan families separately, as it was found in the early stages of enquiry that these communities generally produce different kinds of fabrics and it was expected that they might have somewhat different economic condition). The union totals were then added to district totals in the same way and then all-district abstracts prepared.

66. **Description of the general tables.**—Five sets of general tables as described below have been prepared:—

A series.—Size of family, adults and minors, males and females; lands held—khas cultivated lands and total lands—the difference indicating the homestead and other lands not under cultivation (figures are in acres), total principal debt of each class of debt.

N.B.—Those of age 17 years or more have been treated as adults and the rest as minors. (*Vid:* paragraph 256, Census Report, Volume V, Part I.)

B series.—Income (1342 B.S.), (*a*) cash income from agriculture (total value of agricultural produce grown in own land *less* value of such produce consumed by the family, which has been separately calculated, *plus* income from agricultural labour), (*b*) weaving income (value of fabrics produced, and, for the few Mahajans, profit by sale of yarn, (*c*) wages earned by weaving, and (*d*) income from all other sources. The debts incurred or assets (land, cattle, ornaments, etc.) sold to meet the excess of expenditure over income *in that particular year* are shown after actual income to make up the total gross income of the year.

C series.—Expenditure (1342 B.S.) (*a*) on weaving (materials, repairs and replacements, etc.), (*b*) weaving wages paid (by Mahajans, etc., to weaving wage-earners), (*c*) on agricultural operations, (*d*) on food (excluding the value of agricultural produce grown in own land and consumed), and (*e*) “other” expenditure (of all other kinds—including payment of rent, expenses on clothing, repayment of debt, etc.). These are totalled to make the actual expenditure. The surplus money, if any, invested in advancing debts or in purchasing assets, are shown thereafter and the total gross expenditure shown in the last column.

D series.—Productive occupations. In this series is shown the number of working months given by the male, female and child workers (with their numbers) in each of the productive occupations agriculture, weaving and “others”. Number of months is followed by the number of workers in each of the three occupations shown in the table. These are printed herewith as Tables VIII A and B.

E series.—The numbers and varieties of looms and chief appliances in use, number of months the looms are worked, the number of man months, woman months, and child months given to the work and the quantity (in square yards) of the different fabrics produced.

67. **Subsidiary tables.**—The subsidiary tables deal with the abstracts of the general tables and matters not dealt with in the general tables, such as quantities and varieties of yarn used, areas and families surveyed, production of fabrics, etc.

CHAPTER X.

Size of family, workers, land and rent.

68. **Size of family.**—The average size of family, amongst the weavers, has been found to be 5·5 (Table III B) as against 5·2 amongst the non-weavers. The 1931 census gave the average size of family for the whole provincial population as 5·0, but as we have taken only some districts, the comparison may not be statistically quite in order. Allowing for the increase during the last five years—the 5·2 size for

non-weavers would seem quite a fair estimate for the present average size of family in the province taken as a whole. In any case, the average size of the weaving family is larger than that of the non-weaving. The district variation of the sizes amongst the weavers is also quite significant—varying from 6·2 in Dacca to 3·8 in Midnapore.

69. **Total workers.**—As regards average number of workers per family also, the weaving families have 2·75 of which 2·45 are weaving workers. Of the latter, 1·46 are males and 0·99 females. In the non-weaving families, the average number of workers is only 1·64, being 2,801 males, 282 females and 309 children or 3,392 in all, in the 2,069 families. This shows that the part or whole-time weavers work much more and harder than the non-weavers. The number of workers per family vary considerably from district to district. Dacca has the largest number of workers per family but Rangpur, Bogra and Rajshahi have the largest proportion.

70. **Female and child workers.**—As against the average of 1·46 male workers per weaving family there are 1·35 male workers per non-weaving family, which shows that weaving industry makes a fuller use of the female and child workers. The proportion of female to male workers is highest in Bogra and lowest in Nadia where women work very little. Curiously enough, the workers of Nadia reported that in respect of mortality, people of certain classes and parts of this district seemed worse than was found in any other district under survey. It would be interesting to examine how far these two—the comparative laziness of women and immorality in society—are interdependent. The children (below 17 years) give most time for productive work in Rangpur and Dacca and lowest in Midnapore.

71. **Land held.**—As regards land, the 3,303 weaving families have 3,132·58 acres of khas cultivable land and 1,356·14 acres of other lands—homesteads, tanks, etc. This works out to 1·36 acres in all, on the average of all families. In fact, the 3,132·58 acres of cultivable land are distributed amongst 1,549 or 46·9 per cent. only out of the 3,303 families and thus these families have on the average 2·02 acres of such land per family. The 1,356·14 acres of non-cultivable land, on the other hand, are distributed amongst 3,295 (out of the 3,303 families, 8 families living in other persons' lands), giving an average of ·41 acre per family. As against these, 1,234 or 59·6 per cent. out of the 2,069 non-weaving families have, on the average, 3·12 acres of cultivable land and 2,041 of the 2,069 families, 1·11 acre of homestead and other lands each, the 2,069 families having, on the overall average, 2·95 acres of land each.

72. **Variation of land asset in different classes and districts.**—Of the four weaving classes, only 116 out of 782 families of class I have cultivable lands of less than an acre each. 1,022 families out of the 1,496 of class II have on the average a little over 2 acres each, 163 out of the 281 in class III have about 3½ acres each while 248, out of the 744 families in class IV, have a little over 1 acre each on the average. In Bogra and Malda, the average land held is highest while Dacca and Midnapore return the lowest figures. Amongst the non-weavers, Malda shows the highest with Rangpur and Bogra coming next.

73. **Rents.**—Of the 3,303 weaving families, 3,295 have land and of these 172 enjoy rent free lands entirely, the remaining 3,123 paying on the average Rs. 6·7 as annual rent. Of the 2,069 non-weavers, 173 enjoy entirely rent-free lands, the remaining 1,896 paying on the

average about Rs. 12 annually as rent. The average rent per acre works out to Rs. 3·7 for non-weavers' lands and Rs. 4·6 for weavers' lands. Non-weavers having holdings with larger and mixed area have lower rates of rent than weavers who in most cases pay for homestead lands alone, at *Bastu* rates.

In first part of the "A" series of tables will be found details of the total population and lands held by families of different classes and in different districts surveyed.

CHAPTER XI.

Productive Occupations.

74. **The Occupational Tables.**—The information about occupation was collected under three heads, weaving, agricultural and others. The D series of tables printed herewith as tables VIIIA, B show the number of families, the number of months in the year 1342 B.S. given to each occupation (followed in each case by the number of workers who were so occupied). The tables show figures separately for each occupation and also for the male, female and child workers. As some workers occasionally give some months to each of the three occupations there are overlapping in the number of workers and therefore, the actual number of male, female and child workers have been given in the three last columns of the tables.

75. **Male workers and wastage of man power.**—There are 4,934 male workers, in the weaving families, of which 4,153 give on the average 9·2 months each to weaving work. Workers of class I give on the average 11 months, those of class II, 8·4 months, of class III, 5 months, while the wage earners give 10·4 months each. In class I 30 workers only have more than one occupation, and the total of 1,062 workers give altogether 11·1 months each which means a wastage of 952 working months in the 782 families of this class. In class II, 1,293 out of the 2,523 workers have more than one occupation, 887 workers giving on the average 4·9 months to agriculture and 840 workers giving 6·3 months to "other productive occupations." All the 2,523 workers work on the average for 10·8 months each, which amounts to an wastage of 2,992 working man months. In class III, of the 408 workers, 180 give on the average about 5·8 months to agriculture and 297 workers give 8·5 months each to "other occupations." Altogether the 408 give on the average 11·6 months' work each, so that the wastage is only 165 months. In class IV, 66 out of the 941 workers give on the average 8·9 months to agriculture and 275 give 8·0 months each to "other occupations." On the whole each of the 941 gives 11·4 months to productive occupation, thus wasting 526 months. The total wastage of man months in the 3,303 families is thus 4,637 months or 1·4 months per family. The wastage is highest per family in class II and lowest in class III. Of all the 4,934 male workers about 1,798 or 36·4 per cent. have more than one occupation. In this calculation the fact of some workers having more than two occupations has been ignored.

76. **Female workers.**—There are altogether 2,883 female workers in the 3,303 weaving families and they give on the average 5·5 months to work. Of the female workers, 2,817 give 5·4 months each to weaving, 36 give 2·7 months on average to agriculture and 142 workers give 4·5 months on average to other productive occupations.

It is not possible to estimate the wastage in this case, because many of these female workers have to perform "non-productive" domestic work and therefore, may not have any extra time to give to productive work. Making allowance for females who have such duty to do, the wastage can very roughly be estimated at about a month per worker per year. It is notable that all the 702 woman workers of class I work on weaving alone and give 5·7 months on the average to this work. Of the 1,446 woman workers in class II, 61 have more than one occupation, while only 5 in class III and 46 in class IV have more than one occupation.

77. **Child workers.**—There are altogether 1,258 child workers giving on the whole 6·3 months each, of which 1,152 workers give 5·4 months each to weaving, 115 give 4·5 months each to agriculture and 147 give 7·8 months each to other cash earnings occupations. 156 workers have more than one occupation. Weaving work claims most of these workers—and "other" occupations take the largest average number of months per worker.

78. **Non-weaving workers.**—As against the above, of the 2,801 male workers in non-weaving class V, giving on the whole 11·2 months to work each, 1,229 workers gave 7·1 months to agriculture on the average and 2,114 gave 10·7 months each to "other occupations" while 542 workers (19·4 per cent. as against 36·4 per cent. amongst the weavers) had more than one occupation. There are in class V, 282 woman workers, 14 per family and 8·3 per cent. of the total number of workers, as against 8·7 per family and 31·7 per cent. of total workers, amongst the weavers. The wastage of man power in class V is only 1·1 months per family—but on the total they have 1·64 workers per family as against 2·45 amongst the weavers. Of the child workers also, while they constitute, 13·9 per cent. of the total workers amongst the weavers, they are only 9 per cent. of the total workers amongst the non-weaving classes.

79. **Weaving works done by men and women.**—In weaving families, male workers generally perform the actual weaving on the loom, the sizing, beaming, denting and drafting. The winding and wrapping are nearly always done by women. In some places of Bogra and Malda and still more rarely in other places, a few females have been found working on the loom. The comparatively grown up male children in many places work on the loom when the weaver himself is called away on other work and in Dacca, they have been found to do embroidery work almost as dexterously as adults. In work of higher counts, women sometimes do the sizing as well.

80. **Working hours and days.**—Male weavers work generally from 10 to 12 hours a day. On the *hat* days they are always off and they also occasionally take one or two days off in other domestic or social duties. Working months were computed on this basis. In families having a larger number of dependents, weavers often have to work for longer hours to make both ends meet. The 1·4 months average wastage is based more on the fact that they can get more assistance from family members than do the non-weavers. The women generally work in the afternoon—as in mornings they have to do their domestic work. In the old system of wrapping, women have to walk to and fro for hours and it has been calculated that such a worker walks nearly 2,400 miles per year—in a whole-time weaver's family. It has been found that for the 38,410 man months given to weaving, 21,351 woman and child months are needed for help. Making allowance for the male grown up

children who work on looms, we may, therefore say that, roughly, for each 12 man months' work, 6 women and child months' assistance is needed in this occupation.

TABLE VIII A (PARAGRAPH 74).

Productive Occupation.

Class.	No of families.	A Adult male workers.					
		Weaving (months).	No. of workers.	Agri- culture (months).	No. of workers.	Cash- earning (months).	No. of workers.
1	2	3	4	5	6	7	8
I	782	11,623	1,058	127	28	42	6
II	1,496	17,616	2,089	4,355	887	5,313	840
III	281	1,177	235	1,044	180	2,510	297
IV	744	7,994	771	585	66	2,187	275
I-IV	3,303	38,410	4,153	6,111	1,161	10,052	1,418
V	2,069	..	..	8,747	1,229	22,598	2,114

Class.	B Adult female workers.						C Weaving (months).
	Weaving (months).	No. of workers.	Agri- culture (months).	No. of workers.	Cash- earning (months).	No. of workers.	
1	9	10	11	12	13	14	15
I	4,037	702	..	..	..	..	1,767
II	7,595	1,420	83	28	240	59	3,383
III	1,151	242	10	6	90	19	183
IV	2,316	453	3	2	302	64	919
I-IV	15,099	2,817	96	36	632	142	6,252
V .. ..	..	..	..	..	1,688	235	..

Class.	C Child workers.					D Total workers.		
	No. of workers.	Agri- culture (months).	No. of workers.	Cash- earning (months).	No. of workers.	Men.	Women.	Children.
1	16	17	18	19	20	21	22	23
I	804	25	5	..	..	1,062	702	308
II	625	386	87	745	98	2,523	1,446	713
III	51	93	18	141	19	408	262	70
IV	146	32	5	269	30	941	473	167
I-IV	1,126	518	115	1,155	147	4,934	2,883	1,258
V .. ..	..	876	158	1,709	205	2,801	282	309

TABLE VIII B (PARAGRAPH 74).

Productive Occupation. Class I—IV (combined).

Districts.	Number of families.	Man workers						Woman workers.						Child workers.						Total workers.		
		Weaving (months).	No. of workers.	Agriculture (months).	No. of workers.	Cash-earning (months).	No. of workers.	Weaving (months).	No. of workers.	Agriculture (months).	No. of workers.	Cash-earning (months).	No. of workers.	Weaving (months).	No. of workers.	Agriculture (months).	No. of workers.	Cash-earning (months).	No. of workers.	Men.	Women.	Children.
Dacca ..	1,386	16,908	1,821	2,741	501	4,146	518	8,301	1,445	22	6	839	85	3,654	693	173	48	294	41	2,245	1,503	732
Nadia ..	332	5,020	494	11	1	494	49	431	124	..	..	39	4	501	62	12	1	69	7	470	127	68
Rangpur ..	97	929	122	369	80	278	57	478	88	16	8	28	7	232	40	69	13	35	8	142	91	46
Bogra ..	241	1,491	288	1,326	253	1,225	207	1,792	286	25	10	3	1	369	78	122	26	166	22	361	287	91
Rajshahi ..	164	962	164	669	147	890	127	1,001	169	1	1	62	17	185	50	23	6	173	19	224	166	67
Malda ..	517	6,310	628	122	21	1,792	255	1,794	401	..	..	61	13	807	136	4	1	195	25	729	404	153
Jessore ..	278	3,593	853	212	39	616	87	715	137	6	1	37	6	861	50	67	10	152	16	883	142	66
Midnapore	288	3,197	348	641	119	676	123	587	167	26	10	68	9	53	17	48	10	71	9	380	163	35
Total ..	3,303	38,410	4,153	6,111	1,161	10,052	1,418	15,099	2,817	96	36	632	142	6,252	1,126	518	115	1,155	147	4,934	2,833	1,258

CHAPTER XII.

Income and Expenditure.

81. **Tables dealing with the subject.**—The “B” and “C” series of tables deal with the total income and expenditure found in 1342 B.S. along with the deficits and surpluses. In Tables IX and XI, XII are given an analysis of the income figures while Table X gives similar information about the expenditure. The income in columns 3 and 4 of Table IX have been arrived at by deducting the cost of the materials and operation from the gross value of the products. In the agricultural income column, the value of the agricultural produce grown and consumed by the family has been included in the agricultural income as also in food expenditure of Table X, though this has not been included on either side in the “B” and “C” series of tables.

82. **Weaving Income.**—The average actual (net) weaving income of all classes of weavers is found to be Rs. 92·9 per family per year, which represents 67·6 per cent. of their total income. But this would be a misleading idea of the income from weaving as the overall average includes families of class III, which only give 4·2 man months per family to this work and consequently earns only a small part (12·1 per cent.) of their income from weaving. The real position about weaving income is to be gathered from families in classes I and II, who are whole-time weavers or whose principal occupation is weaving. In these classes, the average weaving incomes are Rs. 129·3 and Rs. 99·3, respectively, per year and these represent nearly 99·8 per cent. and 56·2 per cent., respectively of the total income in these two classes—which are Rs. 129·7 and Rs. 176·7, respectively. As against this, the average income of non-weaving families is Rs. 164·7, Rs. 35 per family more than the whole-time weavers and Rs. 12 less than those in class II, and Rs. 40·4 less than class III families but Rs. 12·2 more than all weaving classes taken as a whole. It may be noted that in the enquiry which was made in 1934 into the conditions of the agriculturist (raiyyat class) debtors, we found an average income of Rs. 218 per family with 6·73 acres of land each. In the present enquiry, we have found, in class V, the income to be only Rs. 164·7 on the average with 2·95 acres of land per family of the 2,069 families. One of the reasons for this difference is that in 1934, the selection of agricultural villages and families was not done “at random” and hence cannot be statistically considered to have represented all classes of families. Secondly, we have selected families of class V at “random”—from all non-weaving classes and not merely from agriculturists—not to say of raiyyat class agriculturists. Therefore, the average areas and incomes were bound to vary. Besides, the fact that the average area held per family was then found to be 6·73 acres is enough to show that all classes of families were not evenly represented in that survey.

83. The variations of weaving income in different classes and districts are quite significant. The largest income has been found to be in class II of Nadia with Rs. 143·4 per family, class I weavers of Dacca coming next with Rs. 138·5 and of Nadia, after that, with Rs. 136·8. The largest average income taking all classes of weavers is also of

Nadia with Rs. 132·4 and next comes Dacca with Rs. 114·2. It should be noted that Dacca and Nadia, are, amongst the districts surveyed, the largest "exporting" districts. The largest average production of 2,994 and 1,945 sq. yds. of fabrics per family are also found in these districts. Malda exports consist mainly of silk and mixed products but owing to the great fall in their demand, it is well-known that the silk weavers are not making much profit now. The finer fabrics only of Midnapore and Jessore are in general exported but most of their common products are sold locally. It would thus appear that weavers who cater only for local markets do not earn as much as is earned by those whose products are taken to distant places for sale.

84. One of the reasons why families of Nadia earn more than those of Dacca apparently is the larger man and loom months they give to the work. But this is not the only reason, for we have found that Malda gives 17·2 and 19·4 loom months per family in classes I and II but earns much less, Rangpur class I weavers give nearly as many man months to the work as does the Nadia class I families but the former earn less (Table XI). On the other hand, Dacca class III weavers and Bogra class I weavers are found to earn Rs. 10·2 and Rs. 10 on the average per weaving man month, an income higher than that of Dacca and Nadia classes I and II, etc. The proximity to Calcutta, which gives Nadia the advantage of low cost in taking yarn from the markets of Calcutta is, of course, an important factor. The small number of families in these class-samples may also have influenced the results to some extent but there may be some other reasons as well for so marked a difference, specially with the 50 per cent. more production per family in Dacca. A detailed analysis of these variations, along with the factors of fabrics produced, price variation of yarn, and other aspects of the industry in these places is likely to give accurate information as to the exact reasons why weavers of some districts earn more by working for a period—while others in other regions cannot earn nearly as much though they give the same time and probably turn out the same kind of fabrics. But such an analysis will take a lot of time and is beyond the scope of this report.

85. **Income largest in class III—Per capita income.**—Another notable feature is that in class III families, the total average income in every district (except Jessore) is much larger than the total income in any other class—which, *prima facie*, would show that the families who follow weaving as subsidiary occupation are the most well-off class compared to the non-weavers also. These (class III) families earn only 12·1 per cent. of their income from weaving, 55·6 per cent from agriculture and 32·3 per cent. from other sources. They have the largest average size of family, viz., 6·3 as against 6·2 in class II, 5·1 amongst non-weavers and only 4·8 amongst the whole-time weaver (*vide* Table IX, column 2). For the real reasons of this difference also, a detailed analysis would be necessary and this has not been done yet. The overall per capita income from all sources is Rs. 27·2 amongst weavers and 31·7 amongst non-weavers. This difference of Rs. 4·5 may lead one to think, *prima facie*, that weaving is now a definitely worse occupation than agriculture. But when the interest on the capital (land value) is taken into account it would not compare so very unfavourably with the return from non-weaving occupation. This proves the maxim, mentioned in paragraph 21, that sister occupation in all regions keep some sort of economic balance.

86. **Deficits and surpluses, how met and utilised.**—The average actual total income of weavers has been shown in column 7 of Table IX. It is a significant fact that in every district and every class (except class III of Nadia, Rangpur and Malda and class V of Rangpur) including the non-weaving class (V), the expenditure (Table X) exceeds the actual income. On the overall average, the weavers had a deficit of Rs. 20·4 per family as against Rs. 11·4 amongst the non-weaving classes. The B and C series of tables show, after the debt figures, the number of families who had to incur debts in the particular year to meet their expenses and the number of families who had a surplus which they utilised to invest either in advancing loan or in purchasing assets. It would seem that the (3,303) weaving families on the average borrowed Rs. 18·1 and transferred assets of value Rs. 14·3 during the year 1342 B.S. as against Rs. 17·9 borrowed and Rs. 18·3, value of assets realised, per non-weaving family. The total gross income has thus been Rs. 184·9 amongst weavers and Rs. 200·9 amongst non-weavers, as against a total expenditure (including investments) of Rs. 177·6 and Rs. 184·5, respectively. The class variations of deficits and surpluses amongst weavers have also been fairly marked but as these are clearly set out in Tables IX and X, no repetition is necessary here. The debt question will be discussed in next chapter.

87. **Average deficits in 1342 B.S.—Actual deficits and surpluses.**—One point needs be explained here; the Rs. 184·9 and Rs. 200·9 gross total income and Rs. 177·6 and Rs. 184·5 gross total expenditure shown in Tables IX and X would seem to show that debts were incurred or assets transferred in many cases unnecessarily as there was an overall saving over expenditure. This is not really the case. The surpluses of such families as had any, are, of course, included in the "total gross income" figures. But the amounts which were borrowed or obtained by sale of assets by such families as had to adopt this course, have been included in the "total gross income" also. The solvent families' surpluses have thus maintained the margin of saving—along with the little out of the borrowed money or of the price of assets sold, which was left over, and this margin is represented by the difference between gross total income and actual expenditure (column 8, Table X). Of the 3,303 families, 1,658 borrowed on the whole Rs. 59,801 or Rs. 36·1 on average and 948 sold assets of the value of Rs. 46,879 or Rs. 49·5 per family who sold assets. The saving, however, by the solvent families was Rs. 39,636 out of which 59 invested Rs. 4,894 and 278 families purchased properties worth Rs. 10,676, leaving a cash saving for the solvent families of Rs. 24,066.

88. **Distribution of Expenditure.**—Of the total actual average expenditure of Rs. 172·9 per weaving family (as against Rs. 176·1 per non-weaving family) Rs. 126·2 (73 per cent. or Rs. 22·9 per head, including value of agricultural produce grown and consumed) were spent on food, as against Rs. 116·2 (66 per cent. or Rs. 22·3 per capita) amongst the non-weaving families. The per capita food expenditure is largest (Rs. 24·4) amongst weavers of class I, and lowest (Rs. 21·2) in class IV, classes II and III maintaining midway positions with Rs. 23·0 and Rs. 23·3. The reason for class I families, with lower average income, spending more on food, partly is that they had to purchase most of their food stuff. It is, however, to be noted that the '8 districts' average is not universal, for we find class III having

largest per capita food expenditure in Dacca, Nadia, Bogra and Malda and lowest in Midnapore and Jessore. In Jessore, it is natural—as the income in class III was found to be the lowest, but in Midnapore, the income in this class was found to be the highest. The district variations are also remarkable. Per capita food expenditure is as high as Rs. 28.4 in Nadia (with Rs. 33.7 in class III and second highest Rs. 29.3 in class IV); and as low as Rs. 16.9 in class IV of Rangpur. One reason for this is that Rangpur people consume rice of very inferior quality while in Nadia most people use finer rice. In Dacca (Rs. 23.1), the people use larger variety of fish and vegetables than the people of Rangpur, Rajshahi, etc. Another notable point is that non-weaving people in all districts except Rajshahi and Jessore spend less on food than does the weavers. This, of course, is partly due to the fact that they get more of their food stuff from their own lands and consequently cheap. As against this, the non-weaving families spend more (Rs. 11.5 per capita) in “Other expenditure” items than the weavers (Rs. 8.5 per capita), mainly because the weavers in general have to pay less as rents and for clothing, the two largest drains on the purse of rural people, after food. Table X shows the variations of per capita food and other expenditure in each class of each district.

89. **Other expenditure.**—As regards expenditure other than that on food, the average is Rs. 59.9 per family amongst the non-weavers and Rs. 49.9 per family amongst the weavers—which work out to Rs. 11.5 and Rs. 8.5 per head in the two classes. Of the above expenditure, the most notable item is clothing which, as has been found by a detailed analysis of 100 family budgets taken at random, works out to Rs. 21 on the average for Hindu families and Rs. 16 per Muslim family. This marked difference is due partly to the fact that the Muslims wear *lungi* which, being of half the length of the *dhoti*, costs less and lasts more. This and similar other reasons cause the average consumption of cloth being 18.04 sq. yds. per head amongst the Hindus and 11.91 sq. yds. per head amongst the Muslims (*vide* Table XXVI). Of the other items, rents and taxes, repayment of debts and interest thereon, medical expenses, house repairs, kerosine, matches and tobacco are noticeable. Average expenses on litigation or social ceremonies or percentage of families who incurred such expenses have not yet been worked out from the about 1,000 family budgets which have been prepared and when this is done, detailed information will be available on many aspects of the expenditure and liability side of the weavers.

90. I have dealt with the actual income and expenditure in this chapter. In the general Tables (B and C series), the gross income on weaving and agriculture (value of produce and income from wages) has been given in the income tables and expenditure on weaving materials, wages, etc., and on agriculture, in the expenditure tables. It is found that, roughly, one third of the gross value of weaving products represents the profit or remuneration in weaving occupation, the remaining two-thirds being the value of materials used. Where work is done by wage-earners, the gross profits are a little more and of this the Mahajan takes from $\frac{1}{3}$ ths to $\frac{2}{3}$ ths and the rest goes to the wage-earner as wages. This ratio, however, is true for the common fabrics only, the profit is generally less in luxury products, (silk, high count or embroidered cotton products, etc.). Owing to the factor of the

capital (value of land) involved in agricultural pursuit, similar information cannot be given for agricultural income without further analysis of the results. But it is found that the 2,069 non-weaving families get on the average Rs. 43·7 from a total of 3,851·72 acres of cultivable land, which works out to a net return of Rs. 23·5 per acre while the 3,303 weaving families get on the average Rs. 21·6 per family—from a total area of 3,132·58 acres of cultivable land, which works out to Rs. 22·8 as net return per acre of land. At Re. 1-8 per maund this gives about 15 maunds of paddy per acre, and this average is fairly accurate as in some of the places under survey we found the crop of 1342 B.S. having been considerably damaged or ruined by floods, etc. The total per capita expenditure is Rs. 31·4 amongst weavers and Rs. 33·8 amongst non-weavers. District and class variations are given in details in Table X.

TABLE IX.
Average Actual Income per family (In Rupees).
(1342 B. S.)

District.	Class.	Size of family.	Average income from—			Total average actual income.	Per capita.	Debts incurred in 1342 B.S.	Value of assets transferred in 1342 B.S.	Grand total (1342 B.S.).
			Weaving (Net).	Agriculture (Net).	Other sources.					
1	2	3	4	5	6	7	8	9	10	11
Dacca	I	5.1	138.5	0.1	..	138.6	27.2	16.5	5.1	160.2
	II	7.1	128.7	40.0	46.8	215.5	30.3	21.4	15.3	252.2
	III	7.3	28.6	11.0	210.3	249.9	34.2	40.2	24.0	314.1
	IV	4.8	49.7	20.9	44.5	115.1	24.0	11.6	5.6	132.3
	I—IV	6.2	114.2	23.0	41.9	179.1	28.9	19.6	11.2	209.9
	V (709)	5.9	..	47.7	141.1	188.8	32.0	16.6	11.5	216.3
Nadia	I	4.8	136.8	0.1	..	136.9	28.5	19.0	15.7	171.6
	II	6.6	143.4	19.9	51.1	214.4	47.6	29.8	37.8	282.0
	III	6.9	42.8	2.4	284.1	329.3	47.7	15.9	..	345.2
	IV	4.2	111.8	0.9	24.3	137.0	32.6	47.6	24.5	209.1
	I—IV	5.3	132.4	6.2	28.4	167.0	31.5	25.5	22.8	215.3
	V (137)	5.1	..	2.5	180.9	183.4	36.0	17.3	38.8	239.5
Rangpur	I	3.5	93.1	-0.1	..	93.0	26.6	0.3	18.4	111.7
	II	5.4	73.2	42.2	21.8	137.2	25.5	1.5	8.2	146.9
	III	5.6	19.7	76.7	73.0	169.4	30.2	2.9	6.6	178.9
	IV	3.6	27.2	38.5	22.1	87.8	24.4	..	0.8	88.6
	I—IV	5.0	61.3	42.8	27.5	131.6	26.3	1.4	9.5	142.5
	V (272)	5.2	..	74.8	87.4	162.2	31.2	2.6	8.6	173.4

District.	Class.	Size of family.	Average income from—			Total average actual income.	Per capita.	Debts incurred in 1342 B.S.	Value of assets transferred in 1342 B.S.	Grand total (1342 B.S.).
			Weaving (Net).	Agriculture (Net).	Other sources.					
1	2	3	4	5	6	7	8	9	10	11
Bogra	I	4.4	76.7	15.3	..	92.0	20.9	15.7	8.7	116.4
	II	5.0	47.3	54.4	32.4	134.1	26.8	8.4	9.5	152.0
	III	6.8	25.0	132.9	81.1	239.0	35.1	9.6	16.2	264.8
	IV	..	..	..	..	..	..	..	..	..
	I—IV	5.2	45.4	65.4	38.7	149.5	28.7	9.2	10.5	169.2
	V (71)	5.0	..	81.3	59.4	140.7	28.1	5.6	11.4	157.7
Rajshahi	I	2.7	89.0	..	..	89.0	33.0	37.0	..	126.0
	II	4.6	50.8	36.5	28.9	116.2	25.3	9.7	8.2	134.1
	III	5.0	15.1	51.5	66.9	133.5	26.7	7.3	1.6	142.4
	IV	..	..	..	..	..	..	..	..	..
	I—IV	4.7	37.8	40.9	43.0	121.7	25.9	9.5	5.4	136.6
	V (110)	5.6	..	67.1	142.9	210.0	37.5	18.5	28.1	256.6
Malda	I	4.9	110.8	0.5	..	110.3	22.3	17.1	31.6	159.0
	II	6.2	99.3	3.9	52.9	156.1	25.2	25.0	25.6	206.7
	III	6.7	43.4	50.7	194.8	289.0	42.8	25.1	14.8	328.9
	IV	4.6	65.5	2.1	33.7	101.3	22.0	16.7	12.3	130.3
	I—IV	5.4	83.7	4.7	44.8	133.2	24.7	20.5	20.2	173.9
	V (256)	5.1	..	22.6	116.5	139.1	27.3	21.1	24.8	185.0
Midnapore	I	3.3	84.1	0.3	..	84.4	25.6	24.4	41.8	150.6
	II	4.5	52.7	39.8	21.0	113.5	25.2	12.4	11.4	137.3
	III	5.7	18.1	40.4	58.3	116.8	20.5	18.3	10.8	145.9
	IV	3.0	54.7	4.5	19.7	78.9	26.3	13.4	14.2	106.5
	I—IV	3.8	55.8	18.2	20.5	94.5	24.9	15.8	18.5	128.8
	V (199)	4.3	..	20.3	99.1	119.4	27.8	16.2	15.6	151.2

Jessore	..	I	..	4.0	114.8	..	..	114.8	28.7	6.7	11.4	132.9
		II	..	5.3	53.8	19.6	61.7	135.1	25.5	18.7	16.3	170.1
		III	..	4.3	10.1	28.3	47.4	85.8	19.9	5.0	6.3	97.1
		IV	..	4.9	95.2	5.8	23.9	124.9	25.5	19.9	14.1	158.9
		I-IV	..	5.0	79.9	10.8	36.1	126.8	25.4	18.3	14.5	159.6
		V (315)	..	4.9	..	40.8	102.6	143.4	29.3	16.7	27.5	187.6
Eight districts	..	I	..	4.8	129.3	0.4	..	129.7	27.0	17.4	12.9	160.0
		II	..	6.2	99.3	33.9	43.5	176.7	28.5	18.7	16.6	212.0
		III	..	6.3	24.8	48.8	131.5	205.1	32.5	20.5	12.8	238.4
		IV	..	4.5	67.6	8.8	31.7	108.1	24.0	16.9	1.6	136.6
		I-IV	..	5.5	92.9	21.6	38.0	152.5	27.2	18.1	14.3	184.9
		V(2,069)	..	5.2	..	43.7	121.0	164.7	31.7	17.9	18.3	200.9

TABLE X.
Average Expenditure per family (Rupees).

District.	Class.	Size.	Food.	Per capita.	Others.	Per capita.	Total.	Per capita.	Investments.		Grand total.
									Cash.	In assets.	
Dacca	I ..	5.1	121.9	23.8	32.6	6.4	154.5	30.2	.04	0.9	155.8
	II ..	7.1	167.4	23.6	64.7	9.1	232.1	32.7	2.2	7.3	241.6
	III ..	7.3	180.9	24.8	89.1	12.2	270.0	37.0	21.6	0.8	294.4
	IV ..	4.8	92.6	19.3	32.7	6.8	125.3	26.1	0.7	0.8	126.8
	I-IV	6.2	143.0	23.1	51.6	8.3	194.6	31.4	2.6	4.0	201.2
V ..	5.9	132.5	22.5	63.4	10.7	195.9	33.2	3.9	3.7	203.5	
Nadia	I ..	4.8	129.7	27.0	32.9	6.9	162.6	33.9	0.8	1.8	165.2
	II ..	6.6	190.6	28.6	76.8	11.6	267.4	..	0.1	3.2	270.7
	III ..	6.9	232.6	33.7	81.7	11.8	314.3	45.5	..	..	314.3
	IV ..	4.2	123.0	29.3	69.4	16.5	192.4	45.8	0.5	13.3	206.2
	I-IV	5.3	150.3	28.4	52.0	9.8	202.3	38.2	0.5	3.6	206.4
V ..	5.1	127.0	24.9	76.1	14.9	203.3	39.8	1.4	31.9	236.6	
Rangpur	I ..	3.5	70.7	20.0	32.2	9.2	102.9	29.2	..	4.7	107.6
	II ..	5.4	103.5	19.5	35.7	6.6	139.2	25.8	0.2	4.3	143.7
	III ..	5.6	112.2	20.0	60.1	10.7	172.3	30.7	..	4.9	177.2
	IV ..	3.6	60.8	16.9	16.9	4.7	77.7	21.6	..	..	77.7
	I-IV	5.0	96.2	19.2	36.8	7.3	133.0	26.5	0.1	4.0	137.1
V ..	5.2	98.3	18.9	56.9	10.9	155.2	29.8	0.5	5.2	160.9	
Bogra	I ..	4.4	83.2	18.9	29.9	6.8	113.1	25.7	..	2.9	116.0
	II ..	5.0	107.0	21.4	38.8	7.8	145.8	29.2	..	2.9	148.7
	III ..	6.8	155.6	22.9	83.5	12.3	239.1	35.2	1.2	7.6	247.9
	IV ..	..	..	..	..	..	..	..	..	..	..
	I-IV	5.2	113.9	21.9	46.0	8.8	159.9	30.7	0.2	3.7	163.8
V ..	5.0	106.4	21.3	44.6	8.9	151.0	30.2	0.2	0.6	151.8	

rajshahi	I ..	2.7	65.5	24.3	59.0	21.9	124.5	46.2	..	..	124.5
	II ..	4.6	89.6	19.5	35.7	7.8	125.3	27.3	0.5	0.3	126.1
	III ..	5.0	98.7	19.7	38.5	7.7	137.2	27.4	..	1.5	138.7
	IV ..	..	..	..	..	..	..	..	..	..	..
	I-IV	4.7	92.0	19.6	37.4	8.0	129.4	27.6	0.3	0.8	130.5
V ..	5.6	132.9	23.7	96.3	17.2	229.2	40.9	0.3	5.5	235.0	
lalda	I ..	4.9	106.5	21.4	49.5	9.3	152.5	30.7	..	0.6	153.8
	II ..	6.2	133.7	21.6	56.5	9.1	190.2	30.7	4.6	3.1	197.9
	III ..	6.7	189.4	28.1	71.2	10.5	260.6	38.7	16.7	16.7	294.0
	IV ..	4.6	94.4	20.5	29.2	6.3	123.6	26.8	1.2	2.0	126.8
	I-IV	5.4	116.1	21.5	44.2	8.2	160.3	29.7	1.5	3.0	164.8
V ..	5.1	103.8	20.0	53.8	10.6	157.6	31.0	1.8	6.9	166.3	
lidnapore	I ..	3.3	85.0	25.7	56.6	17.1	141.6	42.8	0.2	1.8	143.6
	II ..	4.5	100.5	22.3	33.0	7.3	133.5	29.6	..	0.7	134.2
	III ..	5.7	99.3	17.4	36.4	6.4	135.7	23.8	..	2.5	138.2
	IV ..	3.0	72.4	24.1	31.8	10.6	104.2	34.7	..	0.4	104.6
	I-IV	3.8	86.6	22.8	37.6	9.9	124.2	32.7	0.04	1.0	125.2
V ..	4.3	98.4	22.9	46.1	10.7	144.5	33.6	0.1	3.5	148.1	
essore	I ..	4.0	99.0	24.8	24.0	6.2	123.9	31.0	..	..	123.9
	II ..	5.3	112.9	21.3	50.0	9.4	162.9	30.7	1.0	0.7	164.6
	III ..	4.3	75.1	17.5	15.7	3.7	90.8	21.2	..	..	90.8
	IV ..	4.9	113.3	23.1	40.1	8.2	153.2	31.3	0.7	4.4	158.3
	I-IV	5.0	112.1	22.4	41.9	8.4	154.0	30.8	0.7	2.7	157.4
V ..	4.9	111.9	24.3	51.6	10.5	163.5	34.8	0.7	16.9	181.1	
eight districts	I ..	4.8	117.3	24.4	35.4	7.4	152.7	31.8	0.4	1.2	154.3
	II ..	6.2	142.0	23.0	55.5	8.9	197.5	31.9	1.0	4.6	203.1
	III ..	6.3	147.0	23.3	65.5	10.4	212.5	33.7	8.1	3.7	224.3
	IV ..	4.5	95.4	21.2	34.7	7.7	130.1	28.9	0.7	2.5	133.3
	I-IV	5.5	126.0	22.9	46.9	8.5	172.9	31.4	1.5	3.2	177.6
V ..	5.2	116.2	22.3	59.9	11.5	176.1	33.8	0.2	8.2	184.5	

TABLE XI.

Average workers, working months and Actual Income (in Rupees).

From weaving.

District.	Class.	No. of families having weaving income.	Average—				Net weaving income per family.	Per cent. weaving income to total income.	Average net weaving income per man month.
			Weaving workers per family.	Loom months per family.	Weaving man months per family.	Total working months per family.			
1	2	3	4	5	6	7	8	9	10
Dacca ..	I ..	432	3.1	13.7	15.1	25.6	138.5	100.0	9.2
	II ..	669	3.2	13.8	13.3	22.0	128.7	59.7	9.7
	III ..	85	1.8	9.0	2.8	9.0	28.6	11.4	10.2
	IV ..	200	1.5	2.2	6.1	11.5	49.7	43.2	8.1
	I—IV ..	1386	2.8	11.8	12.2	20.9	114.2	63.8	9.4
Nadia ..	I ..	182	1.9	13.8	15.5	18.6	136.8	100.0	8.8
	II ..	99	2.0	15.0	16.3	19.4	143.4	45.6	8.8
	III ..	12	1.1	9.1	9.0	9.0	42.8	13.0	4.5
	IV ..	39	1.4	1.3	11.6	13.8	111.8	81.6	9.6
	I—IV ..	332	1.9	12.5	15.1	17.9	132.4	79.3	8.8
Bangpur ..	I ..	10	2.5	13.3	13.8	22.6	93.1	100.0	6.7
	II ..	60	2.9	11.8	11.2	20.2	73.2	53.4	6.5
	III ..	15	2.4	5.1	4.0	8.0	19.7	11.6	4.9
	IV ..	12	1.3	3.4	5.2	6.7	27.2	31.0	5.2
	I—IV ..	97	2.6	9.9	9.6	16.9	61.3	46.6	6.4
Rajshahi ..	I ..	4	2.0	13.0	9.0	20.0	89.0	100.0	9.9
	II ..	96	2.6	10.2	7.3	15.7	50.8	43.7	7.0
	III ..	64	2.0	5.6	3.5	8.8	15.1	11.3	4.3
	IV ..	..	..	..	..	..	..	..	..
	I—IV ..	164	2.3	8.5	5.9	13.1	37.8	31.1	6.4
Malda ..	I ..	63	2.3	17.2	14.0	18.9	110.8	100.0	7.9
	II ..	209	2.4	19.4	12.8	17.9	99.3	63.6	7.8
	III ..	24	1.3	7.5	5.0	7.6	43.4	15.0	8.7
	IV ..	221	2.2	11.6	11.9	17.5	65.5	64.7	5.5
	I—IV ..	517	2.3	15.3	12.2	17.4	83.7	62.8	6.9
Midnapore ..	I ..	57	1.8	14.6	14.2	15.8	84.1	100.0	5.9
	II ..	83	2.1	11.5	9.8	12.5	52.7	46.4	5.4
	III ..	32	1.6	6.4	5.4	7.3	18.1	15.5	3.4
	IV ..	118	1.7	11.7	12.1	14.3	64.7	69.3	4.5
	I—IV ..	288	1.8	11.6	11.1	13.3	55.8	59.0	5.0

District.	Class.	No. of families having weaving income.	Average—				Net weaving income per family.	Per cent. weaving income to total income.	Average net weaving income per man, month.
			Weaving workers per family.	Loom months per family.	Weaving man months per family.	Total working months per family.			
1	2	3	4	5	6	7	8	9	10
Jessore ..	I ..	18	1.9	14.1	14.7	17.7	114.8	100.0	7.8
	II ..	97	2.0	13.7	11.3	16.2	53.8	39.8	4.8
	III ..	7	1.1	3.1	3.0	3.4	10.1	11.8	3.4
	IV ..	156	1.9	14.5	14.9	18.4	95.2	16.2	6.4
	I-IV ..	278	1.9	13.9	12.9	16.8	79.9	51.7	6.2
Bogra ..	I ..	16	2.6	13.8	7.7	17.6	76.7	83.4	10.0
	II ..	183	2.7	11.0	6.2	15.4	47.3	35.3	7.6
	III ..	42	2.5	7.8	5.4	12.3	25.0	10.5	4.6
	IV ..	..	..	..	..	..	..	..	..
	I-IV ..	241	2.7	10.7	6.2	15.2	45.4	30.4	7.3
8 districts ..	I ..	782	2.6	14.1	14.9	22.3	129.3	100.0	8.7
	II ..	1,496	2.8	13.9	11.8	19.1	99.3	56.2	8.4
	III ..	281	1.9	7.3	4.2	9.9	24.8	12.1	5.9
	IV ..	744	1.8	9.0	10.7	15.1	67.6	62.5	6.3
	I-IV ..	3,303	2.4	12.3	11.6	18.1	92.9	67.6	8.0

TABLE XII.

Average workers, working months and actual income (in Rupees).

From Agriculture.

(Not printed.)

CHAPTER XIII.

Total Principal debt and debt incurred in 1342 B.S.

91. **Debts in 1342 B.S.**—Chiefly to meet the current years' needs— but in some cases for repayment of old debts also, the 3,303 families incurred new debts of Rs. 59,801 and sold movable and immovable properties worth Rs. 46,879, during the year 1342 B.S. This was done by 1,658 and 948 families, respectively, though there were some families who took recourse partly to both these means. The average borrowings were Rs. 36 per family that borrowed and the average sale of assets was Rs. 49.4 per family which sold assets. The overall average addition to income from these, for all families, was Rs. 32.3. As against this, 756 out of the 2,069 non-weaving families borrowed on the average Rs. 40.6 each and 519 families sold assets on the average of Rs. 73 each, the overall average being Rs. 33.1 per family from both

sources together. The overall average deficit was thus practically the same but fewer non-weavers had to borrow larger amounts than the smaller amounts borrowed by larger number of weavers.

92. **Total debts.**—Of the total principal debt, it is found that 2,698 (or 81·79 per cent.) out of 3,303 weaving families had on the average Rs. 192 of principal debt, as against 1,358 (66 per cent.) of the 2,069 non-weaving families having on the average Rs. 205. The overall average total principal debt works out to Rs. 157 per weaving family as against Rs. 135 per non-weaving family. Here again a larger percentage of weavers are in debt for smaller average amounts as compared to fewer non-weavers having larger average debts. The total principal debt is thus 4·9 times as much as was incurred by weavers in 1342 B.S. and a little over four times as much as was incurred by non-weavers in that year. In course of the enquiry made in 1934, we found the average principal debt of the raiyat class agriculturists (in 1934) to be Rs. 165 per family and Rs. 234 per indebted family (Board of Economic Enquiry's Preliminary Report: Tables 2 and 4). The two results compare very favourably, the little lower averages of this survey being accounted for by the fact that we have taken, in the non-weaving category, agriculturists of all classes and also some non-agriculturist, in our random selection of families.

93. **Distribution of debts.**—Of the total debt, 20·7 per cent. are covered by mortgages, 44·0 per cent. are "non-interest bearing" ordinary debts, 26·3 per cent. are debts under bonds, 5·7 per cent. are verbal loans with interest and 3·3 per cent. are loans from co-operative societies. The large percentage of "other-non-interest bearing debts" is accounted for by the fact that weavers owe money on credit account with yarn-dealers on which no interest is supposed to be taken. As many as 1,955 of the weaving families are indebted in this way, out of the 2,659 independent weavers who purchase yarn for themselves (classes I to III). As against the above, the non-weavers' debts are distributed as follows:—

	Per cent.
Mortgage	30·2
Bond	22·3
Co-operative	5·6
Others—Interest bearing	11·8
Others—Non-interest bearing	30·1

The mortgage debt is higher in this class as they have more lands to mortgage. The non-weavers get seasonal (after-harvest) funds against which they are also given verbal loans oftener than would be given to a weaver. The debt in class I is Rs. 154 only per indebted family as against overall average of Rs. 192 amongst the weavers. The lower borrowing capacity of whole-time weavers is, of course, due to their having very meagre assets.

94. **Present system of cash and yarn credit.**—The present system of ordinary cash credit to weavers is much the same as it is with the agriculturists. The weaving Mahajans, where they have some agricultural operations also, occasionally accommodate weavers with cash

advances, the more to have the latter under their sway. When this is done, price of yarn charged is more and value of products given is less than the market price, the difference going to uncredited interest payments. The larger share of the weavers' indebtedness is covered by the arrear prices of yarn due to the dealers. It is well known that the weavers—specially the whole-time weavers—have to work so very hard that they find very little rest. When they are ill or when for any other reason they cannot sell their products in the weekly hat at a reasonable price, they have to spend some part of the capital—(the borrowed capital consisting of the price of weekly supply of their yarn) for their maintenance. Arrears grow up like this and is to some extent reduced just before the Pujas and before the winter when their products are in larger demand and they get fairer prices. Not that they voluntarily pay this extra profit towards liquidation of their yarn-debts. They are watched while selling their products and the yarn dealer pounces upon the money as soon as it reaches the weavers' hands unless the yarn dealer himself purchases the fabrics in which case the matter becomes easier still. In all "out-of-the-ordinary" needs, marriage, *sradh*, litigation, long illness, etc., they have to borrow cash on the security of what little asset they may have. Thus goes on the weaver's life from day to day. The agriculturists have their period of mental and economic peace just after a good harvest. Not so the weaver, whose to-day, to-morrow and the day after are all the same.

CHAPTER XIV.

The Life of Weavers—Standard of Living.

95. **The moral and psychological aspect of the weaver's life.**—The foregoing chapters make it abundantly clear that the weaver has a miserable life to lead. Not that he earns much less than his neighbours following other occupations, but his chief disadvantage, as compared to the agriculturists, etc., lies in the fact that his life is of continuous struggle without rest, of an incessant fear without a hope of future. He himself works very hard and the women and children of the family give what help they can all the year round. Yet, when he goes to his weekly hat, he goes with a palpitating heart—the hope of getting a good price and fear of not getting any buyers alternately raising hope and fear in his mind. He has no grain in his house, as the agriculturist has, to fall back upon, in case he cannot sell his merchandise. The weaver must sell his goods at any price—else he and his children will have perhaps to starve. The agriculturists' respite for a few months is not for the weaver and yet he works much harder. The creditors of agriculturists automatically wait for rent and debt dues till a harvest, weaver has a persistent "Takid" on him. The cultivator has in many cases his staple food crop and he has a future—a hope for prices rising. The weaver has the prospect of an increasing mill competition and of growing debts. No wonder the weavers find themselves in a bad way—morally, psychologically and physically and hence economically also.

96. **Standard of living.**—The standard of living amongst weavers is very low. They get less staple food than most other classes, and it is fortunate that they have generally work causing less physical exertion. In family life, the weaver is more happy inasmuch as he gets co-operation and sympathy from his wife and children who are mostly fellow workers and thus realise his difficulties. The weavers generally have no breakfast in morning but only the mid-day meal, unlike agriculturists who nearly always takes a morning *nasta*. In point of education, they are apparently behind the other rural people and they can also ill afford to indulge in litigation and other expensive or time wasting luxuries. They have generally sufficient clothing but oftener than not this sufficiency is secured by dishonesty in their business (giving less yarn of shorter lengths, etc.). Their huts are generally in a very bad condition and the houses oftener than not consist of a single hut with an extension on one side for the kitchen and another on the other for the loom. In that single hut live adults and minors jumbled up. When there is a married son in the house, a third extension of the thatched or corrugated iron roof of the hut is made to accommodate him. Varieties in food are unknown in most places as these people have not the time to catch fish from *khals* and streams and of course no money to buy the same. A marriage or a *sradh* almost always involves them in debt and of course a continued illness makes them sell or pawn their few utensils when there is nothing else to offer as security.

97. The above picture would seem dismal but it is not more dismal than what we have seen in the hundreds of weaving households. I must add that the above picture does not represent so much of actual deficiency of income as it does the moral and psychological aspect of the weaver's life. It is in this respect also that he is probably in greater need of assistance. He is told by everybody, time and again, that he has not any chance in his calling now or in the future but nobody tells him any alternative course to follow. This continuous sense of hopelessness is undermining the weavers' energy, their vitality and their life. In any scheme of improvement the first and foremost duty before us will be to counteract these evil forces of hopelessness and to let them know and feel that they have still a future and they are going to have the Government and the people to help them fight their difficulties with success.

98. A more detailed economic picture of their life, showing average quantity of staple and other foods used, cattle assets, huts per couple, expenses on litigation, social ceremonies and education, etc., will be written when the family budgets are tabulated and examined in details.

Part III

The Industry in its different aspects.

CHAPTER XV.

Looms in use.

99. **Looms now in use.**—The 3,303 weaving families under survey have been found to possess 3,943 looms in all, of which 997 “Throw-shuttle” looms are possessed by 762 families, 2,722 “Fly-shuttle” looms by 2,166 families and 224 “Semi-automatic” looms are used by 164 families. There are thus 640 more looms than there are families in our sample. Applying the multiplier (7·9) for 8 districts, we find that there are about 31,150 looms in these 8 districts, of which 7,876 or 25·3 per cent. are throw-shuttle, 21,504 or 69 per cent. are fly-shuttle and 1,770 or 5·7 per cent. are semi-automatic. The estimate for the province is 29,112 throw-shuttle and 86,318 fly-shuttle (which include semi-automatic) or a total of 115,430 looms.

100. **Loom census of 1921.**—A census of handlooms was taken in 1921 along with the decennial population census. The total number of looms shown in that census in the 8 districts under report was 43,625 of which 20,653 were fly-shuttle and 22,972 throw-shuttle looms. The present number, estimated as above, represents a fall of nearly 29 per cent. as compared to the number in 1921. The relative figures for each of the 8 districts is given in the table below.

Table XIII.

Comparative statement of the number of looms in 1921 and 1936.

Districts.	1921.			1936.		
	Fly-shuttle.	Throw-shuttle.	Total.	Fly-shuttle and semi-automatic.	Throw-shuttle.	Total.
Dacca	6,375	5,423	11,798	8,289	1,363	9,652
Nadia	2,726	2,199	4,925	3,246	279	3,525
Rangpur	3	401	404	33	361	394
Bogra	274	1,591	1,865	1,369	1,112	2,481
Rajshahi	118	379	497	710	211	921
Malda	1,025	903	1,928	1,925	1,157	3,082
Midnapore	4,314	10,962	15,276	2,457	4,809	7,266
Jessore	5,818	1,114	6,932	7,231	..	7,231
Total of 8 districts' figures ..	20,653	22,972	43,625	25,260	9,292	34,552
8 districts' figures calculated directly by sampling factor (7·9) ..	..	..	..	23,274	7,876	31,150

101. **Idle looms not included in our survey.**—One reason for such difference is—that in our survey we have taken the number of working looms and such idle looms only as were found in the houses of weavers who still follow the occupation. But persons who used to weave before but had given up the occupation since 1921, were not “weavers” any longer and as such did not come into our list of weaving families. Looms possessed by such families are thus not included in the numbers obtained by us. Not unoften did we find the parts of looms tucked up or hung up from the roof of huts in families who are now agriculturists but were weavers few years ago. In this way, we have missed the existence of a large number of looms no longer in use but which were probably in use in 1921.

102. **Reasons for variation.**—The fact that there has been a rise in the number of fly-shuttle looms from 20,653 to (21,504 + 1,770 =) 22,274 while the number of throw-shuttle looms has decreased from 22,972 to 7,876, agrees with our common knowledge that of late, throw-shuttle looms have been growing increasingly unpopular and uneconomic. This would perhaps be a factor in favour of the probable accuracy of our estimate of the present number of looms.

103. **Why throw-shuttle looms have decreased in number.**—The Registrar of Co-operative Societies stated before the Special Tariff Board that “Under the protection of duties, the Indian Mills have taken to fine weaving and dumped the market of Bengal with similar class of fine goods which were formerly produced by the hand-loom weavers alone.” (Paragraph 106 of Special Tariff Board Report). It is well-known that finer cotton fabrics are woven in throw-shuttle looms. When, therefore, the non-co-operation movement of 1921 and following years made a determined campaign against the use of foreign yarn by weavers, those who produced finer fabrics lost their occupation, as a sufficient quantity of finer yarn was not produced by Indian Mills and fabrics produced from finer foreign yarn would not sell. This, added to the advantage given by the tariff imposition of 1922 (XII of 1922) helped the Indian Mills to produce finer fabrics by the finer yarn they could produce or import and the competition drove many users of throw-shuttle to agriculture. In Dacca and Santipore, we found large number of families who had given up weaving during these years and the decrease in the number of throw-shuttle looms is only what one could expect in the circumstances.

104. It may be said that the census figures about the number of workers lead to a different conclusion. The 1931 census shows that there were 57,333 workers in weaving industry in these 8 districts as against 52,210 in 1921, an increase of over 5,000. The 1921 figures include the mill workers of the Mohini Mills and in 1931 also of the Dakheswari Mills. It is of course possible that the workers increased somewhat between 1921 and 1931 (in these 8 districts only, for there was a fall in Bengal as a whole) but has fallen since. But this cannot explain a fall of this nature. Moreover, we have estimated that the present number of workers is about $(8,096 \times 7.9) = 63,958$ —which represents an apparent increase over the 1931 number.

105. It would be seen from paragraphs 50 and 69 of this Report that in our enquiry, we have found that there are, on the average 1.46 male and .99 women weaving workers (including child workers for both sexes) in each weaving family. The female workers are thus 40 per cent. of the total number of workers. We have, however, seen in

Chapter VIII that in respect of the number of female workers at least, there has been a large element of error in the census figures caused probably by weavers' unwillingness to disclose the fact of their women-folk being employed in earning occupation. If, therefore, we divide our estimated number of total workers, 63,958, in the proportion of 1.46 to .99 we get 38,110 male and 25,848 female workers. Therefore there has really been a decrease in the number of loom workers from 45,751 in 1931 to 38,110 in 1936, in the 8 districts. Again, in the 1921 census, 43,625 looms were shown as against 37,715 male workers in these 8 districts. This, as has been explained before (paragraph 53) is an almost sure indication of there having been an under-estimation of the number of workers.

106. Now, of the 38,110 male workers, found by us 32,809 ($4,153 \times 7.9$) are adult males. When it is considered that in cases of some poorer families, more than one worker works alternately on one loom and in operating semi-automatic looms 2 to 3 male workers are generally needed, the number of workers would compare very favourably with the estimated total number of looms, viz., 31,150. The apparent disagreement of our estimates with the numbers found in the census of 1921 and 1931, thus does not vitiate our estimates at all.

CHAPTER XVI.

Productive Capacity of different kinds of looms.

107. **Unsuitability of fly-shuttle looms for certain fabrics.**—It has been stated by a number of weavers that the fly-shuttle looms are not very useful in producing high quality fabrics—(Saris, etc., of counts 110s and above) as the speed with which the shuttle moves frequently tears the warp. Besides, the automatic action of pushing the sley which the worker imbibes in working with fly-shuttle looms, prevents fabrics of best texture being produced. With a throw shuttle loom, the worker can push the weft tight by pushing the sley more than once when necessary—but in fly-shuttle the left hand, pushing the sley, acts almost involuntarily in unison with the movements of the right hand operating the shuttle. If the weft is to be pushed twice or thrice this automatic action of habit is hampered, and progress is affected. If this is not done, the texture would not be as tight as it is required for high class fabric of finer-counts. For these reasons, fly-shuttle looms have also not been popular with the workers who weave fabrics of silk, tassar, etc. As such work is done mostly by Hindu weavers, the proportion of throw-shuttle looms to fly-shuttle looms amongst the Hindu weavers is much more (620 to 750) than amongst the Muslims (377 to 1,964). The above arguments apply with still greater force in respect of the use of semi-automatic and Hattersley looms, which work faster and cause a vibration in the machine which the finer yarn can hardly stand. Thus we find only 49 semi-automatic looms amongst Hindu weavers numbering 1,080 as against 175 amongst 2,223 Muslim weaving families.

108. **Productive capacity of different kinds of looms.**—The economic advantage of fly-shuttle looms over the throw-shuttle type is in the former's capacity of producing common fabrics much faster.

The capacity of the semi-automatic looms (of the type commonly called "Chittaranjan" looms) greatly surpasses that of ordinary fly-shuttle looms. It has been found difficult to estimate the difference in outturn from each type of loom without statistical analysis, as the three kinds usually turn out different kinds of fabrics. There are some cases, however, where the information for each kind of loom is available and from these the results shown in Table XIV have been gathered. The comparison is based on totals and averages only and are not statistically quite accurate—though it would perhaps not much differ from the real facts.

Table XIV.

Average Production per Loom-month on Throw and Fly-shuttles.

Descriptions.		Total Loom-months.	Total production.	Average production per loom-month.
				Yds.
Sari	{ Throw	935	50,470	53.98
	{ Fly	886	93,049	105.02
Gamcha	{ Throw	564	53,895	95.56
	{ Fly	710	76,874	108.27
Dhuti	{ Throw	190	12,229	54.36
	{ Fly	104	7,648	75.84
Lungi	{ Throw	54	7,368	136.44
	{ Fly	71	12,611	177.62
Others	{ Throw	216	23,063	106.77
	{ Fly	227	36,564	161.08
Total	{ Throw	1,959	147,025	75.05
	{ Fly	1,998	226,796	114.01
Semi-automatic looms		3,670	2,488,625	678.10

109. The overall average comes to 75.05 and 114.01 yards respectively for throw and fly-shuttle looms per loom-month. The differences in different fabrics shown are not very accurate even as estimate, for a sufficient number of looms of each class have not been found in a random search producing exactly the same kind of fabrics. In the Sari class, for instance, the throw-shuttle productions are mostly of higher counts, Lungi probably gives a more accurate estimate as the variation in counts and quality is small. In any case, the difference is quite marked in all branches of production—though in both cases, the averages are somewhat lower than the personal impressions of the workers.

110. The production by semi-automatic looms shows a surprisingly high figure. In Kanchan Union of Dacca district (where 222 out of 224 such looms have been found), it is so high (2,488,625 square yards

in 3,670 loom months) that the Dacca and 8 district production averages have been markedly influenced by them (vide paragraph 144). It is to be noted however that the weavers' families in the union are very big (8-17). The larger number of workers of each family give usually 12 to 15 hours instead of 10 hours a day to their work. Besides, each such loom is worked by 2 adult men (working alternately) and the outside help of half a woman day. Besides work here is done with lower counts 2/20s and 10½s) and this factor influences the much increased yardage. When allowance is made for these, the average production would still be about 300 per cent. more than the throw-shuttle production. Of the total production of the 1,381 families of Dacca district taken in the sample, over 60 per cent. is produced by the 276 families of Kanchan and most of these by the semi-automatic looms. A more minute examination of this matter will be made in the final Report.

111. Semi-automatic looms.—Semi-automatic looms require somewhat more physical energy in operation than the ordinary looms. An average man cannot continually work at it for more than at most 2 or 3 hours. The price of such a loom is Rs. 50 to Rs. 60, which it is not possible for most weavers to find. Besides, in these looms the vibration of the machine is so strong that it is difficult to produce fabrics of higher counts than 32s.

112. Hattersley looms.—The Hattersley looms have even greater productive capacity, but the difficulty is that it requires a capital of about Rs. 400 to install such a loom, which very few weavers can find. Besides, the working of these looms requires a considerable amount of physical strength and energy which most of the weavers do not possess or do not wish to give to the work. We have not found any Hattersley loom in use within the units of our survey but some have been found used by weavers residing not far from the Kanchan Union.

113. Waste of loom months and its economic effect.—The 3,943 looms in use were found to have been worked for 40,512 months during the year under survey (1342 B.S.), an average of 10·27 months per loom. The total production of cotton and other fabrics has been 6,773,157 square yards or on the average 167 yards per loom month. If all these looms had been worked for 12 working months we would have had 6,804 more loom-months and 1,136,268 square yards more of fabrics in the sample. This would mean a wastage of 53,752 and 199,357 loom-months and 8,976,517 and 33,292,652 square yards of fabrics in the 8 districts and in the province, respectively. On the basis of average profits, this extra yardage would have meant an additional net income of about Rs. 56,000 for (or Rs. 17 for each of) the 3,303 weaving families, Rs. 42,000 for the 8 districts and Rs. 16,41,000 for the province. Rupees 17 per family annually does not probably seem much of an income but when it is remembered that the average net weaving income per family is a little over Rs. 92 per year, Rs. 17 would mean no insignificant factor. The loss of working time means as if 567 of the total number of looms had remained idle throughout the year. This works out to an wastage of 4,479 looms in the 8 districts and 16,613 looms in the whole province. It should be noted that the loom months have been calculated on the basis of normal working time for each day in each area (generally 10 hours) and normal working days (generally 25, excluding 4 hat days and one for miscellaneous work) for each month. It should be noted also that wastages noted are based on the assumption that men who work on looms as a

subsidiary occupation only—would work whole time. The wastage in loom months in class I is 0.6 and in class II is 1.9 months, only per 12 months.

CHAPTER XVII.

Appliances and Loom Parts.

114. **Jacquards and Dobbies.**—We have found altogether 210 Jacquards and 28 dobbies in use amongst the 3,303 families. Most of the Jacquards are of 100 needles but a few of 200 and 300 controls have also been found. The 28 dobbies mentioned are all box dobbies. The indigenous hand and foot controlled arrangements for producing ornamental borders, etc., consisting of the use of a few extra healds, are not included in the number. One difficulty in taking the number of these was that these appliances are detachable, the number of healds vary in different looms and for different kinds of work (from 2 to 7) and the methods were found somewhat different in different areas. No chain dobbies have been found in these districts but a few were found later in Pabna, with up to 50 controls. Dobby is the indigenous mechanism for weaving ornamental designs and having fewer controls, this can only produce designs which are repeated at shorter intervals while with Jacquards, having larger number of controls, more elaborate designs can be executed.

115. **Why more Jacquards are not used.**—Jacquards cost between Rs. 60 to Rs. 80 for the 100 controls type, now, though it was much more costly before. This is one reason why they have not become more widely used. Chain dobbies cost about half the above and for those with smaller number of controls, they cost still less. Common weavers are also afraid of handling the more intricate mechanism of the Jacquard though in fact they are not really very difficult to operate. What popularity the Jacquards have earned in recent years has been due almost entirely to the training, demonstrations and propaganda of the Department of Industries.

116. **Peculiar and other appliances.**—In Tarabo union of Dacca district most of the "Boota" work is done in the famous Jamdani cloth, by what is called the "lappet weaving" system. A drawing of the design is kept before the weaver. This design is worked into the cloth with an extra weft which is drawn through the body of the cloth by means of a hook worked by hand. In Panchasar union of Dacca district, some ladies of non-weaving families have been found to weave towels of ordinary and twill grounds with the help of a few bamboo sticks which are deftly manipulated by hand. In Midnapore (Sauri, police-station Danton), weavers have been found using bamboo shuttles. Ordinarily, iron and iron mounted shuttles are used in throw-shuttles and iron mounted or wooden shuttles for fly-shuttle looms. Creels (a frame in which a large number of bobbins are arranged in rows to enable easy and expeditious warping) have been found to be used to some extent in Kanchan Union of Dacca district and in some parts of Nadia, Bogra and Jessore. It is not understood why it has not yet become more popular. Its use saves a lot of time and trouble and it is neither expensive nor difficult to work. It is one of the most useful of minor appliances.

CHAPTER XVIII.

Consumption of Yarn.

117. **Yarn available.**—The total yarn available for consumption by the handloom weavers may be calculated from the existing statistical records as follows:—

Table XV.

Import, export and balance of yarn.

Foreign—					lbs.
Overseas—Imports .. .. .	..	..	..	..	+11,379,758 (a)
Exports .. .. .	..	..	..	..	-2,523 (b)
Coastwise—Imports .. .. .	..	..	..	..	+89,740 (d)
Exports .. .. .	..	..	..	..	-318,806 (e)
Rail and river borne—Net exports .. .. .	..	..	..	..	-2,827,502 (h)
Total foreign yarn used in Bengal .. .. .	..	..	..	..	+8,320,667 (1)
Indian—					
Overseas—Exports .. .. .	..	..	..	..	-2,660 (c)
Coastwise—Imports .. .. .	..	..	..	..	+27,546,402 (f)
Exports .. .. .	..	..	..	..	-4,428,723 (g)
Rail and river—Net imports .. .. .	..	..	..	..	+4,629,230 (t)
Total Indian (non-Bengal) .. .. .	..	..	..	..	+27,744,249 (2)
Production of Bengal mills .. .. .	..	..	..	..	+41,056,056 (j) (3)
Total yarn consumption in Bengal (1+2+3) .. .. .	..	..	..	..	+77,120,972 (4)
Less—Consumption by Bengal Mills .. .. .	..	..	..	..	28,900,633 (5)
Balance available for extra mill consumption (4-5) .. .. .	..	..	..	..	48,220,339 (6)
Less—Used in fishing net, small hosiery and other similar industry and miscellaneous purposes, wastes, etc. {25 per cent. of (6) by estimate} roughly .. .. .	..	..	..	..	12,220,339 (k)
Net balance available for handloom industry proper (roughly) .. .. .	..	..	..	..	36,000,000

118. **Other estimates of consumption.**—The Special Tariff Board estimated 48.2 million lbs. of yarn as available for handloom industry, perhaps from the above figures (6), but they did not, as they

- (a) Annual statement of the Sea-borne Trade of British India, 69th Issue. Volume I, page 397.
 (b) Page 796 *ibid.*
 (c) Page 669 *ibid.*
 (d) Accounts relating to the Coasting Trade and Navigation of British India—March, 1935. Page 80.
 (e) Page 164 *ibid.*
 (f) Page 52 *ibid.*
 (g) Page 136 *ibid.*
 (h) Accounts relating to the Inland (Rail and River-borne) Trade of India—March, 1935. Pages 16 and 17. Maunds converted into lbs. at 1 Md. = 82½ lbs.
 (i) Pages 18 and 19 *ibid.* Maunds converted as above.
 (j) Monthly Statistics of Cotton Spinning and Weaving in Indian Mills—March, 1936. Page 9.
 (k) Annual Statement of the Sea-borne Trade of British India, 69th Issue. Volume I, pages 23. Consumption of yarn calculated at 100 lbs. of yarn to 112 lbs. of cloth, as done by the Special Tariff Board.

stated (at page 100 of the Report), make allowance for the other extra-mill consumption of yarn. The number of small knitting and other hosiery machines is quite large and fishing nets absorb a very substantial quantity of yarn. The Special Tariff Board did not take home spun yarn into account. In the 8 districts, we did not get any in the units surveyed though, near Raninagar of Rajshahi district there were some spinners in a neighbouring union, and of the last 5 districts taken up Noakhali returned some such yarn. The quality of home spun yarn produced in Bengal or obtained from other provinces would be less than .1 per cent. and can be ignored.

119. Consumption calculated from results of present survey.—We have found 1,039,190 lbs. of cotton yarn being used by the 3,303 families (vide Table XVI). Using the sampling factor for the 8 districts and for the province, we find the total consumption of yarn in handloom industry, to be 8·209 and 30·448 million lbs. respectively in the 8 districts and in the province as a whole. The estimate for the province differs from the other estimate (paragraph 117) by nearly 5·552 million lbs. or about 17 per cent. When it is remembered that for the consumption—and in particular, the weight of the yarn, the workers had to base figures more on estimates than on any accurate version of the weavers, this difference would not, it is hoped be considered very striking. The average consumption per family was about 327 lbs., of the 3,177 (out of 3,303) families, using cotton yarn. 80·6 per cent. of these families used Indian yarn, 61·6 per cent. Japanese and 15·7 per cent. British yarn, nearly 1,838 families using more than one make. For this reason the percentages are not mutually exclusive.

Table XVI (District figures) (paragraph 119).

Consumption of Cotton Yarn (in lbs.).

Districts.	Indian.			European.			Japanese.			Total.		
	Greys.	Coloured.	Total.	Greys.	Coloured.	Total.	Greys.	Coloured.	Total.	Greys.	Coloured.	Total (greys and coloured).
Dacca	480,648	87,829	518,472	8,507	537	4,044	17,247	176,534	193,781	451,397	204,900	716,297
	746	423	1,169	194	85	279	393	936	1,329	..	..	..
Nadia	2,359	824	3,183	1,628	279	1,007	9,228	84,289	93,497	13,215	85,372	98,587
	39	53	92	41	18	59	109	358	467	..	..	..
Rangpur	25,642	5,297	30,939	..	..	..	80	..	80	25,722	5,297	31,019
	134	56	190	..	..	..	3	..	3	..	..	..
Bogra	42,819	..	42,819	..	..	..	55	..	55	42,874	..	42,874
	281	..	281	..	..	..	1	..	1	..	..	..
Rajshahi	19,952	507	20,459	..	..	..	50	..	50	20,002	507	20,509
	164	2	166	..	..	..	2	..	2	..	..	..
Malda	37,835	25,438	63,273	..	..	..	3,894	5,405	9,299	41,729	30,843	72,572
	158	154	312	..	..	..	34	32	66	..	..	..
Midnapore	12,968	1,448	14,416	4,928	917	5,845	1,247	982	1,629	19,143	2,747	21,890
	97	42	139	71	67	138	15	21	36	..	..	..
Jessore	22,380	3,109	25,489	2,293	981	3,274	5,617	1,062	6,679	30,290	5,152	35,442
	157	55	212	15	7	22	49	3	52	..	..	..
Eight Districts	594,598	124,452	719,050	12,856	2,714	15,070	37,418	287,652	305,070	644,372	394,818	1,039,190
	1,776	785	2,561	321	177	498	666	1,350	1,956	..	..	..

Bold figures indicate the number of families consuming the yarn.

CHAPTER XIX.

Sources and Varieties of Yarn in use.

120. **Sources.**—The yarn demand for the Handloom Industry in Bengal is supplied from three sources:—

- (1) Indian—The Madras Mills supply the largest share, the Bengal Mills supply a small proportion and the rest comes from Bombay Mills.
- (2) Japanese and Chinese yarn—(both pass as Japanese).
- (3) British yarn.

Tables XVII (A, B) and XVIII show the extent, distribution and percentages of the counts and makes of yarn in use in the units surveyed in the 8 districts as a whole and in each district separately.

121. **Indian Yarn predominates in lower counts.**—Up to 18s. the Indian yarn has been found to have a virtual monopoly. About 31·5 per cent. of the total consumption of grey cotton yarn is in these counts of which 10½s, used generally as weft for the Chadars, mainly in Kanchan, claim 28·4 per cent.—the largest consumption in any single count. The 10½s also command 17·6 per cent. of the total cotton yarn consumption and is the third most important count in use. In counts from 20s to 32s, Indian greys and coloured yarn consumed was 202·8 thousand lbs. as against 46·0 thousand lbs. Japanese and only 33 lbs. European. Thus, in the lower counts, Indian Mills have an almost free market.

122. **Competition in medium counts.**—40s. are the most important and widely used yarn and 27·9 per cent. of the total consumption of yarn is in 40s. In greys, Indian Mills supply 21,247 lbs. as against 28,974 lbs. Japanese but in dyed yarn, Japan sells 193,439 lbs. as against 46,374 lbs. sold by Indian Mills, while only 218 lbs. are British yarn.

After 40s, Indian and Japanese yarn gradually fall out and except for the small supply by the Dhakeswari Mills—the British yarn holds the field. It appears therefore, that at present the competition lies between Indian and Japanese yarn of the medium counts, between 20s to 60s. Below that Indian yarn enjoys a virtual monopoly and in above 60s, the British yarn has no competition worth the name. It should be noted, however, that the proportion found in the enquiry cannot be claimed to have a very high degree of accuracy—in this matter at least. It is often difficult for experts to distinguish between Indian and Japanese yarn of the same count and our workers were not experts. On the other hand, the weavers who gave information in many cases did not really know the make or else had been misled by the dealers. But the overall proportions would give, it is hoped, fairly dependable results.

Of the total consumption, 69·2 per cent. is Indian, 29·4 per cent. Japanese and 1·4 per cent. European. In order of importance, the distribution of different counts is:—

	Per cent.
40s	27·9
2/20s	23·2
10½s	17·6
20s	9·9
26s	9·1
Others	12·3

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123. **Counts used in different fabrics.**—40s are generally used in coarse Saris and Lungis and occasionally in good gamchhas, 2/20s and 10½s are used in Chadars mostly, though some of the latter is used for Satranchis. 20s to 26s are used mostly in Gamchhas and Lungis, mosquito nets and rarely in Saris also.

124. **Greys and coloured.**—Of the total quantity of yarn consumed, 62 per cent. was found grey and 38 per cent. dyed, at the point of production. This has been shown as the proportion of Indian, Japanese and European dyed yarn. In actual fact, most of this yarn were greys when purchased and had then been dyed locally by indigenous process. The tables should not therefore be taken as giving proportions for “foreign-dyed” yarn. When European or Japanese dyed yarn is mentioned, it includes or, to be more accurate, chiefly consists of European or Jananese grey yarn dyed locally.

125. **Popularity of yarn of different makes.**—As regards popularity, the British yarn is liked most for its tensile strength, finish and glaze. The Dhakeswari yarn is considered by most as next best while Japanese and Bombay yarn come third. Madura yarn is, however, used most. The reason is that the best yarn costs more. Secondly, the Madura Mills give a better margin of profit to the dealers than other Mills. The Special Tariff Board thought that “the close proximity of the cotton growing areas and comparatively cheap supplies of electrical energy are amongst the reasons” (paragraph 16) why the Madras Spinning Mills are doing well. In fact, up to 18s, Madura yarn almost exclusively holds the market—and gets a good price. There is a competition for the market in the medium counts with Japan—and even here Madras—it is said by dealers and weavers, is gradually making a headway. The Madras yarn is not made from high quality cotton. The Madras Mills can and do give the yarn cheap—or at least compete with Japan. This and not the quality of the yarn, is the reason for the popularity of the Madras yarn.

126. A more detailed discussion of the yarn statistics would be beyond the scope of this report, and besides, the regional difference of prices of different counts have not yet been analysed and compared with Calcutta prices. A random sample of the price variation in different unions only is given as Table XIX. The question of the proportion of silk and other yarn is not commented on as the weight of these could not be even roughly ascertained. Figures of silk and other yarn have been collected but are not shown for this reason. The quantity of fabrics produced from these yarns have been shown in Table XXI. The figures in Table XIX are also of not much statistical value as there are different makes in same counts with varying prices. But the table is given to show a rough idea of the nature of variation in prices.

Table XVII-A (Paragraph 120).

Distribution of cotton yarn (greys, coloured, twists) according to sources of supply.

(Not printed.)

Table XVII B (paragraph 120).

Consumption of yarn.

Counts.	Greys.	Percentage to total greys.	Colour-ed.	Percentage to total coloured.	Total.	Percentage to total yarn.	Percentage to total of—		
							Indian.	Euro-pean.	Japa-nese.
	lbs.		lbs.		lbs				
2	8,780	1.4	..	..	8,780	..	..	..	..
10½	183,116	28.4	..	..	183,116	17.6	17.6	..	..
14½	1,772	.3	..	..	1,772	..	..	..	..
16	8,232	1.3	238	..	8,470	..	..	..	..
18	24	..	..	..	24	..	..	..	..
20	21,661	3.4	30	..	21,691	2.1	1.8	..	..
22	41,439	6.4	61,233	15.5	102,672	9.9	9.4	..	..
24	8,772	1.4	8,286	2.1	17,058	1.6	..	..	1.1
26	72,091	11.2	22,673	5.7	94,764	9.1	6.9	..	2.2
28	3,462	.5	9,171	2.8	12,633	1.2	..	..	..
30	..	..	64	..	64	..	..	..	..
32	2,113	.3	..	..	2,113	..	..	..	..
40	50,234	7.8	240,018	60.8	290,252	27.9	6.5	..	21.4
42	..	..	96	..	96	..	..	..	..
46	83	..	..	..	83	..	..	..	..
60	1,887	.3	1,830	.5	3,717	..	..	..	..
64	..	..	268	..	268	..	..	..	..
70	5,320	.8	850	..	6,170	..	..	..	..
80	4,168	.6	151	..	4,319	..	..	..	..
84	..	..	23	..	23	..	..	..	..
90	789	..	6	..	795	..	..	..	..
100	1,402	..	1	..	1,403	..	..	..	..
110	1,357	..	60	..	1,417	..	..	..	..
120	385	..	4	..	389	..	..	..	..
130—140	1,788	..	860	..	2,648	..	..	..	..
200	..	..	2	..	2	..	..	..	..
2/20s	225,008	34.9	14,567	3.7	239,575	23.2	23.1	..	..
2/24s	30	..	..	..	30	..	..	..	..
2/42s	..	..	18	..	18	..	..	..	..
2/64s	114	..	623	..	737	..	..	..	..
2/80s	..	..	233	..	233	..	..	..	..
Unspecified count and colour ..	345	..	33,513	8.5	33,858	3.2	..	..	3.1
Percentage of the minor counts not separately shown above..	..	1.0	..	.9	..	4.2	3.9	1.4	1.6
Total ..	644,372	100.0	394,818	100.0	1,039,190	100	69.2	1.4	29.4
Percentage ..	Greys.	62.0	Coloured	38.0	Total.	100.0	..	..	..

Table XVIII.

District distribution of cotton yarn consumption (greys and coloured, of all makes).

Counts.	Dacca.	Nadia.	Rangpur.	Bogra.	Rajshahi.	Malda.	Midnapore.	Jessore.	Eight districts.
2s	..	..	8,780	..	..	..	..	..	8,780
10½s	179,424	..	1,088	..	..	2,604	..	..	183,116
14½s	..	..	1,772	..	..	..	..	..	1,772
16s	..	..	8,127	..	..	343	..	..	8,470
18s	..	..	..	..	..	24	..	..	24
20s	..	100	..	..	..	3,543	12,844	5,204	21,691
22s	68,329	4,585	10,567	7,741	..	1,465	..	9,985	102,672
24s	764	10,865	..	..	20	40	..	5,369	17,058
26s	..	22,799	..	34,866	18,827	18,272	..	..	94,764
28s	2,920	4,280	..	..	1,098	4,335	..	..	12,633
30s	64	..	..	..	..	..	..	..	64
32s	684	..	..	..	..	..	..	1,429	2,113
40s	192,500	51,135	872	267	564	36,904	66	8,444	290,252
42s	..	96	..	..	..	..	..	..	96
46s	83	..	..	..	..	..	..	..	83
60s	402	110	..	..	..	1,478	1,718	9	3,717
64s	..	..	..	..	..	..	..	268	268
70s	2	867	..	..	..	..	5,301	..	6,170
80s	492	3,218	..	..	..	..	423	186	4,319
84s	..	..	..	..	..	..	..	23	23
90s	578	75	..	..	..	..	94	48	795
100s	1,403	..	..	..	..	..	..	..	1,403
110s	1,304	..	..	..	..	..	..	113	1,417
120s	223	..	..	..	..	2	..	164	389
130s to 140s	45	..	..	..	..	..	860	1,743	2,648
200s	2	..	..	..	..	..	..	..	2
2/20s	234,776	..	..	..	..	3,036	1,403	360	239,575
2/24s	30	..	..	..	..	..	..	..	30
2/42s	..	18	..	..	..	..	..	..	18
2/64s	123	32	..	..	..	..	..	582	737
2/80s	..	180	..	..	..	9	41	3	233
Unspecified	32,179	227	313	..	..	517	..	622	33,858
Total	716,327	98,587	31,019	42,874	20,509	72,572	22,750	34,552	1,039,190

Table XIX (paragraph 126).

Prices of some principal counts of grey yarn in various localities (in rupees) Indian, (European), [Japanese].

Unions.	20s	Unions.	22s	Unions.	24s
Shyamkur	.. .50	Kanchan	.. .53	Panchasar	.. .53
Siddhipasa	.. .50	Abdullapur	.. .52	Meherpur	.. [.60]
Milky	.. .50	Baruakhali	.. .55	Kaya	.. [.52]
Midnapur XIII	.. .50	Kathadia-Simulia	.. .51	Joypur	.. .56
Midnapur XIV	.. .50	Kalma	.. .49		
		Mirganj	.. .55		
		Shyamkur	.. .59		
		Siddhipasa	.. .59		
		Purulia	.. .55		
		Kaliachak	.. .48		
		Shibganj	.. .49		
		Nayanowbhanga	.. .55		
		Majihatta	.. .58		

Unions.	26s	Unions.	40s
Milky	.. .56	Abdullapur	.. .70
Shibganj	.. .52	Baruakhali	.. .74
Raninagar	.. .56	Nayabari	.. .73
Boalia	.. .60	Kathadia-Simulia	.. .69
Chandipur	.. .59	Kalma	.. .74
Chhatingram	.. .63	Shyamsiddhi	.. .69[.75]
Nasratpur	.. .59	Kolapara	.. .73
		Kaya	.. [.68]
		Barkhada	.. [.66]
		Joypur	.. [.68]
		Shyamkur	.. .77[.68]
		Siddhipasa	.. .77[.68]
		Milky	.. [.83]
		Kaliachak	.. .75[74]
		Chhatingram	.. .80

Union.	80s	Unions.	90s
Tarabo	.. (1.5)	Panchasar	.. (1.6)
Meherpur	.. (1.5)	Siddhipasa	.. (1.3)
Siddhipasa	.. (1.24)	Ramjibanpur	.. (1.7)
Birsingha	.. (1.5)		
Ramjibanpur	.. (1.6)		

CHAPTER XX.

Present system of yarn supply.

127. **Difference between Calcutta and moffasil prices.**—The weavers obtain yarn in all cases from Mahajans and retail traders. Some of the handloom factories purchase from Calcutta agents or bigger Mahajans at bale or bundle prices, according to size of such factories, but most of the weavers proper have to purchase by *Moras* consisting of 10 or 20 hanks. The bigger Mahajans purchase from the Calcutta agents of manufacturers and retail sellers purchase from these Mahajans. Between the Calcutta agents of the manufacturers and the actual consumers of yarns, there is, therefore, at least two middle men and in many cases three. After making allowance for the charges of transport which vary according to communication of each locality and the profits of the middlemen the price which the consumers pay comes up to anything between $1\frac{1}{2}$ to 3 annas to the rupee in excess of the f.o.r. wholesale price at Calcutta.

128. **Purchases of yarn on credit.**—This, however, apply for cash purchases. The independent weavers, in most cases, cannot afford to purchase in cash even their weekly yarn requirements. Besides, to make a casual purchaser a regular one, it not unoften happens that the weaver is allowed to have yarn on credit during the first stages of his clientele until he becomes too deeply involved to confer his custom elsewhere. In some cases the inducement offered in the first stages is the purchase of their products, when yarn and cloth business is done by the same Mahajan. Once this is accomplished, the weaver has not only to purchase yarn from that dealer, but to do so at whatever prices the latter may exact. In such cases the difference between Calcutta and local prices has been found to vary between 2 to 4 annas per rupee. What ordinarily happens is that after the weaver sells his weekly merchandise he goes to the yarn dealer for his next week's supply of yarn, unless of course the yarn dealer also happens to be the purchaser of the products. He has then to pay the price of yarn and also whatever portion the dealer finds it possible to take from him, on account of his previous dues. But whatever may be the payments made, the arrear account is never squared up and the weaver has to be under perpetual bondage to the dealer Mahajan.

129. **How weavers are cheated by some yarn dealers.**—The above is only one of the ways of sharing the slender profit of the weaver. A second method is to cheat him by giving him a cheaper brand of yarn under colour of its being a costlier variety. A third means is to give him Japanese yarn when the weaver wants the Bombay or Bengal manufacture. Yet a fourth method of cheating is to pass 44s yarn as 40s and to save 4 hanks to the lbs., to the dealers' benefit, in the transaction. In the sale of dyed yarn, the giving of loose dyed or semi-fast dyed yarn as fast dyed is more or less a common practice.

130. **Profits of yarn dealers.**—Between these diverse methods of making profit, the yarn dealer generally retains a comfortable margin about 3 annas on the average per rupee. But it must be said that the cannot always enjoy this nearly 20 per cent. profit. For one thing when they advance yarn on credit to obtain fast custom, they always risk the loss of a major portion of such arrear due. In many cases owing to deaths, disabilities and the giving up of the weaving occupation, such dues become bad debt. The taking of a large gross prof

thus acts as an insurance against such losses and in the long run the net profit of the 2 or 3 grades of yarn dealers, jointly, comes up to only about 10 to 15 per cent.

131. Alternative agency not feasible.—It is difficult to suggest any means by which yarn can be made available to weavers on better terms. The idea of erecting Government store at convenient centres does not seem to be workable. For one thing, it will deprive a large number of people, who are now earning their livelihood by selling yarn, of their occupation. Secondly, if such stores are established within reasonable reach of the weavers, the establishment cost will be too high and no actual benefit will accrue to the consumers of yarn. If such stores are established at big centres only, to cater for limited clientele, the volume of sale will hardly leave sufficient margin to defray the expenses after giving any appreciable price relief to the weavers. Thirdly, in case of sale through Government stores, the common weaver will not always get the advantage of any temporary accommodation during and after the stoppage of work for illness, etc., as they now get from local Mahajans. The difficulty in such cases, of course, is that the average weaver has not even the small capital which he needs for purchasing his weekly supply of yarn.

132. Co-operative system of supply.—There is the co-operative system which theoretically ought to meet all these difficulties. But in the present state of education and party factions amongst them—the weavers themselves are not generally fit to look after their own interests by combining as co-operative bodies. As regards business acumen, the great majority of them have none. They are so poor that they will continually spend the whole of their profit on food, etc., and thus become defaulters. This will have to be followed by strict measures from co-operative societies. The management of co-operative organisations, under the existing procedure, are either individually interested or have no interest for the weavers and such persons cannot generally be expected to be very active for weavers' interests only and if honest, to be more than officially helpful. These have been, and are very likely to be, for some time to come, the primary causes of failure of the co-operative movement on existing lines. The experience of co-operative sale and other societies for weavers, narrated before the Industrial Conference by the representatives of other local Governments is hardly encouraging, and the history of the co-operative activity in this province, except for a very few exceptions, is no less discouraging.

133. At a later stage I will discuss the possible methods of improvement of the arrangement for the supply and sale of yarn.

CHAPTER XXI.

Handloom products.

134. Tables dealing with the subject.—An abstract statement showing the total production of cotton and other fabrics by the 3,303 families under report will be found in Table XX for each class of each district. In Table XXI, the total and average cotton productions have been shown, first for all districts—class by class and then for all classes of each district. In Table XXII, the total cotton and other fabrics produced in different districts by each class has been shown.

135. **Classes of fabrics.**—It would be seen that of the total cotton fabrics produced, Saris are 37·2 per cent., Lungis 20·8 per cent. Chadars 19·1 per cent., mosquito nets 9·8 per cent. Ganchas 9·7 per cent., and Dhuties 1·5 per cent. The coloured Saris of 40s yarn is very popular amongst the Muslim rural women and they are the chief consumers of these. The finer Saris, produced from higher counts of grey and bleached yarn, in Dacca, Abdullapur, Santipur, etc., are used by comparatively well-to-do Hindu families. Lungis have a very extensive market in North Bengal and Assam and the Chadars of Kanchan and some of Kumarkhali (Nadia) find a ready market amongst the poorer classes of all Bengal districts, and also in some districts of Assam.

136. **Variety of articles.**—It is difficult to give any detailed description of any kind of fabric—as in each class there are endless varieties. The difference is caused by count of yarn, manner and degree of sizing, size, colour, texture, etc. No two pieces can be said to be exactly similar, for even when the same number of warp ends are used, wefts are closely or loosely placed in the front and middle parts of the fabrics. It has thus been found very difficult to analyse, by direct method, the time, cost and profit of production, as would be found in the chapter dealing with profits.

137. **Fabrics of modern need and taste.**—The weavers, it will be seen, have been producing almost the same classes of common fabrics which their forefathers used to weave. But the modern civilisation has increased the demand of piece-goods, by creating needs for innumerable new classes and varieties—towards which the proverbially conservative weavers have not yet turned their attention. In recent years, by the untiring efforts of the Department of Industries, the weavers of some areas have started producing miscellaneous goods—towels, “asans,” table cloths, shirtings, “sujni,” sheetings, etc. But the movement is not yet sufficiently widespread as the activities of the Department of Industries have probably been restricted for want of funds. But there is hardly any chance of the handloom weaving having a good future if it does not take to widening its field of production. This widening of the scope should however be done very carefully to avoid competition with Mills in lines in which the Mills can produce better products at much cheaper rates.

138. **Fabrics do not suit modern taste.**—As to the suitability of the fabrics for modern tastes, the luxury products of Dacca, Santipur, etc., are very good in their old way but (except for the productions of a few up-to-date weavers) are much behind the taste and fashion of the day. Amongst the Saris, etc., which I caused to be produced from Dacca for the inspection of the members of the Sub-Committee, a large number were in gorgeous colours and some were so closely embroidered that modern ladies would be laughed at if they were to wear them. The time has come when the idea will have to be instilled in the minds of the weavers of fine Saris, specially the illiterate ones,—that the days of closely embroidered and deep coloured clothing of the old type are gone.

139. **Old fashioned types still adhered to.**—The same is the defect with weavers of coloured coarse Saris. Amongst the thousands of pairs of such Saris and Lungis I have seen, there were very few which, it seemed to me, would be to the taste of any modern woman. The “three border” fashion is long gone and however much ornamentation

may be liked in the borders, it is difficult to pass on Saris, of deep colour and closely ornamented by designs in the body, on women even in casual touch with modern times. The designs are old fashioned—except in the Dacca, Santipur and a few such areas and when to these defects is added the coarseness of the cloth, it is no wonder that these fabrics find no bigger market. It is only because tastes and ideas vary so widely from class to class in this province that such articles find any market at all.

140. Common defects in fabrics.—The next defect of handloom fabrics is in its size and texture. A nominally 10 cubits Sari seldom, would measure over $9\frac{1}{2}$ cubits and in width the same dishonesty prevails extensively. Besides, many weavers would put 30 ends per inch when 35 are adequate, cover this deficiency by pushing the wefts tight for a yard or so of the cloth and then prepare the rest in the usual way. As a result, the top part of the cloth (when folded), leads a person to believe that the cloth is of good texture, when in reality most part of it is much worse. This defect of the cloth is covered, at the time of preparation, by size, in such a way that an ordinary purchaser won't know the difference—until the cloth is washed. Yet another defect, so far as the coloured fabrics are concerned, is that nobody can say for certain if the dye is fast or not and not unoften fabrics of loose dyed yarn are passed on as if they were made of fast dyed yarn. Besides the above, the roughness of handloom fabrics caused by the (often excessive) use of rough sizing material, is a notorious defect.

141. Most weavers cater for limited clientele.—The greatest of the drawback industry is that except for the finer—more or less luxury fabrics—and a few types here and there, the great majority of the products are woven to suit the taste of rural Muslims only. The cloth consumption Table (No. XXVI) would show that the per capita consumption of cloth by the Hindu is 18·04 square yards as against 11·91 amongst the Muslims. Besides, the "other expenditure" figures show that Hindus spend much more on clothing. The so-called "National" sentiment also is supposed to be more prevalent amongst the Hindu consumers. But the great majority of the weavers do not produce fabrics which can appeal to the taste of ordinary Hindu consumers. This unintentional limitation in the variety of production almost permanently shuts out a very large section of the consumers. In any attempt to popularise the handloom fabrics, this aspect of the situation will need a great deal of attention.

142. Chadars—Female Lungis—Sataranchi—Mosquito Nets—Others.—Coming to particular commodities, Chadars for the winter use of poorer classes are produced in very large quantities in Kanchan Union of Dacca district. These have now almost entirely ousted from the market the once famous Chadars of Kumarkhali. Female Lungis prepared in Jessore are largely used by Muslim women of Rangpur and other parts of North Bengal and in some parts of Jessore. These women use a upper garment in addition to the Lungi (which they use to cover the lower part of the body) so that the two pieces between them can alternately serve as wearing cloth and upper garment. Often two such Lungis are also used. Sataranchis are produced round about Nespattan, a market 4 miles from Rangpur town. These are not worse but in some cases of better quality than ordinary United Provinces Durries but the price is much higher than the U. P. fabrics and this has prevented the weavers, having a better market. Mosquito nets prepared in Dacca (Kanchan) Bogra, Rajshahi, Midnapore

and Jessore are of very common type—but are very cheap, though scarcely lasting. The “others” category include some Asans, small red-coloured cloths, usually used for babies in ceremonious occasions and some shirtings, sheetings, pillow-case-cloth, etc.

143. **New types.**—In recent years, owing to the propaganda, demonstration and training by the Department of Industries, new varieties of articles are being prepared in some places in small quantities. As these articles grow in popularity, they will, it is hoped, get a better local market.

144. **Total production.**—The total production by the 3,303 families has been found to be 6,709,097 square yards of cotton and 64,060 square yards of silk and other fabrics. Average cotton production is 2,112 square yards per family of the 3,177 families producing cotton fabrics and 2,031 square yards per family of all families. But this average is somewhat higher than normal as it is influenced by the unusually high production (679 square yards per loom-month) in Kanchan of Dacca district where semi-automatic looms are used. If Kanchan production is not taken into account, the average comes down to 1,361 square yards per cotton producing family. But in a random survey, we cannot entirely exclude the production of an area which produces more, for then we need exclude, in this case, Midnapore also, as it produces unusually less. But still, as there are not many places like Kanchan (not even one in the other 40 units), we should make some allowance for it. The total production may thus be calculated as follows:—

Basis of calculation.	(Million yards.)	
	8 districts.	Bengal.
(1) 2,031 square yards per family	53.00	196.58
(2) 1,361 square yards per family	35.51	131.71
(3) 1,900 square yards (for equating the influences on averages of the Kanchan production).	49.57	183.88

By multiplying total production in sample by the relevant sampling factors, we get the figures at (1) above, as the outside or higher limit while No. (2) is the lower limit, so that No. (3) might probably be an estimate nearer truth. The “1,900” basis is, however, a mere chance selection—it might have been 1,800 or 2,000, and is consequently not a statistical one but based on my personal impression about the degree of influence on the overall averages, of the Kanchan production. The Nadia average is 1,945 square yards per family, and 1,900 would therefore be a safe estimate for average production. It may be noted that automatic and semi-automatic looms are in use to some extent in Pabna and some unions round about Kanchan in Dacca.

Table XX (paragraph 134).
Production of fabrics in square yards.

Districts.	Class.	Cotton fabrics.	Other fabrics.	Total fabrics.	Number of families.
Dacca ..	I ..	864,013	554	864,567	492
	II ..	3,171,269	1,692	3,172,961	669
	III ..	41,784	..	41,784	85
	IV ..	58,663	424	59,077	200
	I—IV ..	4,135,719	2,670	4,138,389	1,386

Districts.	Class.	Cotton fabrics.	Other fabrics.	Total fabrics.	Number of families.
Nadia ..	I ..	359,763	..	359,763	182
	II ..	243,786	..	243,786	99
	III ..	3,008	..	3,008	12
	IV ..	39,341	..	39,341	39
	I—IV ..	645,898	..	645,898	332
Rangpur ..	I ..	14,979	..	14,979	10
	II ..	78,431	121	78,552	60
	III ..	5,865	..	5,865	15
	IV ..	3,129	163	3,292	12
	I—IV ..	102,404	284	102,688	97
Bogra ..	I ..	33,476	..	33,476	16
	II ..	243,138	..	243,138	183
	III ..	29,301	379	29,680	42
	IV ..	..	..	..	..
	I—IV ..	305,915	379	306,294	241
Rajshahi ..	I ..	8,242	..	8,242	4
	II ..	152,935	..	152,935	96
	III ..	37,264	..	37,264	64
	IV ..	..	..	..	..
	I—IV ..	198,441	..	198,441	164
Malda ..	I ..	61,432	12,541	73,973	63
	II ..	279,851	32,693	312,544	209
	III ..	9,062	2,879	11,941	24
	IV ..	320,535	12,614	333,149	221
	I—IV ..	670,880	60,727	731,607	517
Midnapore ..	I ..	62,367	..	62,367	57
	II ..	80,745	..	80,745	83
	III ..	13,071	..	13,071	32
	IV ..	84,388	..	84,388	116
	I—IV ..	240,571	..	240,571	288
Jessore ..	I ..	35,529	..	35,529	18
	II ..	215,042	..	215,042	97
	III ..	1,934	..	1,934	7
	IV ..	156,764	..	156,764	156
	I—IV ..	409,269	..	409,269	278
8 Districts ..	I ..	1,439,801	13,095	1,452,896	782
	II ..	4,465,197	34,506	4,499,703	1,496
	III ..	141,289	3,258	144,547	281
	IV ..	662,810	13,201	676,011	744
	I—IV ..	6,709,097	64,060	6,773,157	3,303

Table XXI (Paragraph 134).

Production of cotton fabrics (square yards) : Totals, averages and percentages.

(A) By classes—8 districts.

Class.	Number of families.	Sarl.	Dhuti.	Lungi.	Gamchha.	Female lungi.	Chadar.	Satranchi.	Mosquito net.	Others.	Total.	Averages.
I ..	763	928,667	11,541	392,487	72,786	9,585	9,908	..	14,378	499	1,439,801	1,887
II ..	1,437	1,230,686	64,609	743,723	482,417	82,627	1,257,757	4,320	591,888	7,675	4,465,197	31,07
III ..	269	18,079	4,849	7,082	65,381	748	1,447	128	40,174	3,401	141,289	525
IV ..	708	318,764	21,711	250,640	28,010	..	20,174	846	11,153	11,512	662,810	936
I—IV ..	3,177	2,496,196	102,710	1,393,932	648,544	92,960	1,289,286	5,294	657,088	23,087	6,709,097	2,112

By Districts—All classes.

District.												
Dacca ..	1,381	1,469,845	55,211	849,813	43,690	..	1,276,114	..	488,526	2,520	4,195,719	2,994
Nadia ..	332	455,262	2,706	175,440	5,672	..	6,818	..	..	..	645,898	1,945
Rangpur ..	93	20,042	..	2,234	68,357	..	..	5,294	..	6,447	102,404	1,101
Bogra ..	238	..	..	1,599	219,846	..	..	..	79,342	5,128	305,915	1,285
Rajshahi ..	164	3,600	50	304	59,071	..	..	..	135,416	..	198,441	1,210
Malda ..	408	135,969	935	330,305	190,077	9,265	4,329	..	..	..	670,880	1,665
Midnapore ..	288	150,700	35,869	586	47,791	..	2,025	..	3,600	..	240,571	836
Jeasore ..	278	260,778	7,939	33,621	14,040	83,695	..	..	204	8,992	409,269	1,472
Total ..	3,177	2,496,196	102,710	1,393,932	648,544	92,960	1,289,286	5,294	657,088	23,087	6,709,097	2,112
Percentage to total cotton fabrics ..	..	37.2	1.5	20.8	9.7	1.4	19.1	.1	9.8	.4	100.0	..

Table XXII (paragraph 134).

Production of Cotton fabric in square yards.

(By each class of each district.)

(Not Printed.)

Table XXIII (paragraph 134).

Production (Silk or other Fabrics) in square yards.

Districts.	Class.	Garad (Silk) fabrics.				F.*	Matka.			F.*	Endi-chadar.	F.*	Total silk.	F.*	Mixed silk and cotton.	F.*	Jute.	F.*	Total non-cotton.	F.*
		Sarl.	Dhuti.	Chadar.	Oth-ers.		Sarl.	Dhuti.	Chadar.											
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
Dacca	I ..	554	..	..	..	1/1M	..	..	..	..	..	..	554	1/1M	..	..	..	..	554	1/1M
	II ..	1,288	..	..	102	3/4M	..	..	..	..	..	..	1,390	3/4M	302	1	..	..	1,692	4/4M
	IV ..	424	..	..	..	1/1M	..	..	..	..	..	..	424	1/1M	..	..	..	..	424	1/1M
	I-IV ..	2,266	..	..	102	5/6M	..	..	..	..	..	..	2,368	5/6M	302	1	..	..	2,670	6/6M
Rangpur	II ..	..	..	..	..	..	..	..	..	..	121	3M	121	3M	..	..	..	..	121	3M
	IV ..	..	..	..	..	..	..	..	..	..	163	4	163	4	..	..	..	..	163	4
	II-IV ..	..	..	..	..	..	..	..	..	..	284	4/3M	284	4/3M	..	..	..	..	284	4/3M
Bogra	III ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	879	8	879	8	
Malda	I ..	6,201	779	323	..	9	8,427	..	2,134	9	..	..	12,541	18	..	..	..	..	12,541	18
	II ..	20,212	2,754	407	..	29	1,668	979	958	11	..	..	26,894	40	5,799	16	..	..	32,693	56
	III ..	..	..	..	..	..	..	..	..	..	..	..	..	..	2,379	8	..	..	2,379	8
	IV ..	10,889	1,208	407	..	29	891	147	72	8	..	..	12,614	32	..	..	..	..	12,614	32
	I-IV ..	36,802	4,741	780	..	67	5,486	1,126	3,164	23	..	..	52,049	90	8,678	24	..	..	60,727	114
8 districts	I ..	6,755	779	323	102	10/1M	3,427	..	2,134	9	..	..	13,095	19/1M	..	..	..	..	13,095	19/1M
	II ..	21,500	2,754	407	..	82/4M	1,668	979	958	11	121	3M	28,405	43/7M	6,101	17	..	..	34,506	60/7M
	III ..	..	..	..	..	..	..	..	..	..	..	..	..	..	2,379	8	379	..	3,258	8
	IV ..	10,813	1,208	407	..	80/1M	891	147	72	8	163	4	13,201	37/1M	..	..	..	..	13,201	37/1M
	I-IV ..	31,068	4,741	780	102	72/6M	5,486	1,126	3,164	23	284	4/3M	54,701	99/9M	8,980	25	379	..	64,060	124/9M
Percentage to total silk	..	71.4	8.6	1.8	0.2	..	10.2	2.1	5.7	..	0.5	..	100	..	..	..	..	..	..	..

*F. columns indicate the number of families weaving particular fabrics, 'M' indicates the number of families weaving both silk and other fabrics, 1/2M thus means 1 family weaving silk fabrics only and two weaving both silk and other fabrics.

CHAPTER XXII.

Share of handloom products in the present demand and supply.

145. **Average and total consumption of cloth.**—The Bombay Mill-owners Association estimated that the average per capita consumption of cloth in India in 1934-35 was 16.3 yards. (Special Tariff Board Report—Page 135.) The Lancashire Indian Cotton Committee estimated the average consumption to be 16.2 and 15.3 yards in 1932-33 and 1934-35 respectively (*vide* Second Annual Report of the Committee—Table 6). In our enquiry, made along with the present survey, we have found that the average per capita consumption in rural Bengal is 15.9 yards (*vide* Table XXVI). Allowing for the slightly large consumption by urban people, the general average may be taken as 16 yards. Adding, for the increase between 1931 and 1936, by estimate, to the 1931 Census population, the total Bengal population now would be about 53 millions. Thus the total approximate consumption of cloth in Bengal is roughly 848 million yards.

146. **Foreign and Indian supply of piece goods in Bengal.**—From the "Annual Statement of Seaborne Trade of British India" (Volume 1, for the year ending 31st March 1935, page 437), the "Account relating to the Inland (Rail and River-Borne) Trade of India," (No. 12 of 1934-35, page 22, etc.), the "Accounts relating to the Coasting Trade and Navigation of British India" (for March 1935, pages 82, 156, 53 and 136) and the "Monthly Statement of Cotton Spinning and Weaving in Indian Mills" (March 1936, page 23) it is found that the following piecegoods, foreign and Indian (excluding Bengal handloom fabrics) are available for consumption in Bengal (in yards).

Table XXIV.

Sources of Cloth Supply in Bengal.

			Yards.
Foreign	.. Overseas ..	..	+292,825,000
	Coastwise ..	..	+1,393,000
	Rail and river	..	-90,141,000
Total Foreign	..	..	+204,077,000
Indian	.. Overseas ..	..	-134,000
	Coastwise ..	..	+196,675,000
	Rail and river	..	+117,922,000
	Bengal mills	..	+148,343,000
Total Indian	..	..	+462,806,000
Total Foreign and Indian	..	..	+666,883,000

147. **Residual demand met by Bengal handloom fabrics.**—Deducting the above from the estimated total consumption of 848 million yards, we get 181,117,000 yards as the residual need which may be said to be met by the Bengal handloom products. If we add to this the

quantity which are transported to and from adjoining provinces, there will likely be a balance in favour of the Bengal products and the total handloom production may, therefore, from these sources of information, be placed roughly at 185 million yards, or 21.8 per cent. of the total consumption, as against 17.5 per cent. of the total demand met by the Bengal Mills.

148. **Supply by Bengal handloom industry.**—We have seen in paragraph 144 that the total production, according to estimates made on the basis of the results of our survey, is 196.60 million square yards, which differs by about 6 per cent. from the above estimate of 185 million yards. The mean estimate of 183.88 million square yards differs from the above by about 1 per cent. only. We can, therefore, safely take the total handloom production in Bengal to be in the region of 185 million yards. If we had data for all the districts, the results of our survey would have probably agreed with the other estimate more closely but even as it is, the agreement is remarkably close.

149. **Comparative value of handloom and mill products.**—Our figures show that the total value of the 6.04 mill yards of cotton fabrics produced by classes I, II and III of weavers (class IV is excluded, because for their fabrics, the wages earned and not the value was mostly shown)—is Rs. 11,01,842 which gives an average price of 5.5 yards to the rupee. The average price of imported piece-goods (vide Account of the Seaborne Trade) is 6.2 yards to the rupee—while that of Indian Mill Products is 6.6 yards to the rupee (vide Report of the Special Tariff Board page 135).

150. **Variation of average prices.**—The average prices given in the above paragraph really mean very little, because the proportion of fabrics of different kinds vary considerably in the imported and Indian mill products and handloom products. In the handloom products also, the variation of average prices of cotton fabrics (taking all varieties together of each class) is remarkable. Following are the overall average yardage per rupee in different districts:—

Table XXV.

Variation of average prices of handloom (cotton) fabrics in different districts.

District.					Yards per rupee. (Width 1 yard.)
Rajshahi	..	..	..	..	10.5
Bogra	..	..	..	..	9.1
Rangpur	..	..	..	..	6.3
Jessore	..	..	..	..	5.7
Dacca	..	..	..	..	5.6
Midnapore	..	..	..	..	5.4
Nadia	..	..	..	..	4.9
Malda	..	..	..	..	3.6
8 districts	..	..	..	..	5.5

151. One notable factor in the above is that the average prices are the lowest in areas which are least important from the point of

view of the weaving industry. The Rangpur prices are somewhat affected by the higher prices of *Sataranchis* while silk and mixed fabrics of Malda and the very high quality Gamchhas account for the lowest yardage in Malda. The Dacca and Nadia figures are nearest the average prices.

152. **Non-Bengal handloom products consumed.**—It may be noted here that besides the mill products, Bengal absorbs a large quantity of the handloom products of other provinces. It has been found in course of the enquiry that a very large quantity of Madras handloom fabrics, specially *Saris*, are imported and sold in Bengal. As yet, the sale is restricted to the towns and principal trade centres, but these articles are acquiring an increasing popularity. Almost all the Calcutta retail sellers stock large quantities of these *Saris* though in the special enquiry conducted in Calcutta, we found only about 110 shops stocking any notable (though not large) quantity of Bengal handloom products. Even in these, the finer products of Dacca, Santipur, Farasdanga, and the "Tangail" *Saris* are only generally kept. The larger shops stock some quantity of silk, Matka and Tussar products of Malda, Murshidabad, Bankura, Birbhum, etc., but the places of these are generally being taken by artificial silk goods which are much cheaper and by which the poorer consumers can satisfy their desire of using showy silk garments. The United Provinces *Satranchis* are widely used in Bengal and it was found that in Rangpur district alone, handloom fabrics worth Rs. 12,000 were imported from Azamgarh (via Mhow Station) in the United Provinces. It would seem, therefore, that the Bengali consumers have no aversion to the use of handloom products as such, and that if decent quality of articles are produced and sold at reasonable prices, there is more than a chance of their having a good market. Incidentally, it may be again stated that while the Bengal handloom products of common varieties are almost always made to the taste of the Muslim consumers, the imported products find a readier market amongst the Hindus.

153. **Principal consuming centres of particular fabrics.**—As for the Bengal handloom products, those produced in Nadia, Dacca and Mymensingh, are sent in large quantities to the districts of Northern Bengal and also of Assam. A comparatively smaller quantity is sent to Santhal Parganas, Chhota Nagpur and some other districts outside Bengal. The *Katari* (mixed Matka and cotton) fabrics of Sahapur (Malda), at one time was sold in large quantities in the areas contiguous to the Persian Gulf and in Turkey and Egypt, through some Bombay merchants. This trade has dwindled considerably and except for some fabrics sent to Nepal, the industry is all but dead. The *Khasida* of Dacca (Muga and Jari embroidered scarfs) at one time had large sales in Turkey, Egypt, and Asia Minor. But this industry is also now ruined, the export trade having decreased from Rs. 4 lakhs in pre-war days to Rs. 25,000 or so, now, purchased mainly by the Arabs. So much has been written already about the fall of the Muslim trade that it would be unnecessary to discuss it here. International trade conditions and attempts of all nations, nowadays, to supply their own needs, have been the principal causes of the ruin of these local industries and there is hardly any chance of their revival in these days of changed fashions.

154. **Important markets and handloom goods sent therefrom.**—Some statistics were taken of the inland trade movements of the handloom fabrics. The details have not yet been analysed to show which are

the principal consuming centres of Bengal products inside and outside Bengal but the following figures, for goods sent from the stations serving some of the principal hats, will be of interest. The figures are roughly for 1936 B.S. (1 year):—

	Weight of products (Rough value Rs. 100 per maund).
(1) JINARDI STATION (Assam-Bengal Railway) (serving, with other stations, Madhabdia hat of Dacca district) to different places of Dacca (4,400 mds.), Rangpur (2,300 mds.), Mymensingh (8,900 mds.), Tippera (600 mds.), Sylhet (700 mds.) Goalpara (700 mds.), Nawgaon (400 mds.), Bogra (1,100 mds.), Cooch-Behar (1,200 mds.) and other places	25,907 mds.
(2) NARSINGDI RAILWAY STATION (Assam-Bengal Railway) (serving Madhabdia hat of Dacca district) to different places of North and East Bengal and to Assam	6,800 mds. by goods and 8,223 mds. by parcel. Total 15,023 mds.
(3) BHANGARCHAR STEAMER STATION (River Steam Navigation Co.), District Dacca	Import of yarn 4,967 mds. and export of hand loom products 6,952 mds.
(4) NARSINGDI STEAMER STATION (River Steam Navigation Co.) Dacca District	Export of handloom products 4,586 mds.
(5) BISHNANDI STEAMER STATION (River Steam Navigation Co.) Exports are to various places of Mymensingh district and of Assam	Export of handloom products 3,624 mds. Import of yarn 11,748 mds.
(6) TARPASSA STATION (India General Navigation and River Steam Navigation Co.'s steamer station in Dacca district) serving, with other stations, Gayali-Mandra Hat in police-station Srinagar of Dacca to Nawgaon (Assam), Chaumohini, Jamurki, Sylhet, Karimganj, Dingabazar, Silchar, Atharabari, Iswarganj, Sunamganj, Noakhali, Baura, Habiganj, Akhaura, Shaestaganj and many other places	6,576 mds. by goods and 1,610 mds. by parcel. Total 8,186 mds.
(7) KUMARKHALI STATION (Eastern Bengal Railway) (serving Kumarkhali hat) to different places of North Bengal and a few places of Central Provinces	14,820 mds.*

*In the week ending 17th May 1936 after the sitting of the hat that was surveyed by us, 95 bundles of hand loom products of roughly 3 maunds each were exported to different stations while 67 bundles of yarn of 5 mds. each were imported for sale in this hat.

155. **Important hats.**—Nearly 60,000 maunds of handloom products are sold annually in the Madhabdia Hat and the average prices of articles sold in each weekly hat is over Rs. 1 lakh. In Gayali-Mandra Hat (police-station Srinagar, district Dacca) the average sale per weekly hat exceeds Rs. 40,000 while Kumarkhali (Nadia) and Howrah hats sell from Rs. 50,000 to Rs. 80,000 worth of handloom fabrics every hat day. These four hats, between them, sell nearly 40 per cent. of the total production of the province.

Table XXVI (Paragraph 145).

Consumption of cloth.

(A)—POPULATION SURVEYED.

Districts.	Number of Families.	Adults (17 years and above.)			Minors (5 to 17 years.)			Infants (upto 5 years.)	Total.
		Males.	Females.	Total.	Males.	Females.	Total.		
Daçca ..	93	..	..	301	..	..	212	54	567
Jessore ..	105	..	..	276	..	..	132	73	481
Midnapore ..	116	..	..	290	..	..	128	68	486
Total ..	314	471	396	867	215	259	472	195	1,534

(B)—CONSUMPTION OF CLOTH.

Fabrics.	By adults (Age 17 and above.)	By minors. (Age 5 to 17).	Total.	
	Sq. yds.	Sq. yds.	Sq. yds.	
Dhuti	7,203	1,656	8,859
Lungi	912	238	1,150
Sari	7,693	2,352	10,045
Female Lungi	278	33	311
Gamcha	849	149	998
Chaddar, etc.	2,082	587	2,669
Others	245	195	440
Total	19,262	5,210	24,472

Average dhuti and lungi per adult male—17.23 square yards.

Average dhuti and lungi per minor male—8.81 square yards.

Average sari and female lungi per adult female—20.22 square yards.

Average sari and female lungi per minor female—9.21 square yards.

Average total consumption per head of Muslims—11.91 square yards.

Average total consumption per head of Hindus—18.04 square yards.

Average total consumption per head—15.9 square yards.

N.B.—Estimated total consumption per head, allowing for the higher yardage for urban people—16.0 square yards.

CHAPTER XXIII.

Dyeing and Designs.

156. **Local dyeing and system thereof.**—It has been said before that foreign dyed yarn is rarely used but that greys are purchased and dyed locally. There are local dyers in most of the more important weaving centres and some yarn dealers also dye yarn. Green, yellow, blue and red are the colours commonly used but pink, black, brown are also found to some extent. Indanthrene dyes are most popular as they give fast colours and this is most commonly used, but sulphur colours, indigo colours and ordinary direct colours are also used in many places. Of late the Haverro Trading Co., Ltd., has been successfully diffusing a knowledge of the system of fast dyeing but some of the dyers, to make extra profit, do not follow the prescribed procedure, and thus turn out loose dyed yarn in some places. Direct colours seldom give fast colours, while sulphur colours and indigo dyeing system give colours which in most cases do not stand the Dhobi or even soap wash.

157. **Dishonesty in Dyeing Business.**—The dyers often sell loose dyed yarn as fast dyed and this is one of the causes why handloom products are becoming unpopular. Persons who buy fabrics produced from such yarn are naturally unwilling to take a risk again of being deceived and though the weaver may sell the fabrics as fast coloured, in perfect good faith, he must lose custom. This practice is growing apace and something must be done to prevent this dishonesty. The persons who practise this deception get several advantages. After yarn is dyed, it becomes easier to pass on yarn of one make as of another or to sell cheaper yarn as of a dearer quality and even yarn of one count as being of another. Thus, besides the profit in dyeing, they can make considerable extra profit. They do not seem to realise that for an immediate gain, they are digging the grave of their own trade day by day. It is difficult to dissuade them by mere propaganda and some more stringent action will be necessary.

158. **System and costs of dyeing.**—The different systems of dyeing, with normal cost in each of the different processes, are noted below. For the Indanthrene colours, we are indebted to the Inspector-demonstrator of the Haverro Trading Co., Ltd., at Pabna, for the valuable information given by him to enable us to check the results of our own enquiries.

Expenses of dyeing 10 lbs. of yarn.

- (i) *Indanthrene colours* (Green, Blue, Brown, Golden-orange, Yellow, Violet and Magenta are generally in use)—
- Green.*—Quarter shade, with 5 tolas of dye—Rs. 2.
Blue.—Quarter shade, with 5 tolas of dye—Re. 1-12.
Golden orange and Brown.—(Mixed to give *Muga* shade)—Re. 1-12.
- (ii) *Naphthal colours*—
- Red.*—Full shade—
- (a) With prepared salt and “ β -Naphthal”—Re. 1-4.
 (b) With the “base” and “ β -Naphthal”—As. 12.
- N.B.*—(b) Does not give colour as fast as (a).
Chocolate or Yellow—Re. 1-8.

(iii) *Sulphur black* (fast to soap wash)—As. 8.

(iv) *Indigo vat* (fast to dhobi wash)—Re. 1.

(v) *Direct colours*—

Congo Red (loose)—As. 4.

Crysophenine (Yellow, loose)—As. 4.

159. **Designs.**—The question of designs is too wide to be dealt with in details. The weavers in different areas prepare cloths of different designs. Designs, of course, are used mostly on the border and body of saris. The lungis are generally of single colour plain or multicolour check pattern, and in these, designs have very little part. Of late, printed designs on cotton lungis are being introduced from Madras and Burma, but it is not likely that in cotton goods, it will appeal to the general body of consumers. Such designs may be introduced in the child-lungis of short width, and then, these may find a better market. In saris, the designs now in use for the common fabrics, are rather clumsy and too showy to appeal to persons having even a slight sense of decency. The Muslim weavers generally seem to think that, the more the cloth is filled by floral and other designs, the greater will these be liked, but this, of course, is not so. Deep colours, except red, are not now liked even by common people, and when to these are added a number of one or one-and-a-half inch wide stripes with floral and other ornamentation between alternate stripes, in the body of the cloth, it becomes too childishly showy to be liked by adult women. It is a matter for the experts to say how the designs can be improved, but it has been found, by questioning the purchasers at hats and in villages, that the existing clumsiness of designs is a factor which makes these articles unpopular amongst decent people.

160. **Better designs in finer fabrics.**—As regards the finer fabrics, the position is not so hopeless. We have collected 40 specimen designs in multicolour drawing with the help of a promising artist Mr. Haraprosad Chakravorty (which it has not been possible to print owing to prohibitive cost of block printing) from which it appears that some really nice designs are prepared by the more advanced weavers of Dacca, Abdullapur and Nadia. But some others in the collection, are so thickly covered by designs in the body that they would be totally unacceptable to modern taste. Hitherto, the weavers do not seem to have tried to follow the trends of changing taste or to meet the local taste. It would be necessary to make them more alive to this aspect of their shortcoming.

161. **Embroidered and woven designs.**—It should be noted that the designs in finer fabrics are not always produced from the looms with dobbies, Dangis or Jacquards. In Dacca, these designs are in many cases woven by hand with metallic thread or Muga or ordinary mercerised cotton in the body of the cloth, with the help of a sort of needle, called *Kanta*. Such work requires considerable skill and time and the famous *Jamdani Saris*, *Khasida* and similar works are of this nature. This type of designs are really done as embroidery work and not as weaving.

162. **Designs in other fabrics.**—Of the plainer fabrics, the mosquito curtains and chadars are prepared in check or plain designs and if the designs were made more attractive but not gorgeously stylish, they might command wider sale. Twisted yarn, if used in larger quantities for mosquito curtains, would certainly increase their sale to a great extent.

CHAPTER XXIV.

Present systems of Marketing.

163. **District sales.**—There are, at present, two distinct systems in which weaving products are marketed. Some weavers sell their products in the nearest handloom product markets on the weekly or bi-weekly market days. (A list of such markets, with approximate attendance in each, in and about the units surveyed, is given in Appendix E.) The independent weavers alone, of course, can follow this system. In such case, the weavers can sell the products to the consumers direct or to trader-mahajans. Generally the weavers try to sell to the consumer direct as this always procures them a better price but when, as often happens, he does not find a consumer-purchaser and also when his yarn dealer is also a trader in finished products, he has to sell to the Mahajan. Where the yarn-dealer is also a trader in cloth, the cloth is nearly always undervalued on some pretext or other and secondly, the weaver has to take the next supply of yarn from that dealer at whatever price the latter may exact. In effect, in this position the weaver is really a wage-earner with this difference that while the wage-earner earns a wage of so much per pair of cloth, fixed beforehand, and has thus a known return for his labour, the other has to depend upon the good will of the dealer as to what wages he would get.

164. **Sales of wage-earners' products.**—The other class, the wage-earners, have their goods generally taken from them by the Mahajan who advances the yarn. These Mahajans pay a fixed wage for each piece or pair as making charges and themselves take the risks for the losses or profits caused by the fluctuations of the market. They also prescribe the quality, quantity and designs of the fabrics to be woven. In this system, the weaver knows what he will get. This, therefore, is a sort of factory system with this difference that in factories the owner provides the looms and accommodation where weavers are to work while in this, the weavers work in their own house on their own looms. In both cases, fixed wages are given on the basis of production and the Mahajan takes the responsibility for selling the products.

165. **Retail sale to consumers.**—It has been found that the largest producing centres are not also the largest consuming centres. The Dacca and Nadia fabrics are taken for sale to Assam and North Bengal districts in large quantities. In our market surveys, we found a very insignificant proportion of the products of these big centres being sold to local consumers. A small proportion of these fabrics are purchased from weavers or bigger Mahajans, by small retailers, at the big handloom product markets, and sold to consumers in smaller ordinary markets in the interior of the districts. In centres producing articles in small quantities, such as Rajshahi, Rangpur and Bogra, about a third of the total production is sold by weavers directly to consumers and the rest, also to local consumers mostly, by petty retail traders who purchase from weavers.

166. The bigger Mahajans who purchase from weavers, generally send these to retail sellers or their own agents or other shopkeepers in other districts, for retail sale to consumers. It has not been possible to trace the prices of fabrics, from when they leave weavers' hands in one place to when they reach the consumers in another distant place, but after meeting the expenses of transport from and to interior parts of districts, the retailer or the exporter Mahajan does not appear to be ab

to retain much of a margin. Besides, such articles are not sent in large quantities so as to keep down the cost of transport.

167. **Factors affecting price.**—When weavers can sell independently to consumers and Mahajans, their getting a fair price depends upon—

- (1) The facility of communication enjoyed by the centre of sale, (as the cost of transport affects the eventual selling price of such products and besides, the number of purchaser-Mahajans operating in the centre depend largely on this factor.)
- (2) The number of consumers, Mahajans or retailers who come to purchase commodities in the particular centre or on the particular hat day.

The quality and other factors count little. As there is no standardisation of goods and each weaver's production is of different quality, the bigger purchasers find very little time to closely examine the respective qualities of the small merchandise of each weaver.

168. **Popularity of fabrics.**—In point of popularity, the coarse saris and lungis of police-stations Dohar and Srinagar in Dacca, and the mosquito curtains and chadars of police-station Rupganj in Dacca seem to have the largest demand. The female lungis of Jessore, chadars of Kumarkhali in Nadia, gamchhas of Malda also have a fair sale. In the Howrah hat, is sold a large number of gamchhas and finer dhutis and saris of Santipur (Nadia) and Midnapore.

169. **Important markets.**—Following are the most important markets for sale of handloom products, arranged in order of importance.—

(1) *Madhabdia Hat* (also called "Babur hat").—In Narayanganj subdivision of Dacca district. It is 7 miles from Jinardi station (Assam-Bengal Railway). Attendance—17,000. Goods sold worth Rs. 125,000 per hat. Days and hours of sitting—Mondays from 7 a.m. to 5 p.m.

(2) *Kumarkhali Hat.*—In Kushtia subdivision of Nadia district $\frac{1}{2}$ mile from the Kumarkhali railway station. Attendance—10,000. Goods sold worth Rs. 55,000. Days and hours of sitting—Saturday from 7 a.m. to 4 p.m.

(3) *Howrah Hat.*—In Howrah town. Less than a mile from the railway station. Attendance—8,000. Goods sold worth Rs. 50,000. Days and hours of sitting—Tuesdays from 7 a.m. to 3 p.m.

(4) *Gayali-Mandra Hat.*—In the Munshiganj subdivision of Dacca district. It is 6 miles from Tarpasa steamer station (India General Navigation and River Steam Navigation Company). Attendance—10,000. Goods sold worth Rs. 40,000 per hat. Days and hours of sitting—Tuesdays from 8 a.m. to 6 p.m.

(5) *Sibrampur Hat.*—In Munshiganj subdivision of Dacca district. 12 miles from Mainat steamer station (India General Navigation and River Steam Navigation Company). Attendance—5,000. Goods sold worth Rs. 18,000. Days and hours of sitting—Saturdays from 9 a.m. to 6 p.m.

(6) *Nawgaon Hat.*—In Nawgaon town of Rajshahi district. 4 miles from Santahar station (Eastern Bengal Railway). Attendance—8,000. Goods sold worth Rs. 16,000 per hat. Days and hours of sitting—Wednesdays from 11 a.m. to 6-30 p.m.

CHAPTER XXV.

Prices, Costs and Profits.

170. The profit in weaving depends on a large number of factors, the more important of which are (1) price of yarn, (2) demand of fabric, (3) nature of article, (4) time required in weaving, (5) nature of appliances used, (6) marketing facility, and (7) competition. Some of these factors are independent of the others while others are interdependent but each has a part to play in the earning of the profit. I have discussed before the present position in respect of most of the above factors. The present level of prices and profits, on the basis of the other existing conditions may now be discussed.

171. It has been stated before that the hand-loom workers as yet turn out very small quantities of shirtings and similar goods, coarse *dhuties* and coarse uncoloured *saris*. These are commodities in which they have wisely left the market to the mills—and mills can give more acceptable and apparently cheaper (apparently, because they are mostly not more durable) articles in these lines. The *chadars*, mosquito curtains, *gamchas* and coarse coloured *saris* are produced from lower counts of yarn, spun in India from an inferior quality of cotton and this yarn the power-looms cannot generally use. It is for this reason that the hand-loom industry has yet a scope in certain lines.

172. **Value of fabrics Produced and total profits earned.**—As regards the cost, value and profit, it appears (Tables B and C Series) that the weavers under survey produce fabrics of the value of Rs. 11,02,842 for which they use materials worth Rs. 8,06,300. The difference of Rs. 2,96,542 thus represents their profit. Using the multiplier for the province, 29.3 we thus find that the hand-loom industry turns out goods worth Rs. 32.31 millions and gives a profit of about Rs. 8.68 millions.

173. **Profit in different commodities.**—Coming to details, Table XXVII gives the average profits per 10 sq. yds. and per loom-month in different commodities. The profit per loom-month gives the real measure of weavers' earning, and not the profit per 10 sq. yds., as the time element (shown in the penultimate column of the table) is involved therein. The *chadar*, for instance, gives a profit of only Re. 0.32 per 10 sq. yds. but as it takes only 0.03 loom-month to weave 10 sq. yds. the profit earned per month is Rs. 12.41, the highest. On the other hand, *dhuti*, which gives highest profit (Rs. 1.08) per 10 sq. yds. (the finer counts are only woven) gives only Rs. 5.23 as monthly earning as it takes 0.21 loom-months to weave 10 sq. yds. The *chadar* production gives higher return also because most of it is produced in semi-automatic looms of Kanchan union in Dacca. These sell cheap too, 5.2 yds. per rupee, the third cheapest commodity produced in hand-looms. The margin of profit is low but the unusually high out-turn and facility of marketing, owing to the proximity of the largest hand-loom fabric market (Madhabdia *hat*), combine in the case of this article, to give the highest monthly return. The normal return of Rs. 9.04 per loom-month is obtained from the *sari* (coloured and coarse, mostly) and next best is from the coloured coarse *lungis*—in which there is not much mill or other competition. *Gamchas* give the smallest profit, but these are produced mostly by families who follow weaving as subsidiary occupation and who sell the fabrics for whatever profit they get, generally in local markets. Where *gamchas* are produced for

distant markets (as in Malda, Hooghly, etc., whence good *gumchas* are brought for sale in Howrah *hat*) the profit is somewhat higher—about Rs. 6.5 per loom-month. The overall average profit is Rs. 8.94 per loom-month, which compare very unfavourably with the earnings of mill workers, which vary between Rs. 16 and Rs. 25 generally.

174. **Profit variation in each class.**—Within each class of fabric, the profit does not vary much but the 41" wide *sari* class gives the highest, Rs. 11.33 per loom-month as against Rs. 8.81 in those with 22" to 38" width. The 44", 45" and 48" wide *saris* are made in finer counts only and are mostly luxury products, which are so varying in nature and quality that profit figures cannot be given without a more detailed analysis of the data. The lower profit in 22"—38" class is due to the fact that it is only the poorest section of the people or the children who wear *saris* of such width. The better class of rural people use the 41" wide variety, while only those in affluent condition—and thus fewer in number—wear 42" and more wide varieties. In *lungi* classes the profits do not appreciably vary.

175. **Profits in silk and matka.**—The silk and matka fabrics give more profit per sq. yd. but much less per loom-month—as longer time is taken to weave them and the cheap Japanese and other silk products and artificial silk fabrics have practically ruined the market for silk and matka products. The latter may have some chance if decent suitings, etc., are introduced instead of *saris* and *chadars* only. Silk has hardly any chance for wider market.

176. **Mahajans' profits.**—Table XXVIII gives the profit statement in respect of fabrics produced by Mahajans who advance yarn, pay wages and conduct business themselves. The gross profit in this Table represents the difference between value of fabrics and cost of materials while the net profit means gross profit *minus* the wages paid by the Mahajans to weavers, to weave the fabrics. The gross profit here is shown for purposes of comparison with the other weavers' profit and is remarkable reading. Per loom-month, the Mahajan, and the ordinary weaver earn as follows:—

	Mahajan		Ordinary weaver.	
	Rs.		Rs.	
Sari	12.1		9.04	
Female Lungi	11.1		7.02	
Chadar	22.2		12.41	
All Fabrics	12.4		8.94	

177. As the Mahajans generally deal in more than one commodity, it has been rather difficult to get the above information correctly for each commodity but the fact that the overall average profit of the Mahajan per loom-month is Rs. 12.9 as against 8.94 for the ordinary weavers, shows clearly that, when yarn is purchased in larger quantities, and the products sold at fair prices at existing market rates (without being cheated in either transaction by the retailers and other middle men), the margin of profit can, for the weaver, be increased by nearly 30 per cent. The group system of work which I am recommending is likely to bring this additional profit to the weaver. In articles which are produced for local markets only, by people who work at the looms merely to supplement their income and not for earning a maintenance (and who thus sell at any margin of profit), the group system of work is not likely to give much better return.

TABLE XXVII.

(A) Profit from Production of Independent Weavers.

Articles	Production (square yards).	Value.	Cost of materials.	Net profit.	Total Loom-months.	Profit per Loom-month.	Profit per 10 square yards.	Loom-months per 10 square yards.	Square yards per rupee.
		Rs.	Rs.	Rs.		Rs.	Rs.		
COTTON.									
Sari	778,988	1,71,682	1,12,952	58,730	6,497	9-04	0-75	0-08	4-5
Dhuti	24,413	6,287	3,650	2,637	504	5-23	1-08	0-21	3-9
Lungi	656,723	1,41,382	1,00,231	41,151	4,816	8-54	0-63	0-07	4-6
Female Lungis ..	148,704	32,682	23,699	8,983	1,280	7-02	0-60	0-09	4-6
Mosquito Curtain ..	143,507	12,205	8,294	3,911	842	4-65	0-27	0-06	11-7
Gamcha	277,445	35,351	24,122	11,229	2,608	4-31	0-42	0-09	6-8
Chaddar	22,360	4,293	3,573	720	58	12-41	0-32	0-03	5-2
Total of above ..	2,052,140	403,882	2,76,521	1,27,361	16,605	7-67	0-62	0-08	5-1
Total Cotton ..	6,046,287	11,07,242	8,05,296	3,01,946	33,786	8-94	0-50	0-06	5-5
ORDINARY SILK.									
Sari	7,173	6,224	4,576	1,648	248	6-65	2-31	0-35	1-1
Dhuti	586	408	300	72	12	6-00	1-23	0-20	1-4
Matka—									
Sari	3,371	2,934	2,242	692	108	6-41	2-05	0-32	1-1
Dhuti	573	516	419	97	33	2-94	1-69	0-58	1-1
Chaddar	1,472	1,557	1,128	429	72	5-96	2-91	0-49	0-95
Total of above Silk Fabrics ..	13,175	11,639	8,665	2,938	473	6-21	2-24	0-36	1-13

(B) Profit variation in different classes of the same fabrics.

(Different widths only are shown: in one union only.)

Cotton Sari—									
22"—38" ..	40,125	9,900	6,411	3,489	396	8-81	0-87	0-10	4-1
40"	164,764	88,123	25,697	12,426	1,206	10-31	0-75	0-07	4-3
41"	3,036	1,896	1,171	725	64	11-33	0-90	0-08	4-3
42"	12,086	3,033	1,858	1,175	116	10-13	0-97	0-10	4-0
22"—42" ..	225,061	52,952	35,137	17,815	1,782	10-00	0-79	0-08	4-25
Cotton Lungi—									
22"—38" ..	66,960	15,755	10,796	4,959	465	10-66	0-74	0-07	4-3
40"	66,780	15,943	10,889	5,054	477	10-60	0-76	0-07	4-2
22"—40" ..	133,740	31,698	21,685	10,013	942	10-63	0-75	0-07	4-2

TABLE XXVIII.

Mahajans' Profit.

Commodity.	Production.	Value.	Cost of materials.	Wages paid.	Gross profit.	Loom-months.	Net profit.	Profit per loom-month.		Profit per 10 square yards.		Loom-months per 10 square yards.	Square yards per rupee.
								Gross.	Net.	Gross.	Net.		
		Rs.	Rs.	Rs.	Rs.		Rs.						
(1) Cotton Sari	34,898	14,307	6,588	3,700	7,719	640	4,019	12·1	6·3	2·2	1·2	0·19	2·4
(2) Female Lungi	6,400	1,340	940	180	400	36	220	11·1	6·1	0·62	0·34	0·06	4·8
(3) Chaddar	50,288	9,854	8,433	413	1,421	64	1,008	22·2	15·7	0·28	0·20	0·01	5·1
Total of above	91,586	25,501	15,961	4,293	9,540	740	5,247	12·9	7·1	1·40	0·57	0·08	3·6
(4) Silk Sari	8,236	7,470	5,289	899	2,181	286	1,282	7·6	4·5	2·65	1·56	0·34	1·1
(5) Manka Chaddar	591	590	442	45	148	25	103	5·9	4·1	2·51	1·70	0·42	1·0

CHAPTER XXVI,

The influence of the activities of the Department of Industries on the Hand-loom Weaving Industry.

178. **Weaving schools.**—Government activities in the sphere of hand-loom weaving industry began in 1911 when the first district weaving school was started in Bankura. That was followed by the school in Malda in 1914, in Pabna in 1915, in Tangail (Mymensingh) in 1917, in Begumganj of Noakhali in 1920, in Chittagong in 1921, in Birbhum and Khulna in 1926 and the last one in Dacca in 1929. These schools trained 2,453 students (out of the 3,167 admitted) and introduced nearly 2,400 improved appliances up to end of 1934-35. 1,887 of the students of these schools adopted weaving as occupation. In course of our enquiry, we have come across a number of such students and though all are not enjoying the same advantages, they are doing, on the whole, much better than the ordinary weavers. In addition to the above, 25 peripatetic schools are now working in different districts of the province. This very useful organisation was first started in 1919 with five schools. These schools go round the important weaving centres, train—mostly the weavers and their children in the improved methods of work and popularise improved appliances. These schools have up to now worked in nearly 200 different centres of the province and have introduced over 10,000 improved appliances.

179. **Aided schools.**—In addition, the Department of Industries assists by grants, etc., 24 schools imparting education in weaving of different kinds of fabrics. The Serampore Weaving Institute gives expert guidance and assistance to all the district schools, the 25 peripatetic schools and the aided schools, besides doing reasearch work in weaving, dyeing and other branches of the industry and giving a complete course of training to students in weaving technology.

180. **Other services of the department.**—Important as it may seem, the work above described represents only a small part of the contribution of the department towards the development of the weaving industry in the province. The "drive" which the brisk activities of the department brought into the industry, the new hope, the knowledge of better methods and appliances as also the introduction of new varieties of fabrics (which widened the field for the industry) are amongst the more important contributions of the department towards the improvement of the industry and the value of these can hardly be described by numbers. The effect that we find in some regions is remarkable. In Kanchan Union (Dacca district) the use of improved looms has caused the average productive capacity to increase by 200 per cent. at least and possibly more. Though there has been a steady decline in the number of throw shuttle looms (the fly-shuttle variety popularised by the department has not decreased) the improved appliances and methods of work introduced by the department have caused in there being an increase in the total output, as has been shown in Chapters VIII and XXII (also Table VI). Weavers are now turning out new varieties of fabrics, new designs and improved dyeing processes are now well known. The peripatetic schools in particular, have kept the rural weavers to some degree in touch with modern tastes and needs. The "group system" of work, which has been found more extensively in Pabna (not under report) and a variation of which I am

advocating, has been a more or less direct result of the training in weaving organisation propagated by the department. Numerous factors, the financial handicap being the most important, have restricted the operation of the department, otherwise the improvement would have been more marked.

181. **Manufacture of improved appliances.**—Another sphere in which the department has done work of lasting benefit is that of the manufacture of improved appliances—Jacquards, Dobbies, etc., in this province. The imported appliances cost such a lot before that few weavers could afford to purchase them. Several factories (in Baranagar area) have, under the patronage and encouragement of the department, started business and sold several lakhs of rupees worth of appliances during the last decade. They have brought down the price level and a continuance of this policy would cause improved parts and appliances being easily and cheaply available in all parts of the province.

182. **Weaving Mills as objective of department—Time not ripe—Reasons.**—Paragraph 3 of the department's annual report of 1934-35 states that it is the object of the department to start through its *Bhadralok* students small (hand-loom) factories, employing hand-loom weavers *in the first instance* (*Italics* here and below, ours) and gradually to introduce power-driven machinery, some of which may develop, in course of time, into large organised factories in mufasil areas and *under rural conditions*:—“There is no reason why Bengal's cottage weavers should not be employed in the modern factory industry and *housed* in reasonable proximity of these factories”. I would submit that the time has not come when we can or ought to adopt this as our objective. For one thing, labourers working in “large organised factories” can seldom be “housed” under “rural conditions,” though they may live in rural areas. The congestion of factory life, the vices and risks, accidents, etc., which a close association of a large number of needy people of all moral spheres bring in its train, can never be eliminated from factory life, however, good the housing conditions may be. But this is a comparatively unimportant factor.

183. **Other reasons.**—This policy could be followed if we could prepare ourselves to launch a programme of extensive road making, irrigation and other engineering projects, start factories for producing other necessities of life in large numbers and in similar other undertakings, create the need for more workers. In short, if and when we are in a position to industrialise our province on modern lines in all respects and not merely for cloth supply, such an objective would be not only desirable, but necessary. But when we are confronted with realities, particularly with the tendency of financiers to lock up capital rather than allow it a free movement, such objective cannot, perhaps, do us any good. In the present state of things, we can't hope to give work to the agricultural and other workers who have surplus time and to the educated and semi-educated *Bhadralok* class who are without occupation. This in itself is gradually becoming an alarming problem. The “Report” says in one place, that, the weavers should “in the first instance” be employed in small factories but they will be gradually replaced as “power” is introduced. At present, about 15,000 mill workers in Bengal mills turn out 147 millions yards of fabrics. Even supposing that the entire 848 million yards of cloth requirement of

Bengal, is met by factories to be established in Bengal, which is hardly likely, these will require only 90,000 workers in all. What, then, is going to happen to the remaining 100,000 workers who now earn their livelihood by weaving? The report itself says that this cottage industry employs more workers than all the cotton and jute mills of Bengal put together. This being so, and agricultural occupations being already overcrowded, what alternative occupation can we possibly offer to the weavers who will not be absorbed by the mills? Untill we can find a solution of this problem, it would, in my humble opinion, not be safe to adopt the objective as visualised by the department.

184. The social and psychological factors also do not much encourage the prospect of mill industry absorbing many Bengalis. I have seen some of the cotton mills of Bengal. The Dhakeswari and Mohini Mills do employ a large number of Bengali workers no doubt, but the workers do not find this work at all congenial to their life and habits. Bengalees are home-loving people by habit and temperament. Outside home-environments, most of them seem to find themselves lost. This may appear rather peculiar but to whatever occupation we turn our eyes, this will, perhaps, be found to be the outstanding reason why Bengalees are losing ground. Had it not been so, we would not have found so many non-Bengalee workers in the mills along the Hooghly river. I might, perhaps, go further and say that the Bengalees as a class, excel in individualistic work done in home environments. If this reading of their position is correct, I think factory conditions will not much appeal to or suit them.

185. **Bengal's position does not warrant a hope of success in small factory system.**—An increase in the Bengal mill production by increasing the number of mills would not also be acceptable on the analogy of the improvement in Japan, England and other industrialised countries. England, for instance, with a total population smaller than Bengal, has to serve a world-wide market. Japan has China, Korea, etc., to sell her goods in. In India and in Bengal, Japan is only being able to undersell the Indian goods by the help of their Government in different ways. In Bengal's economic position, financial help from Government can hardly be expected to be available to the extent to which it is possible in other countries. Besides, Japan has capital which we have not and we will have to borrow capital for these purposes. It is not likely that we shall adopt a policy of devaluation of money. In the geographical compactness, Japan has another advantage for supplying cheap electric power which also will not be available for Indian rural factories working at long distances. Power machinery whether electric or other type, for individual small factories would increase cost of production. All these factors operate to make Bengal conditions so very different from the Japanese and Continental conditions that it would be difficult, in the near future, to develop the industry in organised factory lines with economic benefit to the province, in case of any over production occasioned by the employment of all the present weavers in the industry. The subject is so difficult that it is impossible to examine it from all points of view in a report like this. I have only indicated some of the factors which might be taken into consideration when the policy of work is reviewed.

186. **Trained Bhadrak as guide for and not rivals of weavers.**—With the other policy of the department, viz., that the *Bhadrak*

youths, after their training, will carry their knowledge of improved technique, modern taste, better appliances, etc., to the rural weavers, whom they will organise and instruct; that with their education, they will keep the weavers in touch with technical and economic changes of the position of the industry, with new tastes, correct information about market demands and possibilities, and that they will thus keep on a continuous struggle for the betterment of the industry; the trend of our experience of the needs of the industry is in complete agreement. As I have stated in the chapter on "Expansion or consolidation" in Part IV of this report, we do not certainly want more weavers in the field just yet. We should now aim at making the industry more paying, its products more popular and the present workers well-equipped with modern appliances, methods and principles of work.

187. **Other fabrics.**—The recent attempts of the department to popularise jute weaving (some results whereof we have seen in Bogra), the coir weaving and other similar branches of weaving industry are likely to give very valuable economic results. The jute weaving, specially, if pushed on with vigour, is sure to open up an hitherto unexploited line which, with the abundance of raw materials at their doors, the weavers can make a very profitable use of. The department's help in reviving the silk industry has, I am afraid, not much chance of a success with the growing influx of cheap and nicer looking artificial silk fabrics. But in certain lines and in luxury products, the silk, *matka* and *tassar* may have a restricted market.

187A. **Artificial silk weaving.**—Except a little quantity used for borders, etc., in Mymensingh and Pabna, we have not found any weaving in artificial silk and have thus had no experience or data to examine its possibilities as a new line for our hand-loom industry. But it would be worth while for the Department of Industries to examine this matter further.

CHAPTER XXVII.

The Co-operative Movement.

188. **The Weavers' Co-operative societies.**—The history of co-operative movement amongst the weavers is a melancholy reading. There were, in 1935, 4 limited and 321 unlimited liability weavers' societies and the Department of Co-operative Societies (Report for the year 1934-35) has no good word to say for practically any of them. There were altogether 5,908 members in these societies, less than 20 per society on the average. Of these, Dacca had 1,364 with 91 societies, Nadia 213 with 15 societies, Jessore 36 with 2 societies, Rajshahi 247 with 19 societies, Bogra 320 with 19 societies, and Malda 15 with 1 society. Of the Industrial unions—those at Calcutta (the Provincial Society), Bankura, Dacca, Noagaon, Chittagong and Chowmohini—are all in a bad way (*vide* paragraph 53 of the Annual Report for 1934-35) and the six societies which sold goods to members and the four which purchased members' products did a total business of a little over Rs. 6,100 except for the Khulna "Limited Liability" society, which sold goods worth Rs. 44,487.

189. **Why the societies were not more successful.**—I had little opportunity to examine the internal working of those societies in detail

but took the opportunity of studying the weavers' mentality in relation to these societies—at Naogaon, Noakhali, Bogra and Dacca. The reports of Inspectors who made more detailed enquiries in the matter have also furnished valuable information. The weavers round about Naogaon, where co-operative work has been done for many years, were found definitely antagonistic to the movement while in other places they were rather apathetic. The co-operative workers in these areas started in most cases, by promising much but achieved little. The weavers, who braved the wrath of the Mahajans to join the movement, found themselves in difficulty before long. The early workers in the field, in their zeal to popularise the movement, gave credit even where this was not really necessary, advanced yarn and money for the purchase of improved looms, etc., when the ground (markets for the products, etc.), had not been prepared and the result of all this was that the weavers could not earn enough to repay the loans and interest and the instalments of the price of implements which had been given them and when they produced more articles these found no market. This again resulted in their having to sell at sacrifice prices and thus becoming defaulters to the society and then the societies had to take strong action. The expenses of management were comparatively high in many places and yarn was sold through the society at prices higher than those charged by yarn dealers. Favouritism and dishonesty of some of the officials of the societies—who were subjected to few and far between inspections and supervision by the understaffed department, accelerated the ruin of these societies, and on the whole, it must be admitted that so far as weaving societies are concerned, the first attempt of bringing the weavers under co-operative control has met with no success.

189A. Co-operative Societies as credit and sale agencies—Experience in other provinces not hopeful.—In respect of the functions of these societies as credit societies, their risks were invariably greater than those of agricultural credit societies. As purchasing and selling agents for and on behalf of their members, these institutions met with no better success. The same has been the experience in most of the other provinces in India as we find from the proceedings of the sixth and seventh Industrial Conferences of Provincial Representatives held under the auspices of the Government of India. Speaking in a general way and primarily on the basis of the reports of the co-operative department itself on the working of these societies from year to year, I am constrained to submit that I do not visualise a very good prospect for successful co-operative movement amongst the weavers, on existing lines, in the near future.

189B. Principle to be used in modified form.—I must guard against being understood to say that I want to discredit the movement in any way. None is more alive to the possibilities of the co-operative movement—and in fact I am myself going to recommend a modified sort of private co-operative movement. I only mean to say that from my limited experience, obtained first hand and through the workers during this survey, I have gathered the impression that a great deal of ground and organisation work will be necessary before the co-operative movement can be worked with success. I shall discuss the point further in connection with the recommendations I am going to submit to the Board.

(*Note*—The detailed reports about co-operative movements, received from workers have not yet been studied in details. No tables in the subject are, therefore, attached.)

Part IV

Conclusions and Recommendations: Reasons, Objects and Probable Effects thereof.

CHAPTER XXVIII.

The principles and lines of recommendations.

190. **Improvement of industry—What is meant.**—Improvement of the Hand-loom Weaving Industry has three aspects—

- (1) To arrange for the weavers getting an increased though reasonable economic return from the occupation.
- (2) To arrange for more workers being provided in the occupation.
- (3) Improving the quality and increasing the output of and demand for the fabrics.

These aspects are more or less interdependent. In the following chapters, I have attempted to deal with them separately and in relation to each other. The question of improvement of this industry has engaged the attention of the Government of India for some time, and numerous schemes were suggested and discussed in the Sixth and Seventh Industrial Conferences held under the auspices of the Government of India. I have not the time and space here to examine these schemes, but in formulating my suggestions to the Board, I have naturally studied them with reference to the results of our survey and the condition of the industry in this province. My indebtedness to these schemes is great, and though I may not have followed the scheme of any province, I got much of my ideas of what would suit this province, from them. I am also indebted to the very valuable ideas and information contained in the booklets of Rai B. B. Mukherji Bahadur, Director of Land Records, Bengal, Mr. J. K. Mazumder, M.Sc., B.C.S., Mr. N. N. Mukherji and Mr. J. N. Gupta, I.C.S.

190A. **Summary of suggestions.**—It may be said at the outset, that my suggestions are based on the assumption which in its turn is based on my belief, acquired in course of this survey, that hand-loom industry has a future even in these days of mass production. I have indicated three lines of activities, which may be briefly summarised as follows:—

(1) **Direct local activities.**—Organising the weavers in groups (for work in co-operative system, though not under the co-operative laws in the first stages) through paid Government Agency, and by that means obtaining a proper distribution of the output according to market demands, standardisation of the products and the opening up of new lines of work.

(2) **Indirect local activities.**—(a) Assisting the sale of hand-loom products through subsidised stores, which will mainly try to obtain the custom of local consumers and pass on information about tastes and demands to producers.

(b) To influence shop-keepers through local officers and others to keep stocks and push the sale of hand-loom products.

(c) To purchase hand-loom products for use in public offices.

(d) To supply more costly but necessary improved appliances to weavers on hire purchase system.

(e) To supply information about tastes, demands, markets, fashions, designs and to give technical advice and assistance through officers stationed in weaving areas.

(3) **Other activities.**—(a) Attempting the establishment of spinning mills for supplying cheaper yarn and incidentally providing employment to some educated and semi-educated Bhadrak youths.

(b) Establishing (or subsidising the establishment of) small calendering machines in important weaving centres.

190B. There are some other minor suggestions also of which details will be found in proper places. I have not discussed problems of tariffs, as being beyond the scope of the local Government. I have not also discussed the question of reservation of production of certain commodities for mills and hand-loom workers, as such a course seems at present impracticable. The schemes suggested have been formulated with a view to the possibility of their being put into immediate execution, at a cost within the limit of the present provincial allotments of funds (from Government of India grant and otherwise) for assisting the industry. It would, of course, be for the Sub-Committee and the Board to decide how far these are workable and acceptable.

191. I may add further that my suggestions are, perhaps, more in line with the present policy of the Department of Industries than they would have been before 1928. The department which, in the days of War and Post-war boom in capital and enterprise, was intended to guide the modern industrial enterprises on sound lines of modern scientific development, has now to work for keeping old type cottage industries alive, by introducing as much new ideas and mechanical and other improvements in them as possible, as the industrial enthusiasm is all but dead. I can do no better than quote from the latest report of the Director of Industries, to explain the extent and significance of this change of policy and its reasons and probable effects:

“The main features of the department’s organization and functions in developing industries were determined by the Indian Industrial Commission during the closing years of the Great War. The demand for manufactured products of all kinds, both of internal and external origin, at that time, exceeded all immediate possibilities of satisfaction. An urgent demand and ready money price was available for a wide range of commodities, including a large variety new to the manufacturing economy of India. Hence the possibilities of development of industries were much in the public eye, and the financial resources available for floating industrial concerns appeared to be almost inexhaustible. The purpose of the Department of Industries was to guide such development on sound lines, as might be possible within the capacity and interest of Government: in other words, it was to mobilize information regarding the availability of raw materials for industrial purposes, whether agricultural, horticultural or mineral; to institute special programmes of research and to give the required technical advice, and to organize, in co-operation with industrial management, the training of personnel, both labour and executive, as would be required by such striking developments. The year 1920, however, saw a fundamental change in these conditions—a change which took place

before the department had a chance to function on the lines intended by its promoters. The significance of this change was also apparent to a very limited number of people. It was about this time that the world of commerce and industry passed from what we might call an industrial creative economy to a money economy, i.e., from a state in which there was an unsatisfied demand for commodities, to the state of affairs in which we still live to-day, when in relation to purchasing power available, there is a super-abundance of commodities, in spite of restrictions—artificial or otherwise—and also a surplus of labour and personnel, constituting what we know as the unemployment problem. Clearly the task actually set before the newly established Department of Industries was thus a fundamentally different one to that for which it was designed. The department discovered itself in a state of affairs in which every existing industry found it necessary to compete with its rivals, in a régime of decreasing money purchasing power, with every possible resource, in order to secure its survival. The competition was so intense that many of the newly established industries succumbed almost immediately, and old established industries with little or no organized resource, such as our cottage indigenous industries, found themselves precipitated into a struggle, the issue of which is yet in the balance. From the full blast of that competition there must be some shelter, to enable newly-developed industries to thrust their heads above water, and that shelter in recent years has been found mainly from two sources, viz.—

(a) the protective customs tariff determined by the Government of India either as a result of Tariff Board recommendations or by the immediate needs of the Revenue Exchequer; and

(b) the Swadeshi movement amongst the people of Bengal which takes the form suggested by the motto "Support Bengal Industries".

It is within these shelters and particularly within the latter, that the department in recent years has been concentrating its energies, its influence and example, in appealing to the innate intelligence and ability of the better class young men of the country, generally termed "Bhadrolok" to identify their ambition with the industrial development of their country."

CHAPTER XXIX.

Has Hand-loom Industry a future.

192. **Hand-loom industry never fell below a certain level.**—It is commonly said that the hand-loom industry is in a moribund condition and has no future in these days of mass production by machinery. It would be as well to examine how far this assertion is correct. We all know that with the establishment of spinning mills towards the end of the 18th century, the hand spun yarn gradually gave way to mill yarn until it became all but extinct. After this, when woven piece-goods from Lancashire and other places invaded the Indian markets, the hand-loom weaving found it difficult to compete with them and the industry suffered a steady decline (Report of Mr. Collin's Survey of 1889). But we know also that the weaving did not at any time become

practically extinct as the spinning did. The foreign piece-goods manufacturers had capacity to supply the cloth requirements of the whole of India and even if they had not, England alone was able to increase production to any extent to meet such demand. But even then, the hand-loom industry did not die. When the Indian mills came into existence, and as soon as their products could be put on the market, the natural result would have been the complete extinction of the hand-loom industry. But this again did not happen. What market the Indian mills have, they have taken from the foreign traders, but the hand-loom industry, after falling to a certain level, remained there. (It is true that the first invasion of foreign goods in Indian markets, synchronising with the permanent (zemindari) settlements gave the zeminders an opportunity to convert many weavers into agriculturists.) But the landlords' attempts to induce weavers to take to agriculture did not succeed beyond a certain point.

193. **Share of hand-loom products in total supply—1906.**—In recent years, when Japan has been dumping more and more piece-goods in India, the hand-loom products have not decreased to a corresponding extent but, as has been shown before (Paragraph 61, Table VI), there has actually been an increase in the output. Mr. Patel, in his note on Hand-loom Weaving submitted to the Calcutta Industrial Conference in 1906, estimated the respective sources of supply as follows:—

Class.	Warp counts.	Weft counts.	Hand-loom production.	Indian mill production.	Imports.	Total.
Coarse	6s—16s	6s—20s	900	60	300	1,260
Coarse medium	20s—26s	20s—40s	150	500	1,100	1,750
Medium	20s—40s	30s—50s	450	40	750	1,250
Fine	Over 40s	Over 40s	150	..	350	500
Total			1,650	600	2,500	4,750

N.B.—Production in million yards.

The Special Tariff Board Estimate of the total production and consumption in 1934-35 was—

	Million yards.
Hand-loom	1,426
Indian mills	3,397
Foreign	996
Less exports of Indian and foreign piece-goods by land and by sea	245
Piece-goods retained in India	5,574

194. Writing in the "Indian Industries, Trade and Transport Supplement," (1932) of the "Capital", Mr. M. P. Gandhi, in his article "Hand-loom Weaving Industry and its future in India" has

given the following figures of hand-loom production for the seven years ending 1930-31. (The Bombay Millowners Associations' figures are given side by side for comparison):—

Hand-loom Production.

In million yards.

Year.		M. P. Gandhi's figures.	Bombay Mill Owners' figures.
1914-15	.. ..	....	1,416
1918-19	.. ..	....	1,252
1919-20	.. ..	....	674
1924-25	.. ..	1,256	1,502
1925-26	.. ..	1,160	1,353
1926-27	.. ..	1,296	1,549
1927-28	.. ..	1,292	1,583
1928-29	.. ..	1,116	1,373
1929-30	.. ..	1,404	1,679
1930-31	.. ..	1,388	1,655
1931-32	.. ..	....	1,808
1932-33	.. ..	....	2,056
1933-34	.. ..	....	1,725
1934-35	.. ..	....	1,793

Whichever of the above estimates be correct, it is clear that in spite of the Indian, Japanese and Continental Mill competition, the hand loom industry has not gone below a certain level of decline. What then is the reason which has arrested its further fall?

195. **Reasons why hand-loom products were left to supply certain lines.**—Mr. Patel's note of 1906 indicates certain reasons which, being the points of view put forward by one who knew the mills' working well, I cannot help quoting in extenso: "The bulk of very coarse classes is woven on Indian hand-looms from Indian mill yarn. This yarn is made from very inferior cotton and is not given a proper twist for warp. Some of the Bombay mills tried to produce this class of cloth but the yarn could not stand the speed of the power looms with out a sizing from 50 to 100 per cent. and as the people wanted cotton rather than size in the cloth they bought, the mills had to give it up as a bad business. This cloth is very thick, warm and durable. This class may, therefore, be considered as coming within the absolute sphere of the hand-loom". This statement is perhaps, as true to-day 30 years after Patel's writing, as it was in 1906. The mills do not turn out coloured coarse saris for use of poor village folk who want article more durable and which (not being grey or bleached) require washing at longer intervals. In lower counts' work, such as gamchha, chadar, coarse lungi, etc., also, mills have not yet attempted to capture the market. If Patel's analysis of the reasons be correct and there :

no reason why it should not be, this may be said to be one of the reasons why the mill competition has not been able to kill the hand-loom industry.

196. **Varying local tastes and needs can best be supplied by hand-loom.**—Yet another reason why hand-loom industry cannot be entirely ruined is that the Bengalees (Indians) use a great variety of clothing—of different sizes, for different needs and of varying types. Europeans, for instance, wear suits, and to supply them all variations have to be of the sheeting type. The Indians—and specially Bengalees—would wear a Garad or Matka in time of worship, Patta Bastra for marriage, Lalchi (a sort of red, small cloth) for “first eating” ceremony, etc. The married and unmarried women need saris of coloured border while widows need totally uncoloured variety. Youngsters wear 1” or $\frac{1}{2}$ ” border cloths while more elderly people wear thin bordered dhutis. Innumerable other instances can be cited. The “female lungi” is a local taste, current in some areas only while deep coloured and closely ornamented coarse saris appeal to one section. The mills, which produce for large markets, can hardly supply all these varying local needs and tastes, especially in large scale operations. They cannot also produce the embroidered luxury fabrics. In these lines therefore, the hand-loom products have and will have a field, at least for many years to come.

197. **No other occupation is open to weavers—Hand-loom products of certain types still have a market—Prices of mill and hand-loom products show little actual difference.**—Apart from the reasons stated above, there is the problem of finding occupation for the hand-loom workers, even if it be true that hand-loom industry cannot survive the mill competition. I have shown before (Chapter XXVI, paragraph 183) that there is no prospect of solving this problem in the near future. The Report on the Agricultural Statistics indeed shows that there are about 6,433,225 acres of culturable waste and 4,949,669 acres of current fallow land in Bengal (figures for 1933-34, vide Agricultural Statistics, Page 7). Personally, I believe these figures to be too high to be based on correct information. But even if they were correct, most of this area is scattered over the province in small plots, and a very large proportion of the rest are in areas where irrigation and other improvement projects must first be undertaken before any cultivation can be done. Agriculture, therefore, holds no prospect for them in the near future. There is no other organised or unorganised industry which can absorb even a moiety of these workers. There is thus no other alternative but to help the industry to remain and to give a better economic return. Besides, if the hand-loom and other non-mill products of Madras, United Provinces, etc., can still find a lucrative market in Bengal (the Madras—“Kaveri” and other saris, United Provinces—Sataranchis, etc., sell in large quantities), there is no reason why Bengal weavers should not continue to have the present market for their products and even strive for a wider market. If Bombay mills, producing fabrics at 6·6 yards a rupee in western India, can, after paying transit charges, middlemen’s profits, etc., sell these fabrics in Bengal, the hand-loom products at the consumers’ doors at 5·5 yards a rupee (the present price level) ought to sell to the mutual advantage of both the weavers and the consumers. There is thus no reason to lose heart or to give up the industry as a doomed occupation.

197A. Advantages of hand-loom system as compared to the mill system.—Besides the reasons stated above, the hand-loom system has certain advantages over the modern mill system of work which cannot be denied. If properly organised in a way that the weavers may, while they retain all the advantages of the cottage working system, work as scattered units of a big factory, they should certainly be able, with improved looms and appliances, even to compete with the mills. The following are amongst the advantages enjoyed by the industry when pursued as a home-occupation:—

(1) The workers can devote more time, in fact, all their spare and available time, to the work.

(2) They can put in more workers—the women and children giving help when needed or possible. This acts as an insurance against difficulties caused by illness of the earners in one-earner families. The workers can take up and give off work at any time.

(3) No capital worth the name is required.

(4) The weavers have the prospective consumers at their doors and markets nearby.

(5) There being no congestion in village life, the labour and living is cheaper than in industrial towns.

(6) The weavers have not to spend money on house rents or leave their homes and social environments to earn their livelihood.

(7) Patronage of village people, whose individual needs and tastes they can cater for.

(8) The stabilising influence of family life, and absence of indiscriminate mixing with a host of people of all degrees of morality, prevents the workers from falling preys to habits of drink, immorality, gambling, etc.

(9) Last, but not the least, and of great importance from the view point of the state is the advantage that the workers have not to smart under any feeling of antagonism with capitalists, and the strifes between labour and capital with their communistic and other subversive possibilities can never arise in this system of work.

197B. Best mill conditions are not as good as cottage work conditions.—After all, the modern mass production system has not been able to improve the socio-economic life of the labourer class much, even in the best conditions. The cottage workers earn less cash probably, but they have to spend less on house rent and on articles grown in the house (vegetables, fish and even milk—when they have a cow). They have free air and the peace of home life as against the jammed routine life of the mill labourer. If the labourer has a big family, he hardly gets enough accommodation in the best of mill barracks to live with his family and will either have to live alone or with wife, grown-up daughters, etc., mostly in one room. He has to buy everything. For hours he has to work in the midst of the din and bustle of the mill building, in a suffocating atmosphere, which eventually makes him a part of the machine as it were. When all these are put on the balance, the advocates of the cottage system may be excused if they become greater believers of that system even in these days of machine-civilisation. If our man-power had been less than it is, if we had to supply

a larger demand than we could possibly do by cottage system of work, the preference given to mills could be understood. But with conditions in our country as they are, and with the present attitude of financiers of locking up capital, the only policy we can adopt, I submit, is to try to give some income to all the weavers instead of giving more income to some.

CHAPTER XXX.

Who should follow the occupation.

198. **Families having enough lands should work on lands and not on looms.**—This is a problem the solution of which depends not so much on any activity on the part of anyone but on the circumstances in which the workers are placed. Still, there may as well be a clear idea on the point. The families who have enough lands to keep their man-power fully engaged, should not ordinarily take up this industry, unless the return from land is not enough to maintain them. It has been found that the workers of many such families let out land and work at the looms themselves. This should be discouraged.

199. **Landless persons whose traditional occupation is weaving are best suited.**—Persons who are weavers by caste or have been weavers by occupation for long, and have no land or not much land, should be the class to follow the industry as a whole-time or principal occupation. As regards weaving as subsidiary occupation, those having some lands or other occupations to keep them engaged for a time, but not fetching enough for maintenance, would naturally be the class to come in this category. These divisions are for families who want to weave as an occupation, for sale of fabrics. Each family having time to spare may, however, weave to supply its own cloth requirements, and to this class there need not be any limit.

200. **Weaving for supplying local needs and for sale in distant markets.**—There are areas in the province where large number of weavers are concentrated in one or more adjoining villages and unions. A fairly large number of weavers are, however, scattered all over the province, the number in each union or village being anything from 1 to 20. For the former, the production in one compact area being high, it would be necessary to find markets, mostly outside the immediate locality. The scattered weavers, however, cannot expect to find buyers who will purchase articles from them for carrying the same to distant places, as the cost of transport will be very high. Neither can they themselves go to distant hand-loom-product hats for selling their fabrics, as this would mean a great wastage of time. They must, therefore, try to find buyers in their immediate neighbourhood and should be instructed to persuade the neighbours and others to place orders with them for goods to the taste of such consumers or to purchase commonly used, ready made fabrics. Such local buyers will fear a neighbour less, in the matter of being cheated. With ordinary attempt, such weavers ought to find sympathetic local consumers to patronise them. This class of persons may follow the industry either as principal or as subsidiary occupation.

CHAPTER XXXI.

Expansion or Consolidation.

201. **Expansion not likely at present.**—The influx or shortage of workers in any occupation is generally occasioned by the ordinary economic laws of demand and supply. When owing to an unusually high return given by any occupation, a large number of persons flock to it, it becomes necessary to put artificial restrictions. In the present condition of the weaving industry, there is no prospect of its being over crowded. On the other hand, a mild sort of propaganda is needed to see that the proper classes alone take to and follow this occupation, and others—as for instance agriculturists having to supplement their income, come into it only when they are unable to adopt any other subsidiary occupation more in line with their principal occupation, such as fruit and vegetable growing, fish rearing, etc., in case of agriculturists. The weaving should ordinarily be left to persons who have a traditional or acquired aptitude in the work and have not agriculture or other occupations to follow.

202. **Consolidation should be attempted first—Trained Bhadrals should be helpers and not rivals of weavers.**—The above is clearly a policy of consolidation. In the present state of demand of the fabrics, we will have, for some years at least, to avoid any attempt to increase the following of the industry, by inviting more weavers to join the ranks of the present, generally underfed, ones. Expansion will follow automatically if and when the demand for fabrics and economic return from the industry increases, but until then, it would, in my opinion, be a mistake to pursue that course. Any attempt to induce unemployed Bhadrals youths to take to weaving, as competitors of the weavers, would only transfer the “unemployment” problem from the educated and therefore more vocal class to the mute and poor weaving classes. These youths, when trained, may, and should work with the weavers so that they may bring modern ideas and appliances to the help of the weavers’ traditional skill, but they must not be encouraged to enter the lists as their rivals in trade.

203. **Moral and psychological support needed.**—Before taking up the question of improvement of the industry, it would be as well to consider the problem of the moral and psychological improvement of the followers of the industry. The weavers are, at present, in so very discouraged and hopeless state of mind, that it would be necessary to create hope and courage in them before we can make them husband their energy in this great economic venture. Their position, specially in comparison with that of the agriculturists who are their neighbours, is very depressing. While, the agriculturists have a large percentage of their income free from market fluctuation of prices (*viz.*, the value of the crop they grow and consume) and for the rest (the value of the cash crops or surplus food crop), they have a hope of the prices rising in the near future (which, whether well grounded or not, sustains them), every pice of the weaver’s income is affected by a rise or fall in prices of his products and his future is one of harder competition with the mills. While an agriculturist, after his harvest is collected, is free to take rest or enjoy life for a while, a rest or a forced absence from work, in the case of a weaver, for even a single day, often means a fast on the day following. The agriculturist has his lands against which he

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can raise a loan in a time of need, the weaver has nothing to enable him to do so. Though, therefore, the earning level of both classes is at present more or less the same, the weavers are under greater moral and psychological strain and this affects their working capacity and economic well-being to a great extent. In any attempt to improve the condition of the weavers, it is, therefore, essential, to start with inspiring them with a little hope and confidence.

CHAPTER XXXII.

The creating of markets.

204. **Placing on market easier than finding of markets.**—“Marketing problem” is a term involving two aspects. It may be that there are few or no purchasers of the fabrics. It may also be that there are purchasers but no proper arrangements exist to make the fabrics easily available to the intending purchasers. The latter is not nearly so important as the former. When the Dacca Muslins had markets, the difficulties of transport and other impediments of those days did not stand in the way of their reaching the furthest parts of the world. When the demand was high, the jute growers of Bengal, in spite of their inability to hold up the stock and other disadvantages, got from Rs. 25 to 30 per maund or more as price of their jute. Even now, the female lungis of Jessore and the cheap chadars of Kanchan (Dacca), which have a great demand, are carried to all parts of North Bengal and of Assam, even though there is no advertising or propaganda for these goods. The cardinal point in improving the position of the industry is, therefore, to create markets for the hand-loom fabrics.

205. **How demand can be increased.**—Markets can be created in two ways, by influencing the taste of the consumers in favour of such fabrics or by improving the fabrics to meet the consumers’ taste for the time being. The improvement includes the keeping of the selling price low enough to suit the intending purchasers’ pockets. With the nicely finished cotton and artificial silk mill fabrics of various designs alluring the customers, the ordinary cotton dhutis, saris, etc., turned out by hand-looms, will hardly have any chance of meeting the consumers’ present taste. But the hand-loom products may yet reign supreme in the field where, not showy fineness but durability—not apparent cheapness but real economy, is the ruling factor with the consumer. With some possible improvements in the products, there ought to be no difficulty in achieving this end.

206. **Hand-loom products more economical.**—It is commonly believed that mill products are cheaper than hand-loom fabrics. They may be cheaper but certainly not more economical. If the real value of hand-loom products is brought prominently to the public notice, a market can, even in these days of competition, be created for these hand-loom products by effecting a few minor improvements. The ordinary hand-loom products are rather coarse and rough. The roughness can be removed to a great extent. As regards coarseness, it is in the field of coarse products that they are to find a market.

207. **Both mill and hand-loom products have fields.**—The Bhadrakalok class or, let us say, the people of all classes will always prefer to look

decently attired, when in society. For the outdoor wear of the Bhadrals and for the ceremonial wear of others, the finer mill cloths may continue to be in use. But, for indoor or every day wear, the somewhat coarse hand-loom cloth would be more useful and economical. The difference between the prices of the coarsest mill sari and hand-loom sari is from 1 to 2 annas per pair according to the texture. But it is widely known though often forgotten, that a hand-loom sari is about 75 per cent. more lasting than a mill cloth of corresponding variety. I say widely known because, owing to economic depression, many Bhadrals and other people are already wearing loom-made lungis, indoors. This effects a double economy—first, because lungi is 2 to 2½ yards in length while an adult size dhuti is double that size, and secondly a loom-made lungi lasts twice as long as an ordinary mill made dhuti. If the use of lungi effects a saving of 75 per cent., the use of loom-made saris and dhutis will save at least 40 per cent. and probably more, in the clothing expenditure of a family. This aspect of the results of using hand-loom products will have to be brought to the notice of the consuming public.

208. **Why propaganda did not sustain khaddar movement.**—It may be said here that considerable propaganda was made in favour of khadi without any tangible or lasting result. But khadi and ordinary hand-loom products do not stand on the same footing. Khadi is ordinarily prepared from yarn of very inferior quality. The tensile strength of such yarn is very low and the cloth is not generally more lasting than the mill cloth, and in some cases, less. Then again, ordinary khadi is too heavy to be conveniently worn, and finer khadi products are inordinately expensive, even the ordinary khadi products cost more than hand-loom products. The khadi propaganda, by itself, had therefore its foundation more on the sentiment of nationalism than on a sense of economy. Home made khadi, supplying the family need, is, perhaps, an admirable idea, but khadi weaving as an industry, providing livelihood to a class of people, was doomed to failure from the very start. Hand-loom products need not depend on the sentiment of consumers for a market (though that factor can be exploited, at least during the transitional period), but would rest on a sounder economic basis. All that is necessary, therefore, is an intensive propaganda, making known to the public how hand-loom products can be used (at least for indoor and every day wear) to the considerable financial advantage of the consumers, even though they may use mill cloth for outside wear or on ceremonious occasions. This will give scope to mills and hand-loom weavers and also prevent any unhealthy rivalry with existing mill interests.

209. **Propaganda should be of canvassing type—House to house propaganda needed.**—By propaganda, I do not mean lectures, posters, advertisements and similar activities only or mainly. These are good means but not nearly good enough. We want the propaganda and sale to go hand in hand—in fact, a house to house canvassing. We all know how the *Kabuliwallas* and other hawkers have carried the attractive-looking chintz, crepe, artificial silk products, etc., mostly of Japanese origin, to the furthest corners of the province. To reach the millions of people who will not read advertisements in papers or see posters in public places, this is the only way to proceed. We must carry the products to the doors of the consumers, explain the advantages of such

articles and thus popularise them. This will give the agents engaged in the duty, the opportunity to know first hand, what are the tastes of the consumers, what articles they like, use or want most, and from the agents, these items of information can be passed on to the weavers. This propaganda will be needed for both urban and rural areas, only the commodities offered will be different, according to the choice, taste and position of the consumers.

210. Propaganda to be made on business lines—Proposal.—It is obviously undesirable, even if it be possible, for Government to enter in the trade. I do not therefore propose that the Government should engage people to do this work. The general propaganda work may be done by workers paid by Government and by the department of industries but canvassing is essentially a business venture and must, therefore, be run on business lines. My proposal accordingly is as follows:—

Government, in the Department of Industries, should first of all select some centres (say, five, to start with) in the five most important centres where hand-loom products are known to be used in fairly large quantities and there are a fairly large number of weavers. In these centres, young Bhadrak youths, about six (or 6 to 10) in number for each centre, should be invited to start a store for sale of hand-loom products—and if convenient—for sale of other local cottage industry products. These youths should come from the unemployed class, and must not be afraid of hard work. Each of them must obtain a sum of Rs. 300 or so as his contribution towards the capital of the store. This will give them Rs. 1,800 or more, according to the number of workers taken and contribution of each. The Government, either through some co-operative bank or directly or through the Board of Industries, will advance to each such store a loan of Rs. 1,500 (or 75 per cent. of the capital paid up by the workers themselves) against the joint and several responsibility of these youths, and under guarantee of their guardians, where any youth is not himself a co-sharer in his family property. No other restriction need be imposed. These loans will be repayable by instalments in 10 to 15 years, with a small interest from the third year.

211. How the propaganda will be conducted.—This society of young men (they need not at first go under the formalities of the Co-operative Societies Act) will open a store in the nearest hat or market, where the local public do their marketing, and stock a supply of all kinds of hand-loom fabrics, which are generally used in the locality. Besides selling from this parent store, two of the co-sharers should visit each of the other markets and hats in the neighbourhood on days when such hats sit. The co-sharers, when not so engaged, will go out with some quantity of the commonly used fabrics, and canvass for the same in the area served by the store, visiting each village in turn. The whole work to be divided amongst the six or more workers in such a way that each worker (or each batch of two, in earlier stages) may alternately work in central store, other markets and in villages, the villages being distributed amongst them in blocks so that each may have a distinct area to work in.

212. Capital costs and profits.—I shall describe later how the store will get its supply of standardised goods. The stores will retain a commission not exceeding 1½ annas per rupee on the marked sale price

of the fabrics. This commission will go to the joint fund. At the end of the year, while making final division of profits, if any, the workers who may have sold more, should get a bonus over and above the usual equal share. Assuming that each of the six workers can sell on the average Rs. 400 worth of fabrics a month (including sales at the hat and markets), the store will earn a gross profit of Rs. 225 per mensem. The store room and stall rents will take about Rs. 25 of this. Of the rest, each of the six workers may take say, Rs. 25, leaving Rs. 50 as margin—to pay interests, reduce loans, etc. It may not, of course, be possible to do as much business in the first or in the second year, but there is no reason why, if they are keen workers, they should not be able to achieve a sale of more than Rs. 15 per worker per day from the third year. As these workers will mostly be local men, the starting income, even though low, should not deter them or cause them much inconvenience.

213. **Government help and backing.**—It has been stated before that Government will have to advance each centre about Rs. 1,500 as capital, repayable in ten to fifteen years, by instalments. At 6 per cent., the interest of this will come up to Rs. 90 per year. The Government should, I suggest, undertake to pay this interest for the first two years. Besides, Government should give a subsidy of Rs. 10 per month as rent for the central store for the first two years. In case there is a surplus net profit after paying each worker Rs. 25 per mensem, Government will reimburse themselves of so much of this Rs. 210 as it is possible to do from the surplus. Thereafter the business should pay the interest and the subsidy should be discontinued. Besides the above, Government should give these workers the help of the Inspector, who, I am proposing later, should be appointed for each such area, to act as guide (free of charge) for these two years. Under the terms of the loan, this officer will have certain powers to see that Government money, secured mainly against the stock, is not wasted and in practice, he will act as chairman of the Board of Co-sharers, the latter being the members. He is to see that necessary but simple stock, sale and cash accounts are kept regularly, that workers work well and in right procedure and that business honesty is not sacrificed. If and where necessary, these stores can also supply yarn and weaving implements to their constituent weavers' groups.

214. **Chances of success.**—If the above system is tried, I submit that it has every chance of achieving success. The institutions will not be run by paid persons so that they may waste time and earn money all the while. This, apparently, was the mistake, which resulted in the failure of "Emporiums" and "Sale Societies" organised in different provinces. They left practically everything to paid servants who had little or no stake in the venture. This suggestion will also obtain occupation for some unemployed youths, divert the Bengali youths' attention to trade and establish a link between the illiterate village workers and educated Bhadralks, to their mutual benefit. Similar stores for finer products, more to the taste of the urban people, may be started in district and subdivisional towns, but in such cases, the Government help need not be more than two years' interest free loan and free guidance, coupled with the co-operation of the Government staff engaged in helping the producer of the fabrics (the weavers'.

groups). Rich people with monopolistic tendencies should be rigorously debarred as we want the largest number of persons possible, grouped in small units, to enable the hand-loom fabrics being presented before each door in the locality.

215. **For the present distant markets need not be tackled or vested interests antagonised.**—It will be noticed that I have not provided for the enlarging of distant markets in Assam, and non-producing but consuming centres like the North Bengal districts. I suggest that, for the present, these markets should be left to the existing Mahajans. Until the local markets are secured, and the proposed group system properly organised it would be difficult to organise and capture distant markets, specially as it will involve a rivalry with existing trade interests. In the early stages of the movement, it would be too ambitious a step and too risky to be adopted. But notwithstanding this, these distant markets may be explored indirectly from the very beginning by the officers of Government of all departments, specially the Circle Officers and Officers of the Department of Industries, using their influence with all cloth dealers of such areas, to stock and push the sale of hand-loom products and to put such dealers in touch with centres which supply standardised goods (the stores abovementioned).

216. **Government cost and risk.**—The above scheme will involve the following expenditure per store—

				Rs.
1. Loan (Minimum)	..	..	..	1,500
2. Interest on loan	..	..	..	90
3. Subsidy	..	..	..	120
			Total	1,710

of which Rs. 210 is real expenditure, the other Rs. 1,500 being loan only. For five such stores, in the first year, the cost will thus be Rs. 1,050 and in two years Rs. 2,100. The contribution towards the Inspector's help has not been included in the above as he, in fact, forms part of another organisation.

216A. **Other indirect assistance by Government and public bodies.**—Besides the above direct attempts for obtaining local customers, the Government and private or local bodies can render help by purchasing hand-loom products. *Pagri* cloth of the Police force, chaprashis, etc., strikes me as a commodity which the hand-looms can produce and supply. When standardisation of fabrics is effected, by work as described hereafter, there should be no difficulty in placing orders with the stores for supply of this article. The bearers' livery cloth may also be similarly obtained. The weavers themselves do not always use their own products. The proposed staff for organisation of weavers will also be able to tackle this aspect of the marketing. The door screens in offices and residences may also be supplied by the hand-looms. These are lines in which hand-looms can produce larger varieties and consequently have a chance of having a good market.

CHAPTER XXXIII.

Improvement in the system of yarn supply.

217. No new organisation needed—Control over the present system.—In paragraph 131, I have discussed the difficulties of suggesting any alternative system of yarn supply, which might bring the weavers to any appreciable benefit in this respect. In the circumstances stated there, the only course at present open to us seems to be to maintain the present system with such modifications and changes as may reduce the possibility of the weavers being cheated by dishonest dealers to a great extent. To this end, it would be necessary to make it compulsory for every yarn dealer, to grant a memorandum for every sale of yarn, whether it be a cash sale or a credit sale. This memorandum should include a description of the count and make of the yarn sold, the quantity, the rate and the value as also the payment made for it. If it be a credit account, it should show the amount left unpaid on the current transaction and the arrears due from the particular purchaser up to and including the current transaction. The description should be detailed enough to enable the purchaser to have it checked with the commodity given him.

218. Expected results.—It is expected that this course will prevent manipulation in arrear dues account, dishonesty of the nature of giving 42s hanks as 40s or Indian yarn as Japanese or European, loose dyed yarn as fast dyed and so on. It would be still better if it could be arranged with the wholesale dealers that yarn should be bound with a sealed knot in bundles of five hanks or bound up with a piece of paper like matches, in such a way that the individual hanks cannot be taken out without breaking the seal or tearing this strip of paper. In this strip of paper can be noted the make and count of the yarn. If this is done, it would be difficult to pass on yarn of one count or make as that of another.

219. Control to be exercised by introducing license system—Supervision of licensees.—To enable the above system being introduced and worked, it would be necessary to have a control on the yarn dealers. This can be effected by making it obligatory for all such dealers to take licenses for their trade and debarring unlicensed dealers to trade in yarn. The licensing fee should be quite nominal, and to start with, all existing bona fide dealers, factory owners, etc., should be given licenses. Later on, however, fresh applications should be considered in the light of the sufficiency of dealers in the locality, to prevent unfair price-cutting on the one hand and monopoly on the other. The business of these dealers should be inspected occasionally and as far as possible without notice, by existing local Government officers, Sub-divisional and Circle officers, Sub-Registrars, Sub-Inspectors of Schools, Co-operative auditors and Inspectors and of course, by the officers of the Department of Industries. It would be a mistake to keep these licensees subject to the inspection of any one officer, for it is easier to hoodwink one officer than to bluff many, particularly when they examine their actions without notice. Except for the restrictions noted before, which should be rigorously enforced, the dealers should be left free to conduct their trade in the locality.

220. **License for dyers.**—A similar licensing and inspection system should be introduced for dyers of yarn. To avoid confusion, licensees for fast dyed yarn should not be allowed to prepare or sell loose dyed yarn and *vice versa*. Dishonesty in this matter affected the reputation of many fabrics which were getting good markets, e.g., the Tangail saris. Such dyers should be often inspected by officers of the Industries' Department.

221. In places where stores are established as suggested in the foregoing chapter, such stores may undertake a part of the yarn business, on a supply against product basis. But this is merely a matter of detail which it will be possible to take up later on.

222. **Local production of yarn.**—The next improvement which can be effected is to lower the prices of yarn. As it is, a very large quantity of Chinese and Japanese yarn (both pass as Japanese with the weavers and retail dealers) of lower counts—20s to 40s, are sold and used in Bengal. There is no reason why Bengal should not try to take a share of this trade. Japan and China are not (except what little is grown in Manchokuo) cotton growing countries. If they can purchase cotton from distant countries, manufacture yarn and sell it in Bengal, there is every possibility of Bengal being able to sell it cheaper, specially under the Tariff protections now in force. It may be difficult to get the best cotton necessary for finer counts of yarn. A very small quantity only of such yarn is used in hand-loom industry, and it comes mostly from the United Kingdom. Under the Ottawa Pact, Bengal can purchase it at fairly reasonable price from the United Kingdom, as is done now. The quantity of such yarn used by weavers is so small (1.4 per cent. of the total consumption) that it would not be a profitable business to attempt a home supply. We should, therefore, aim at and be satisfied with trying to supply yarn of lower counts.

223. **Financiers may be induced.**—This can be done easily, if some of the richer people combine to start spinning mills in Bengal. I have had, in this survey, no opportunity to study the trade in yarn from manufacturer's point of view, but presumably the Dhakeswari and other mills of Bengal which are producing yarn for sale, are making a decent profit out of it. The advantages of cheap electric energy and proximity of cotton growing area have, according to the Special Tariff Board, given the Madras yarn mills a steadily increasing market. If the latter advantage cannot be ours for the time being, the former can, perhaps, be arranged. The establishment of a few such mills will not only save a lot of money for Bengal, but provide yarn to weavers at slightly cheaper rates, besides providing a large number of people with employment.

224. **Probable markets.**—Some of the Bengal mills use Japanese and other foreign yarn of coarse-medium counts for cheaper products. If there is a surplus production, after supplying the 27.74 million lbs. of non-Bengal yarn now consumed in Bengal hand-looms, the large number (24) of cloth mills in course of erection will be able to use the same. The possibility of having a good and steadily increasing market should interest rich people in this matter. As early as 1906-07, Mr. J. N. Gupta, I.C.S. advocated the establishment of spinning mills in Bengal, in his "Survey of the Industries and Resources of Eastern Bengal and Assam." The time is now ripe for Bengal capitalists to take the field in this matter.

225. Existing mills can be subsidised or helped by cheap capital.—If we cannot persuade some rich people to undertake this venture, it may be worth while to try if the Dhakeswari, Mohini and other Bengal Mills cannot be persuaded to expand their spinning departments, if Government were to advance them the necessary capital at a low rate of interest, repayable only when a profit is earned. Such a course should solve the unemployment problem to a great extent, in addition to affecting an improvement in the matter of yarn supply to the hand-loom industry, which is our immediate objective.

226. Spinning mill suggestion is subject to expert examination.—I must add that I make the above suggestion with all the diffidence of a person who knows little of the prospects of yarn manufacturing business. All that is known is that the Dhakeswari and other mills who sell yarn, have been finding a ready market so far, and with almost unlimited possibilities of expansion, there does seem to exist a field for a manufacturing attempt. The Madura mills are also earning a lot from Bengal on yarn. Besides, looking further ahead, the existence of some such mills in Bengal may eventually pave the way for popularising the cultivation of cotton of good variety, as an alternative cash crop. In days gone by, when there were no rails, Bengal not only supplied her own needs, but exported cotton goods and most, if not all, of the cotton that was needed for this, must have been grown in Bengal. During the settlement operations of Hooghly district, I found from old papers of the landlords' surveys, that cotton used to be grown in fairly large quantities in Arambagh and Tarakeswar side, even towards the end of the last century. With the help of the Department of Agriculture, it should not be very difficult to grow cotton, at least of moderately good variety, if a ready market can be created for them.

227. Regulation of prices not yet needed.—I have not touched the question of regulation of prices because, at present, the difference between Calcutta wholesale prices and the retail cash selling prices in the interior, is not much. But if the dealers were brought under the control of license, it would be possible, if and when necessary, to fix retail prices for different counts and makes of yarn, as is done in the case of ganja, opium, etc. For the licensing system, it may be necessary for the Government to take some powers through a local law, but this can easily be arranged.

CHAPTER XXXIV.

Improvement of Looms and Appliances.

228. No new action needed for improving looms.—The next problem is about the looms and appliances. So far as looms are concerned, any increase in its number must follow an increase in the demand of fabrics, and until that can be secured, it would be useless to increase the number of looms. The proportion of fly-shuttle looms is now satisfactorily high and, (but for the very fine works for which, until more facility is attained on fly-shuttles, a section of the weavers find it more convenient to use the throw shuttle looms) the propaganda for replacing throw shuttle looms with fly-shuttle ones can continue in the lines now being followed by the department.

229. More semi-automatic looms should be introduced with caution.—The semi-automatic looms, it has been seen (Table XIV), have a far higher productive capacity than the other types (excepting the automatic looms). But here again the question of demand comes in. Unless and until a market can be created for increased production, the introduction of more such looms will have the effect of reducing either the man-power or the working period or will cause an overproduction. Overproduction reduces the price and necessarily the profit, as has been the case with the workers of the Kanchan Union of Dacca district. But with reduced profit per unit the total income of the family can be raised by production and sale of a larger number of units—as again, has been the case in Kanchan. The reduction of price will also give the product a better chance of competing, in respect of price, with the mill products. But for any wider use of semi-automatic looms, steps should not be taken, in my opinion, until the proposed marketing arrangements are put into operation. As the wrong ideas about the hand-loom products gradually disappear, and the competition with mills centres round the question of price only, it will be time to push on a campaign for the more extensive use of semi-automatic looms. If we increase the output too much at a time, without also making adequate arrangement for supply of more yarn, the yarn supply may fall short of the demand, causing a rise in its prices, and such a position will be fatal to the industry.

230. In cases, however, where few workers have to support big families or where there is an existing demand for an increased supply, the introduction of these looms will be very helpful and give the workers that rest and leisure, which is so necessary to them, in addition to an increased total profit, even on reduced prices. This, however, should be treated as a local problem for each area and should be dealt with as such. An indiscriminate increase in the number of such looms in all areas, in the present condition of the demand of fabrics, may well be disastrous.

231. Cheap Jacquards—Help in working with Jacquards.—Of the appliances, it would be worth while to intensify propaganda for introducing more Jacquards. If the Department of Industries could devise a cheaper type of Jacquard with about 50 controls, it would be very popular. To keep pace with the constantly changing fashion in designs and borders, the hand-loom fabrics will have to make increasing use of Jacquards. The present, comparatively high, prices of Jacquards stand in the way of their wider use, and the introduction of a cheaper machine will go a long way to solve this difficulty. The second difficulty is about the perforation of cards and setting the same for different designs. The Department of Industries should have an adequate staff who will go round, train and assist such weavers as may purchase Jacquards, in this matter.

232. Help in the matter of new designs.—The staff noted above may help in setting designs but it would be necessary to have new designs made out, which can be used by the weavers. For this, some design-artists will have to be engaged by the Department of Industries, whose business will be to study the current tastes and trend of fashions and draw new designs for the body and borders of fabrics of different kinds. These will be periodically published in booklet form, with detailed instruction in easy Bengali as to how these designs can be

set, and such books made available to weavers concerned at cheap prices. Without these arrangements, the movement for introducing more Jacquards will not attain much success.

233. **Sale of Jacquards by hire purchase system.**—As regards the purchase of Jacquards by weavers, arrangements may be made for their sale on hire purchase system. The monthly instalment should, if possible, not exceed one or two rupees, and to have a margin for this, slightly higher price may be charged, as is done by firms selling articles in such way. With free training, occasional assistance and regular supply of new designs with instruction, it should be possible to introduce a large number of Jacquards in a short time. In actual procedure, areas where saris and other designed-bordered products are made in large quantities, should be taken up first.

234. **Minor appliances.**—Of the minor appliances, creels and improved charkas for warping and winding should be made more popular. In the ordinary indigenous system of work it has been calculated that the women and children who generally do the work, have to walk about 200 miles per month. The introduction, in large numbers, of Creels and improved charkas, will be a boon to them. This will give the women more time to look after their domestic work and their children which, in many families, they do not now get. These appliances are cheap and can easily be popularised by demonstration and propaganda. The silk and tussar weavers will be particularly benefited by the charkas while the Creel will save a great deal of time for all weavers.

235. About the Shuttles, healds, etc., no particular action is necessary except that in centres where there are a large number of weavers in any compact area and in the big markets of hand-loom products, the sale of good quality loom-parts and minor appliances may be arranged, through some local dealers, at reasonable prices. Where the proposed stores are established, they can keep a stock also.

236. **Improvement of finish by calendering.**—The question of improvement of the industry is closely linked with the "finish" of hand-loom products. As has been said before, the roughness of the fabrics is one of the main reasons for their unpopularity. The finish of the mill cloth is due mainly to the process of calendering to which it is subjected. There is no reason why hand-loom fabrics should not be subjected to that process. The mill calendering is done in such conditions of temperature and pressure that it reduces the tensile strength of the fibres to a great extent. It is for the technical experts to decide, but if a modified sort of calendering, at a lower temperature and pressure, can be adopted for the hand-loom fabrics, their popularity will certainly increase a great deal.

237. **Some calendering machines to be established.**—To this end, it would be necessary to establish small calendering machines in some of the largest weaving centres of the province. We can start with an experiment in 3 or 4 places of the province, first. I am not sure about the cost of erecting such a small machine with necessary oil engines or power supplying devices (where possible), but it seems that if such a machine is installed in an area with about 2,000 weavers within easy reach, particularly, in the neighbourhood of such big markets as the ones at Howrah, Kumarkhali (Nadia), Sibrapur, Gayalimandra and Madhabdia (Dacca), these machines can easily command about 6,000 yards

of fabrics per day and if a rate of one pie per yard is charged for calendering, the income from the operation would be about Rs. 31 per day or over Rs. 900 per month, which ought to be able to meet its running expenses, depreciation charges and the interest on the capital employed. The practicability of this proposal may be examined by the Department of Industries.

238. **Beamed warp supply may come later.**—The attempt in Bagerhat and some other places, of supplying the weavers with beamed warps, would be of great value when the demand of the fabric increases and we want an increased outturn. For the present, this step is not so much needed. If and when the time comes, it would be easy to erect warping machines, side by side with the calendering machines. This step, of course, can help at present in one important matter. The weavers in most places now use a varied number of ends (of warps), so that it becomes difficult for ordinary purchasers to be sure of the real quality of the fabric. With the supply of beamed warps, this difficulty can be, to a great extent, solved. But this will require an organization like the Bagerhat Co-operative Union or the Pabna Schools, to be put into operation. This can, therefore, come at a later stage of our activity.

CHAPTER XXXV.

Improvement of the Fabric.

239. **Main defects.**—In chapter XXI and particularly in paragraphs 136 and 140, I have discussed some of the defects of the hand-loom products, as they now are prepared. The more important of these defects are:—

- (1) The fabrics do not give the lengths and width they are said to possess.
- (2) The front side and remaining part of the fabric are not of the same texture and quality.
- (3) Heavy sizing by materials which cause the surface of the cloth to be very rough.
- (4) Fewer warp ends and wefts than are necessary.
- (5) Want of any standard in any class of fabrics, each pair or piece differing from another.
- (6) Unreliable quality of dyed yarn used.
- (7) Catering for more or less vulgar tastes mainly, by production of fabrics of too gorgeously dyed yarn or over-ornamented body and borders, and thus shutting off the more paying classes of consumers.
- (8) Want of variety and attractiveness of designs.
- (9) Non-production of articles of new types.

240. **Mere propaganda not enough.**—Mere propaganda would naturally be not enough to remove these defects. The "Radio talks" and newspaper advertisements and articles do not reach the weavers. Ordinary lectures do not leave any impression in their mind. The

weavers in general, where they have been given training by the Department of Industries' Peripatetic schools, do not dare go in for new fabrics or designs, lest they may not get any market. Items (1) to (4) of the above defects are occasioned by the weavers' desperate attempts to increase their income a little. This habit is too widespread now to be removed by mere advice, training and propaganda. It would, therefore, be necessary to do something which would create confidence and hope, and encourage the weavers to go in for honest business in improved fabrics. It will have to be demonstrated to them that good fabrics, at reasonable prices, when prepared to the taste and need of the consumers, can always have a good market.

241. Weavers must be organised.—The "Group" system.—Such changes, however, cannot be made by dealing with each weaver individually. They must, therefore, be brought into some organisation and formed into small "groups". Such organisation should follow the principle of co-operative activity but should not, at start, be required to come under the restrictions of co-operative societies' rules, law and procedure. The groups will work independently and without any formality in matters like meetings, accounts, disputes, approvals, etc. But weavers who form themselves into groups will be allowed certain privileges in exchange of their agreeing to work in group system and to produce goods of specified standard. The groups will be free to withdraw from these advisory restrictions at any time. No direct financial liability will bind any party to another or to the Government workers. As long, therefore, as these groups of weavers find that their remaining within the organisation is to their benefit, and in the scheme suggested it is hoped that they will always find it so, they will gladly remain within it.

242. Preliminaries for the organising of weavers into groups.—I shall describe the type of organisation I am recommending, in detail, in the next chapter. Here, I intend to explain how I visualise this organisation to work in relation to the improvement of fabrics. The organiser (whose functions I have described in the next chapter) who works in the area will, in course of the early stages of his work, make as accurate a list as possible, of the varieties and quantities of the different fabrics produced in the area, and an estimate of the existing demands and sales. When this is done, the headmen of the groups formed will be brought together for informal discussions. The new methods, types and varieties of work which can best be done will be discussed there and decisions taken as to what goods ought, for the time being, to be produced from the area and the approximate quantities of each to be produced.

243. Distribution of work.—This estimated production will then be allotted to the different groups, as far as practicable in such a way that (1) weavers who are accustomed to produce a particular commodity are allotted the work of producing that commodity, (2) only as many groups as are necessary to produce any particular fabric to meet the necessary demand, are given that work, (3) stray families are given work of producing such fabrics only as can be sold to consumers in the locality, (4) competent weavers' groups are allotted, with their consent, new types or classes of fabrics to be produced. This last allotment can, in the alternative, be distributed amongst all the groups so that each group may produce some new type and try its popularity

in the market. This system will prevent over-production of particular commodities and also secure seasonal supplies of particular fabrics. Each group will also specialise in particular fabrics and use the type of instruments most suited for such work. This distribution of work will require much tact and if properly done, will go a great way in the attainment of our objective. For instance, if the production of ornamental saris are given to weavers who have or have the means and desire to purchase Jacquards, groups using throw-shuttles are given the finer works only and so on, it would mean a great advantage.

244. **Standardisation.**—The next system to be introduced would be the standardisation of the fabrics. Each group will produce a particular brand of work, e.g.—

Group I.

Saris—coloured yarn—

Warp 40s.

Weft 50s.

So many warp ends and weft picks per inch.

Size—10 yds. × 40" only.

Given degree of sizing.

Designed borders only.

Group II.

Saris—coloured yarn—

Warp 40s.

Weft 40s.

So many warp ends and weft picks per inch.

Size—10 yds. × 42" only.

Prescribed degree of sizing.

Designed border and body.

Group III.

Lungis—checks—

Warp 20s.

Weft 40s.

Size—

Design—

Sizing—

and so on. This will prevent unhealthy rivalry and also secure a steady supply. According to demand conditions, the allotments will, of course, have to be altered from time to time. For this purpose the heads of groups may occasionally meet. It is desirable that the proposed organising staff and experts from the department should take part in such informal meetings. The above system would obtain the desired standardisation of the fabrics, without affecting the supply of good,

medium and inferior qualities of products, as may be in demand. Once this distribution is done, the organisers will have to see (and for mutual safeguards, the different groups will also see to it) that no group produces any article except the particular variety allotted to it.

245. **Advantages to be given.**—The advantages which it is proposed to be offered to the weavers, for joining in and working for the group system, will be as follows:—

(1) **Trade labels.**—For the commodities produced by each group, the organiser will give a small label to be attached to each article produced by such group, which will be of the following nature.

<p>Government Assisted Group System Handloom Production.</p> <p>Group No. A—36. District X.</p>
<p>Coloured Cotton Saris :</p> <p>Ornamental borders and plain body.</p> <p>Counts 40s Wp × 50s Wt. Indian yarn.</p> <p>30 Ends and 30 picks per inch.</p> <p>Size 10 yds × 42". Price Rs. 2/4 (pair)</p>

Such a label, when attached to any fabric, will carry an assurance of quality (whatever it may be) of the fabric, and of the fixity of the price, which will ensure consumers' confidence and consequently command better sale. The price would, of course, be fixed in consultation with the group or groups concerned, and after due consideration of the market competitions. Subject to this, the weavers should be given as reasonable a margin of profit as is possible.

(2) **Selling arrangements.**—The sale stores proposed before will purchase and sell only such articles as bear these labels and no others. Weavers will be at liberty to sell the products direct to any other party also. A selling commission not exceeding 9½ per cent. is to be given to the stores and other sellers.

(3) **New markets.**—Government workers in other places, particularly in distant consuming centres, will, when they can secure orders, place orders for such standardised articles with group-weavers only.

(4) **Advertising.**—Trade lists of standard fabrics, produced by such weavers, will occasionally be issued to sellers and to press, and given publicity in other possible ways.

(5) **Free technical advice and assistance.**—Group system weavers will be given free advice, information and assistance on technical

matters, designs, market conditions, etc. Some deserving weavers may be given stipends for study in the Serampur Institute. They will be given facilities for purchasing the appliances on hire purchase terms. The heads of such groups may be given free licenses for stocking and selling yarn to weavers of their respective groups.

In addition to the above, such other facilities as may be found practicable, will be given to these weavers.

246. Formation and constitution of groups.—Once we can induce the weavers to work in groups, it would be easy to effect technical improvements in the fabrics in all possible lines. These groups, it must be stressed, are not to be formed with heterogenous elements, taken by the organisers from the nearest available weavers. It is desirable that each group should contain the same number of families, say 7 in all, including the head-man, and these families should, as far as possible be neighbours. But the success of the entire scheme will depend on each weaver selecting the brother weavers of his group or in other words, all the weavers in any group must be socially and in other ways friendly to each other. They should be of one party, if there are parties in the village; they should all voluntarily own allegiance to the head or mandal whom they themselves consider their chief. Any laxity in following this principle will bring chaos, disputes and difficulties. All groups so formed in an area will be registered and given a registration number which will appear in the label of their products. Any member of a group or any group producing fabrics not allotted to it or producing articles not of the standard specification, will be rigorously driven out from the organisation, unless the Head Men concerned let him or it off, for the first offence only, with a lighter punishment. The organisers will be only advisers and friends and must not assume dictatorial or bossing attitude, on pain of dismissal. These are the general outlines of the plan in which group system is to work. The advantages of working in this system are so obvious that it should not be difficult to introduce the system with success.

CHAPTER XXXVI.

Organisation of the Industry and Staff therefor.

247. **Staff.**—The Government organisation for introducing the systems of work and improvements suggested in the foregoing chapters will naturally be a branch of the Department of Industries. In the experimental stage, the following staff will be required by the Director of Industries:—

- (1) One Superintendent for the Improvement of Hand-loom Weaving Industry.
- (2) Six Inspectors.
- (3) Twenty-eight organisers.
- (4) Two Design-artists.
- (5) Six Technical advisers.
- (6) Two Marketing assistants.

and clerical and menial staff. The Superintendent, Inspectors and organisers should be men with winning manners, tact and great organising ability. They will not need much technical knowledge; what little they will need, can be given them during a fortnight's training at the Serampur Institute.

248. **Area for work—Work for organisation.**—Five most important weaving centres of the province should be selected first, for experiment. Important centres will be those where large number of weavers are found in a compact area. To each such centre which will be named improvement circle, will be posted one party of field-workers, containing 1 Inspector, 5 organisers and one technical adviser. The locality to be served by each party will be divided into five blocks, with about 700 weavers in each, and each such block will be given to one organiser. The Inspector with the Technical Adviser, will be in charge of the Improvement Circle. The work of these officers will, roughly, be as described below.

249. **Work for Organiser.**—The organiser will start by visiting all the villages in his area and mixing with the weavers intimately. He will, during first 2 or 3 months, obtain detailed information about the kinds, qualities and quantities of fabrics produced by the weavers of his block; their wants, yarn supply, markets and other similar matters. He will explain the Government plan for the improvement of the industry, its advantages and possibilities and gradually win their confidence. He will find out who are the leading weavers in his block and arrange to bring them together. He will study the party feelings, the rivalry amongst weavers of different villages and groups and try, as far as possible, to create a friendly atmosphere between them and more particularly, towards himself. When sufficient progress is made in these lines, he will put up concrete proposals, for the formation of groups, to the weavers in general and their chiefs in particular, and ask them to find out mutual friends to form groups. The actual registration of groups will begin in the third month of their work and should then proceed apace. In the next six months, about six groups per

month ought to be formed and thereafter from 10 to 12 per month would be easy. It should be his endeavour to bring all the weavers in his block into the system, by the 18th month of his work; but progress must show steady increase from the fourth month or else the worker will have to be changed. When groups are formed, he will issue labels for the products and frequently inspect the weavers to see if standards are being maintained. He will also inspect work of the yarn dealers and dyers to see if they are following the conditions imposed by the licence. The general lines on which group system will be worked have been described before. The Organiser will have also to induce all these weavers to use nothing but hand-loom products for their own families.

250. **Work for Inspector.**—The Inspector will assist the organisers generally, attend and address meetings of weavers, get into touch with and acquire friendship of yarn dealers and cloth sellers, see that the organisers work in proper way and generally help to make the organisation a success. He will also have to find out suitable persons to combine for starting the store, the establishment of which has been suggested in Chapter XXXII, and arrange to start it during the third or fourth month of the work, so that as groups grow in number, the store can sell larger quantities of their goods. He will have to be the head of this organisation, and in that capacity, to get into touch with the local leaders of all classes and enlist sympathy for hand-loom products.

251. **Work for Technical Adviser.**—The Technical Expert will go round the circle, popularising improved appliances and looms, demonstrating on weavers' own looms how better work can be done in shorter time, introduce the designs sent out from head office, and give technical advice, instruction and help to the weavers of his circle.

252. **Designers.**—The two designers will go round consuming centres, where the fabrics of the group-system of weavers are mostly sold, watch and ascertain the tastes and fashions likely to be in demand in such areas, sketch out such designs and send such sketches to the headquarters whence these will be circulated to the Inspectors concerned for introducing the same through groups which produce such fabrics.

253. **Head office staff—Marketing assistants.**—The Inspector at headquarters will deal with correspondence, bills, enquiries from consuming centres and officers of other departments (who will be asked to use their influence with cloth dealers to stock and push the sale of the hand-loom products), register and pass on orders for fabrics from distant markets and generally be in charge of the head office when the Superintendent will be touring. The three organisers at head office are meant as leave reserve but at other times they will be sent, along with the two marketing assistants, to, and work in, Calcutta and other centres to secure orders from cloth dealers for the hand-loom products.

254. **The Superintendent.**—The Superintendent will be in charge of the whole operation and help, guide and supervise the work of the whole staff. The importance of having the right kind of Superintendent who can work and inspire work, who believes in and can create a belief in the success of the venture, and who can command respect and confidence from local people easily, cannot be too much emphasised.

He must besides, have organising capacity, imagination and capacity to look ahead. He will work under the direct supervision of the Director of Industries and should be given such help as he may require from Collectors, Subdivisional Officers and other local officers. It may be necessary, or from tactical point of view desirable, to constitute advisory committees from local leaders and leading Mahajans, for advising on problems of prices, production and marketing. These and other details will be left to the Superintendent. The licensing of yarn dealers and dyers will, to start with, be done by Inspectors with the approval of the Superintendent.

CHAPTER XXXVII.

Cost of the Proposed Organisation.

255. **Licensing income and expenditure.**—It has been suggested that yarn dealers and dyers are to be allowed to trade only under licenses. In our enquiry, we have found that there are about 3 yarn dealers to every 100 weaving families and about 1 dyer. With nearly 96,000 weaving families in the province, there must be about 3,840 or roughly 4,000 yarn dealers and dyers. At a nominal license fee of Rs. 2 per annual license, the income from this source will be about Rs. 8,000. Licenses may be issued through Circle Officers in places where the group system will not be working and then it won't involve much additional cost. The licenses will be printed and issued by the Superintendent. The cost for printing and issuing licenses, for communication of names of licensed vendors to local officers, etc., would come up to say about Rs. 2,000. The remaining Rs. 6,000 will be available for expenditure in the improvement work.

256. **Cost for staff.**—The cost of the proposed staff will be as follows per mensem:—

	Pay.	Travelling allowance.	Contingencies.	Total.
	Rs.	Rs.	Rs.	Rs.
(1) Superintendent	400	200	20	620
(2) Six Inspectors @ Rs. 60	360	100	30	490
(3) Twenty-eight Organisers @ Rs. 40	1,120	280	60	1,460
(4) Six Technical advisers @ Rs. 50	300	90	60	450
(5) Two Designers @ Rs. 50	100	40	40	180
(6) Two Marketing Assistants @ Rs. 50	100	40	40	150
(7) Two clerks and one typist	130	..	..	130
(8) Two peons at headquarters @ Rs. 15, one orderly of Superintendent @ Rs. 15 and five peons at five circle headquarters @ Rs. 10.	95	25	..	120
(9) Licensing expenditure .. ..	..	..	..	150
(10) Postage, printing, contingencies, office rents and miscellaneous (including publications of design booklets, trade lists, labels for products, etc., etc.)	..	..	..	200
Total per month .. ..	..	..	..	3,950
Per annum Rs. 3,950 × 12 .. ..	..	..	..	47,400
Add margin for unforeseen and initial expenses.	..	..	..	600
Total annual cost .. ..	..	..	..	48,000

257. **Expenditure on and loans to, sale stores.**—In addition to the above, it has been proposed that each of the five stores to be established

in the five circles, should be advanced a loan of Rs. 1,500, which would mean a cost of Rs. 450 per year on interest (to be paid by the Government) and the subsidy of Rs. 10 per mensem, to each store, would cost Rs. 600 more. With these expenses, the total cost for putting the scheme into operation would roughly be Rs. 50,000 for the first and second years, of which about Rs. 8,000 will be available from license fees, if that system is simultaneously introduced in the whole province. Even without it, the cost of Rs. 50,000 per year for the sake of an industry which obtains for the people nearly Rs. 86.8 lakhs as profit, and supplies products worth Rs. 323.1 lakhs approximately, will not, probably be considered heavy. If the scheme succeeds, and there is no reason why it should not, the improvement effected will give back many times of this amount to the province.

257A. Cost for other schemes.—Estimates of cost for the establishment of calendering machines are not given, as that project will be self-supporting and will not, therefore, really cost Government anything.

The cost for extra staff mentioned in paragraphs 231 and 232 may, perhaps, be met from the existing budget allotment of the Department of Industries. If this cannot be done, the extra staff mentioned there will cost about Rs. 3,000 to Rs. 4,000 more annually, and this can be met from the surplus income from licence fees. The Government will thus not have to spend more than Rs. 50,000 on the scheme per annum, in any case.

258. Future work.—After the first two years, when the first five circles will have been organized, we need leave the Inspectors and Technical Advisers in these areas to pursue the work to its natural development, viz., to form regular Co-operative Primary Societies with the groups and a Central Society with all such primary societies and the sale store, of each circle. • The organisers, the best of them being made Inspectors, will be sent to other areas. Once the movement catches on, each organiser will be able to deal with larger areas and more stores will be formed, thus providing independent and useful occupation to many Bhadrolok youths. The Inspector and Technical expert left behind in each circle will eventually be absorbed in the Industrial Union (Central Society) as its Secretary, etc.

259. Legislation.—To enforce the licensing system, to make the (label) trade marks inviolable, and to give some status to the stores and groups, some sort of Legislation will, perhaps, be necessary. If the Board and Government accept the principle of the suggestions, I shall be glad to submit a draft for consideration.

260. Present scheme and scheme before the Industrial Conferences.—I venture to add that the Bengal Scheme put forward before the Seventh Industrial Conference (Bulletin of Indian Industries and Labour No. 56—Page 13) proposed an expenditure of about Rs. 35,500 in four months of 1934-35 and Rs. 80,000 for the year 1935-36. The scheme advocated there would help the Co-operative Industrial Societies no doubt, but it is doubtful if that would help the ordinary hand-loom weavers except in a very remote and indirect manner.

If the idea is to help selected concerns or societies, then it would not compare with the suggestions I am making for the Board's consideration, as these are based on entirely different premises. If the real

weavers' improvement is to be our immediate objective, I submit that the course of activities suggested herein would be a much better line of work for the achievement of our end.

261. **Summary.**—To summarise the main suggestions:—

(1) Yarn dealers should be brought under control by making it illegal to deal in yarn without license. (Paragraph 219.)

(2) Licensees are to grant detailed memorandum to all purchasers, describing the commodity given, payments made and arrears due. (Paragraph 217.)

(3) Dyers should similarly be allowed to trade only under license and same person should not be given license to dye or sell both fast and loose dyed yarn. (Paragraph 220.)

(4) An experimental staff should be engaged for two years at an annual cost of Rs. 48,000, to organise the weavers into voluntary groups, for distribution of the production work and for obtaining standardised goods. (Chapter XXV and paragraph 256.)

(5) Five subsidised stores to be opened experimentally, for popularising the products amongst local consumers, at a cost of about Rs. 1,200 per year, for two years and a loan of Rs. 7,500 to be advanced to these stores—repayable in ten years' time. (Paragraph 210.)

(6) Erecting 3 or 4 calendering machines in important centres for improving the finish of hand-loom products. (Paragraph 236.)

(7) Introducing cheaper Jacquards, sale thereof on easy instalment terms, and assisting the weavers in making use of these, by technical advice and design suggestions. (Paragraphs 231, 232, 233.)

(8) Exploring the possibility of establishing spinning mills for supply of cheaper yarn. (Paragraphs 222-226.)

CHAPTER XXXVIII.

Acknowledgment.

262. I cannot close this report without referring to the very valuable services which have been rendered by the different public bodies, officials and certain public spirited gentlemen in conducting this survey successfully in their respective areas. The District Boards of all the districts taken up for survey (except Noakhali) permitted our workers free occupation of their Bungalows. The Chairmen of Municipalities and Presidents of Union Boards almost everywhere helped our workers in various ways. We are particularly grateful to those gentlemen who gave lodgings to our workers during their stay in the different areas. Some of them even insisted on the workers being their guests during such stay. District, Subdivisional and Circle Officers gave all possible and necessary help to our workers in securing local assistance and co-operation: What success we have achieved in our work has been greatly due to the ungrudging assistance received from these officials, non-officials and public bodies. On behalf of the Sub-committee which has directed me to do so and also on behalf of workers and myself, I take this opportunity of conveying our grateful appreciation and thanks to all of them for their valuable assistance, ungrudging co-operation and unfailing courtesy.

263. I should like in particular, to bring to the notice of the authorities the extremely valuable assistance and wholehearted co-operation rendered by the gentlemen and officers named below:—

1. Mr. Subhendu Sekhar Bose, M.Sc., P.R.S., Statistical Laboratory, Calcutta.
2. Mr. S. N. Modak, Head Master, District Weaving School, Tangail.
3. Mr. Apurba Kumar Hazra, Zamindar, President, Kolapara Union Board, Dacca.
4. Moulvi Jalaluddin Ahmed, Sanitary Inspector, Shibganj, Malda.
5. Mr. Sudhir Kumar Banerjee, Statistical Laboratory, Calcutta.
6. Mr. Bidyut Kumar Raha, B.J.C.S., Circle Officer, Ghatal.
7. Mr. Pyari Mohon Guha, President, Karatia Union Board, Mymensingh.
8. Mr. Debendra Kumar Lodh, Instructor of Government Peripetatic Weaving School, Kishoreganj, Mymensingh.
9. Mr. Kamini Kumar Neogi, President, Pathrail Union Board, Mymensingh.
10. The Head Master, Weaving School, Birbhum.
11. Moulvi Syed Mahmed Alam, President, Tantipara, Union Board, Birbhum.
12. Dr. Santosh Kumar Mukherjee, Kaya, Nadia.
13. Mr. Jogendra Kumar Dey, Shinghadanga, Ghatal, Midnapore.

264. A list of the workers who were employed for the survey, is given below. Practically all of them worked well and hard, but I

should like to commend the specially good work done by the following workers to the notice of the Sub-committee and of the Board:—

1. Babu Dharendra Mohon Ganguly, M.Sc., Field Inspector.
2. Babu Sukhendu Bikas Datta, B.Sc., Investigator.
3. Babu Chandra Kanta Bhattacharjee, B.A., Investigator.
4. Babu Premananda Kundu, A.G.W.I., Investigator.
5. Babu Manmotho Nath Chakravarti, Investigator.
6. Moulvi Akbar Hossain, B.A., Investigator.
7. Babu Ganesh Chandra Mukherjee, Assistant Investigator.
8. Babu Nagendra Nath Chatterjee, Investigator.
9. Babu Satyabrata Ray, M.A., Headquarter Inspector.
10. Babu Nani Gopal Mahalanobis, Assistant at Headquarter.
11. Babu Haraprasad Chakravarti, Design-artist.

List of Workers.

Supervisor.

- Babu S. N. Sen Gupta, M.A., B.L., Probationary Munsif. (From 13-12-1935.)
- Babu Nihar Chandra Chakravarti, M.A., B.C.S., Assistant Secretary to the Board of Economic Enquiry, Bengal. (From 1-3-1936.)
- Babu Satyabrata Ray, M.A., Inspector at Headquarters.
- Babu Haraprasad Chakravarti, Design-artist.

Headquarters Staff.

- Babu Nani Gopal Mahalanabis, Clerk-typist.
- Babu Jyotirmay Karkun, B.A., Head Computer.

Field Inspectors.

1. Babu Dharendra Mohon Ganguly, M.Sc.
2. Babu Amiya Gopal Barman Roy, M.A.

Investigators.

1. Babu Chandra Kanta Bhattacharjya, B.A.
2. Babu Jibtosh Guha Thakurta.
3. Babu Dharanidhar Ganguly, A.G.W.I.
4. Moulvi Saleh Ahmed, B.A.
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6. Babu Jiban Kumar Banerjee.
7. Babu Manmatha Nath Chakravarti.
8. Babu Sailendra Kishore Dey, A.G.W.I.
9. Moulvi Akbar Hossein, B.A.

10. Babu Kanti Ranjan Banerjee, B.A.
11. Babu Debendra Nath Dasgupta.
12. Babu Adhir Chandra Chakravarti.
13. Moulvi Reza Hossein, B.A.
14. Babu Bijoy Madhab Mukherjee.
15. Babu Haripada Banerjee.
16. Babu Paresh Chandra De, M.A.
17. Babu Bishnupada Paul, A.G.W.I.
18. Babu Premananda Kundu, A.G.W.I.
19. Babu Ramsankar Ganguli, B.A.
20. Moulvi Faizar Rahaman.
21. Babu Paritosh Kumar Mukherjee.
22. Babu Sukhendu Bikas Datta, B.Sc.
23. Babu Jibendra Kumar Gupta, B.A.
24. Babu Dinesh Chandra Biswas, M.A.
25. Babu Nagendra Nath Chatterjee.
26. Babu Paresh Chandra Datta.

Assistant Investigator

1. Babu Ganesh Chandra Mukherjee.
2. Babu Chuni Lal Chakravarti.
3. Babu Pramatha Bhusan Roy.
4. Babu Jitendra Nath Chakravarti.
5. Moulvi Kafiluddin Sikdar.
6. Babu Abani Mohon Datta.
7. Babu Satish Chandra Acharyee.
8. Babu Ratneswar Chakravarti.
9. Babu N. N. Paul.
10. Babu Bimal Kumar Bhattacharya.
11. Moulvi Abdul Barek Talukdar.
12. Babu Nripati Mohan Bose.
13. Babu Brajendra Mohan Chakravarti.
14. Babu Birendra Nath Gope.
15. Babu Gopi Mohan Acharyee.
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