CHAPTER VII

REVIEW OF EXISTING INDUSTRIES AND THE IMPORTANCE OF COTTAGE AND SMALL SCALE INDUSTRY IN THE ECONOMY OF BANKURA DISTRICT

The purpose of this chapter is to show the importance and the key role of the cottage and small scale industries in Bankura, where it has always been considered as supplementary component of development. From the previous chapters we get an idea that although agriculture plays a predominant role in Bankura's economy and the major share of total workers are cultivators and agricultural labourers. The growth of the industrial workers has been remarkable over the 10 years period from 1971 to 1981.

An attempt has been made in this chapter to analyse the industrial structure of the district (between the period 1981 to 1991) in respect to the different industrial units up during this period, the employment generated from them and their production (where it was possible to collect).

Large and Medium scale Industries

There exists no large scale industry in the district. The Mejhia Thermal Power Project is being implemented by the D.V.C. for production of 630 MW in 3 units of 210 M.W. each. It is estimated that 2000 persons, both skilled and unskilled will have employment opportunity, along with various
ancillary industries centering this project. It is yet to start production, as construction work is under way.

During the 7th Five Year Plan period some medium scale industries had come up in the district, with the help of WBDIC and some are under construction. The details of which is given in Table 7A.

Besides these the following units are to be completed very soon.

1) Flour Mill Unit at Borjora
2) Nut bolt factory in Chatna
3) Aluminium utensils unit at Khatra
4) Iron forging unit at Ratanpur
5) Medicine manufacturing unit in Bishnupur
6) Phosphate factory at Ranisagar
7) Spinning mill (Co-op sector) unit in Borjora.
<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Name of Units</th>
<th>Location</th>
<th>Product</th>
<th>Project cost (Rs. lakh)</th>
<th>Employment prospect</th>
<th>Present status</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Shivaji Electrosteel</td>
<td>Borjora</td>
<td>Iron Casting</td>
<td>127.50</td>
<td>-</td>
<td>Not Started</td>
</tr>
<tr>
<td>2.</td>
<td>E.M.K. Polytex</td>
<td>Borjora</td>
<td>H.D.P.E. Woovensack</td>
<td>183.00</td>
<td>125</td>
<td>Started</td>
</tr>
<tr>
<td>3.</td>
<td>Bankura Cold Storage</td>
<td>Patrasayer</td>
<td>Cold Storage</td>
<td>104.00</td>
<td>18</td>
<td>-do-</td>
</tr>
<tr>
<td>4.</td>
<td>Dieless Forge</td>
<td>Borjora</td>
<td>Forged Steel</td>
<td>340.00</td>
<td>70</td>
<td>Under implementation</td>
</tr>
<tr>
<td>5.</td>
<td>Baishali Multilayers</td>
<td>Kotulpur</td>
<td>Multi - Layer film</td>
<td>164.00</td>
<td>72</td>
<td>implemented</td>
</tr>
<tr>
<td>6.</td>
<td>Shiva Durga Oil Co.</td>
<td>Borjora</td>
<td>Rice Bran Oil</td>
<td>129.00</td>
<td>68</td>
<td>implemented</td>
</tr>
<tr>
<td>7.</td>
<td>Cellulose Container</td>
<td>Borjora</td>
<td>Composite Container</td>
<td>127.00</td>
<td>45</td>
<td>implemented</td>
</tr>
<tr>
<td>8.</td>
<td>Exodus Kuitware</td>
<td>Bishnupur</td>
<td>Hosiery Products</td>
<td>258.00</td>
<td>76</td>
<td>implemented</td>
</tr>
<tr>
<td>9.</td>
<td>Blue Plast extrusion</td>
<td>Patrasayer</td>
<td>Multi-layer film</td>
<td>271.00</td>
<td>50</td>
<td>Under implementation</td>
</tr>
<tr>
<td>10.</td>
<td>Pal Cold Storage</td>
<td>Bhadul</td>
<td>Cold Storage</td>
<td>100</td>
<td>18</td>
<td>Implemented</td>
</tr>
<tr>
<td>11.</td>
<td>Crodenco Plasto Ind.</td>
<td>Borjora</td>
<td>Moulded T.V. Cabinet</td>
<td>174.00</td>
<td>58</td>
<td>Construction started</td>
</tr>
<tr>
<td>12.</td>
<td>Bijoy Narayan Cold Storage</td>
<td>Bankadaha</td>
<td>Cold Storage</td>
<td>135.00</td>
<td>20</td>
<td>Under implementation</td>
</tr>
</tbody>
</table>
MEDIUM SCALE INDUSTRY OF BANKURA DISTRICT
1990-1991

INDEX

1. NO INDUSTRIAL
2. 1 INDUSTRY
3. 2 INDUSTRIES
4. 4 INDUSTRIES
5. 10 INDUSTRIES

BLOCKS
2. BANKURA I
3. BANKURA II
4. CHATNA
5. SALTORA
6. MEJHIA
7. GANGAJALGHATI
8. BORJORA
9. ONDA
10. BISHNPUR
11. SONAMUKHI
12. PATRASAYER
13. INDAS
14. JOYPUR
15. KOTULPUR
16. KHATRA I
17. KHATRA II
18. INDPUR
19. RANIBANDH
20. TALDANGRA
21. SIMLAPAL
22. RAIPUR I
23. RAIPUR II

FIG 23.
Two joint sector units of W.B.D.I.C. to be implemented in this district are as follows:

1. **B.O.P.P. Film Project**: This is to be implemented at Borjora with Birla eastern investment Ltd. to manufacture biaxially oriented polypropylene film. The estimated cost is Rs. 3140 lakhs, expected employment is to be 140 persons approximately.

2. **F.F.Y. Project**: The project is being implemented in joint sector with Birla Eastern Ltd. at Borjora to manufacture polyester filament yarn at an estimated project cost of Rs. 187 lakh. The employment potential is estimated to be about 530 persons.

The clockwise distribution of the medium scale units is illustrated in Fig. 23. Borjora and Onda recorded the highest number of units of 10 each. 4 units are located in Bisnupur and 2 in Patrasayer.

**Cottage and Small Scale Industries**

In the absence of large scale and medium scale industries, the cottage and small scale industry played an important role in Bankura district from time immemorial. Although the establishment of British Rule brought about certain fundamental changes in the self-sufficient village economy, and inspite of the operation of so many adverse factors, many of the cottage
industries did not altogether disappear. The Government's policy towards the cottage and small scale industries since independence underwent a welcome change. It was recognised that these industries have a significant contribution to make in the context of the two fold problem of (1) expanding the employment (2) increasing the supply of the consumer goods, as these are labour intensive forms of production.

The cottage and small scale sector is further divided into sub-sectors (1) Cottage & Small Scale Units, (2) Handicraft, (3) Handloom weaving, (4) Village industries, which are grouped under the K.V.I.B.

The number of cottage and S.S.I. units registered with the DIC in Bankura in 1986 was 7479 (as in 13.3.1986). This increased to 7655 in 15.3.1991 (excluding handloom). In 1991 there were 2911 registered S.S.I. units, generating employment to 17,468 persons. There are 32 types of industry in this sector which is given in appendix 20. The blockwise distribution of the S.S.I. unit as in 1991 is illustrated in Fig. 24. Highest concentration of units (i.e. 300 and more) had taken place in Bankura west (Block - 2). In 12% of the blocks (Onda, Simlapat and Kaipur - I), there were 201 to 250 units. 40% of the blocks registered 101 to 150 units. The least number of units (i.e. less than 100 units)
BLOCKWISE STATUS OF S.S.I.
UNITS OF BANKURA Dt.
1991

Fig 24.
DISTRIBUTION OF COTTAGE AND SMALL INDUSTRY WORKERS IN BANKURA DISTRICT (1991)


Fig. 25.
was registered in 20% of the blocks. This gives a very dismal picture. So future plans must cover these comparatively backward areas of Raipur, Ranibandh, Mejhia and Taldangra.

The Blockwise position as regard to employment registered in the above units, is shown with the help of bargraph in Fig. 25. Bankura-II which had registered 201 to 250 units, registered the highest number of employment of 3534 persons, followed by Bishnupur 1780 workers. Borjora which registered 298 units provided employment to 1892 persons. In the other blocks the employment ranged from 96 in Mejhia to 987. Khatra registered 1127 workers.

The development trend of the S.S.I. Units and employment for a 10 years period (from 1981 - 1991) has been computed with, the help of the regression equation and plotted in Fig. 26. The formula used is -

\[ Y = a + bx, \]
\[ \text{where } a = \bar{Y} - b\bar{x}, \quad b = \frac{\sum xy - \bar{y}n \sum x \sum y}{\sum x^2 - \bar{x}^2 n (\sum x^2)} \]

The regression for employment is:

\[ Y = 520 - 17.77 x. \]

For unit is: \[ Y = 65, \]

i.e. there has been a decline of 3.41% of employee per year.

Although in the long term analysis it is seen that there
DEVELOPMENTAL TRENDS OF SMALL SCALE INDUSTRIES OF BANKURA DISTRICT

\[ Y = 520 - 17.77X \]

FIG 26.
was no decline in the number of units, the number of workers declined. This may be due to the fact that because of lack of finance, some of the units remained in non operational conditions, some pulled the shutters down due to sickness, as a result the workers turned to other fields for income. The small scale production in the district suffers from technological deficiencies and therefore have limited employment capacities.

Several steps was taken upto advice and assist in the formulation of programmes of development for the small scale industries. The All-India Board created several Khadi and village industry board. In almost all the states, statutory state Khadi and Village industry boards were created under legislation sponsored by the State Government. Thus a 3 tier organisation was developed to render financial, technical, marketing assistance to the industries and provide protection against the competition of large scale industries.

In Bankura there were 15 types of units which were registered under the Khadi and Village Board in 1991. The details of which is given in Appendix 21. The total number of units registered till 1991 was 3376 and the employment registered in these units was 4467.

The distribution of the Khadi and Village Industry unit is illustrated in Fig. 27. The highest concentration of
FIG. 27.
units of 251 to 300 units was found in Bankura I, followed by Simlapal, Onda and Raipur with 201 to 250 units, Mejhia had the least number of units (45), it had also registered lowest number of S.S.I. units. 64% of the blocks registered 101 to 200 units. Except for 2 or 3 exceptions, the village and khadi units were well distributed.

The number of new units set up each year from 1986 to 1991 and their corresponding employment has been plotted in Fig. 28. During the five years the highest number of unit was registered in the year 1989-1990 when 794 units employed 2350 persons. With the help of regression analysis the developmental trends of the village industry units and employment registered in these units is found out and the plotted in Fig. 29.

\[ Y \text{ for unit is } Y = 45.3 X + 613 \text{ i.e. 7.4\% increase of units per year.} \]

For Employment \[ Y = 70.9X + 1929.5 \text{ i.e. it registered 3.67\% growth of worker per year from the year 1986 to 1991.} \]

The District on a whole registered higher percentage of increase of the village industry unit as compared to the workers registered in the S.S.I. unit. Unlike the S.S.I. units the village industry had made better progress in the decade of 1980's but even then the growth has not been remarkable. To study the fluctuation of the units under different industrial groups, the coefficient of variation has been computed.
PERFORMANCE OF THE KHADI AND VILLAGE INDUSTRIES OF BANKURA DT.
1986-1991

NUMBER OF UNITS

EMPLOYMENT

YEAR

FIG. 28.
DEVELOPMENTAL TRENDS OF KHADI & VILLAGE BOARD OF BANKURA DISTRICT

FIG 29.

NUMBER OF UNITS

EMPLOYMENT

Y = 70.9X + 1929.5

Y = 45.3X + 613

YEAR

1986-87 87-88 88-89 89-90 90-91

\[
C.V. = \frac{S.D.}{X} \times 100
\]

The C.V. for the different industries is plotted in Fig. 40. The C.V. varies from 48.4%, to 341.53%. It is seen that units of P.C.P.I., cane and bamboo, village pottery, conch shell, are more or less evenly distributed throughout the district. Whereas the fibre units, T. Ghanj show high C.V. value, which implies high fluctuation. These are raw material based units and so they are found to be located in the proximity to the raw material sources and are not evenly distributed.

LAC is widely cultivated in the district, the activity is mainly concentrated in the blocks of Chatna, Saltora, Mejhia, Gangajalghati, Khatra I and II, Indpur, Raipur I and Bankura. In 1990 the production of Lac in the district was:

- Broad lac produced - 82402 kg
- Sticklac produced - 10,000 kg.
- Shellac produced - 21,000 kg.

Lac is a natural resin of great industrial use. It is used in the field of surface coating, adhesive plastic, electrical insulation etc. In recent years it is being replaced by the synthetic resins, but due to its unique properties it is still used in most industries, and modern
Lorenz Curve

Cumulative Percentage of Industrial Units

Cumulative Percentage of Area

Coefficient of Variation of a Few Small Scale Industries (1991)

<table>
<thead>
<tr>
<th>No.</th>
<th>Industry</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>P.C.P.I.</td>
</tr>
<tr>
<td>2</td>
<td>CANE AND BAMBOO</td>
</tr>
<tr>
<td>3</td>
<td>VILLAGE LEATHER</td>
</tr>
<tr>
<td>4</td>
<td>LIME (CONCH SHELL)</td>
</tr>
<tr>
<td>5</td>
<td>VILLAGE POTTERY</td>
</tr>
<tr>
<td>6</td>
<td>OIL GHANI</td>
</tr>
<tr>
<td>7</td>
<td>BELL METAL</td>
</tr>
<tr>
<td>8</td>
<td>FIBRE</td>
</tr>
<tr>
<td>9</td>
<td>SAW WOOD PLANED</td>
</tr>
<tr>
<td>10</td>
<td>CARPENTARY</td>
</tr>
<tr>
<td>11</td>
<td>GATE AND GRILL</td>
</tr>
<tr>
<td>12</td>
<td>REPAIRING OF VEHICLES</td>
</tr>
</tbody>
</table>
use is forthcoming 80% of the lac produced is an export item.  
The prospects of lac development is bright in the district.  
New centres should be commissioned in different parts of the  
district where new plantation of lac hosts (Ber) will be  
raised. It will serve the triple role of food production,  
tribal welfare and foreign exchange.

To find out the spatial distribution of the workers  
employed in the cottage and small scale industries. The  
weighted mean centre has been found out. The measure of  
dispersion around the centre is the standard distance (intro-  
duced by sacni). By constructing arbitrary X and Y axis  
around the areal distribution and locating each points by  
its X and Y co-ordinates, the weighted mean centre is found  
out by multiplying the value of X and Y by the weighting  
factor, i.e. no. of workers in this case and thereafter taking  
the mean with respect to the weighting factor.

The standard distance is  

\[ S.D. = \sqrt{\frac{s^2_X + s^2_Y}{n}} \]

where the \( S^2_X \) and \( S^2_Y \) are the variances of the X and Y  
co-ordinates. The values for each police station is given  
in Fig. 31 and App\text{ro}x. weighted mean of X co-ordinate is 7.31  
cm and weighted mean for Y co-ordinate is 10.45 cm  

\[ S.D. = 4.97 \text{ cm} \text{ (with a scaling factor of 1 cm = 6.80 \text{ km})} \]
DISPERSION OF WORKERS OF COTTAGE & SMALL SCALE INDUSTRY IN BANKURA Dt.

INDEX
- HEADQUARTERS OF POLICE STATION
+ WEIGHTED CENTRE (mean)
* AREAL CENTRE (mean)

STANDARD DISTANCE (radius) = 4.97 cm = 33.80 km

FIG 31.
It is evident from Fig. 31, that the weighted mean centre as well as the areal mean centre of cottage industry workers is located in Onda Police Station. Taking weighted mean as the centre, a circle for standard distance is drawn. As the circle covers the major portion the district, it implies that the workers of the cottage and small scale units are more or less well dispersed. The regions which are encircled have greater tendency to be centralised around the weighted mean centre, but, as the circle covers 85% of distance in the north, 80% of distance in the south, 100% of distance in the east and 60% distance in the west, it implies that the workers are dispersed, which is essential for a balanced regional development.

The Lorenze curve plotted in Fig. 32 confirms the validity of the above inference. The curve indicates that the units of the cottage and small scale industries are evenly distributed in the district. The low value of Gini's coefficient variation (0.38) also supports the inference drawn from the standard distance coverage, which is explained in the previous paragraph.
DISTRIBUTION OF COTTAGE & SMALL SCALE INDUSTRY WORKERS OF BANKURA DT. 1991

INDEX
- AGRO BASED UNITS
- FOREST BASED UNITS
- MINERAL BASED UNITS
- CHEMICAL BASED UNITS
- ENGINEERING UNITS
- LEATHER UNITS
- MISCELLANEOUS UNITS

FIG 33.
The handicraft is another important segment of the cottage industry. The district had a long tradition of handicrafts since the reign of the Malla dynasty (1586-1805 A.D.) (The different types of crafts has been discussed in Chapter V). This district witnessed a fairly high rate of drift of the village artisans from their respective areas of skills to agriculture. Inspite of the constraints faced by the rural artisans, many have still stuck to the craft, and they produce a wide range of handicraft products.

From a survey conducted by NISTADS D.R.D.A., D.I.C. and District Planning Cell in 1988-90, it was found that there were 31,168 artisans spread over all the blocks in the district, and in 1991 the total number of registered units was 1368, of which 851 were bell metal units, 197 conch shell, 100 bell mala, 80 stone engraving, 12 sholia, 18 dhokra, 11 terra-cotta units and 7 units were engaged in manufacturing Baluchuri sarees.

In 1988 five handicraft artisans of the district have been selected for national award in Doksa, Conch shell, stone carving and terra-cotta. The economic condition of the artisans is very pathetic, the earning from the craft is not sufficient for their sustenance, so they turn to other sectors for their living. The industry is now going through a process of decay. In every sector a good number
of co-operatives were formed to assist the artisans, but at present none of them are functioning.

The artisans are skill based, hence modern technology is not their need, but supply of raw materials, better marketing arrangements, improvement of general level of earning among the artisans, will help in the preservation of the village craft, which was once the main source of income of a large percentage of the village workers.

Thus the industries which have been dealt with in this chapter, do not by any means form a homogenous group. Their industrial characteristic display a variety and diversity. Some follow technique of handicraft, some are conducted in homes with family labour including the part-time work of children and housewives, while others employ wage labour and occupy small factory buildings. Some are operated on a regular basis all the year around, while others are intermittent or seasonal industries. Some turn out finished products for sale to ultimate consumers, while a few specialise in components which are supplied to factories. Some are independently financed and operated while others depend to a considerable extent on traders and money-lenders.

With all this diversity the small scale industries are clearly distinguishable in type as well as in size from medium and large scale industries. Although a few medium
scale industries started production in the period between 1981 to 1991 and some are to start production in the near future. The cottage and small scale industry still dominates the industrial sector. In designing action programmes for industrialisation of the district, programmes for growth and expansion of the existing cottage and small scale industries is obviously necessary.

The processing of agricultural products like paddy, sugar cane, oilseeds, vegetables and fruits may be conducted by widely varying technologies, starting from fully automatic plants to husking, oil expellers and yur making units. In paddy processing all of the prehusking operations and winnowing after husking are done mostly by women. 75% to 80% of the total production of paddy is still being husked by rural women in their households with Dhenki. Although the number of custom mills are on the increase, Dhenki seems to remain as a viable alternative for paddy husking in Bankura. The setting up of a rice mill will result in the displacing of 300 women per mill, so the need here appears to indicate the adoption of some more labour intensive technology and also of organisational development among rural women to own and operate those methods. It may be mentioned that investigation at the Indian Agricultural Research Institute at New Delhi, also indicated that rice milling operation are best conducted with a semi-mechanis
mill which offer employment to 48 person as against 4 for a fully mechanised one, with about one fifth of the cost of the fully mechanised mill.

Similar development as mentioned for paddy husking need to be undertaken for the indigenous oil ghanis of which there are large numbers in Simiapal, Joypur, Saltora and Khatra. Efforts need to be directed to increase the capacity of oil ghanis. Presently the production of traditional oil-seeds e.g. rape and mustard and sesameum has increased from from 6,80000 M.T. in 1980 to 28,30000 M.T. in 1986, but this is not sufficient and can only cater to 25% of the districts demand. There are 32 oil mill in the district of which 11 are power operated, but the mills are heavily underutilised on account of non-availability of oilseeds and oilcake. There are other factors like uneven competition on account of wide disparity in rail freight structure on oilseeds and oil and multiplier effect of local taxes. Emphasis should be to increase the productivity of oilseeds through improved technology, to cater to the need of the oil-mills and ghanis.

Gur and Khandoesari are made in 598 and employ 614 person. They are spread throughout the district gur is produced by simple evaporation process, their are no sugar mills in the district although sugar cane is grown in many parts of Indas, Patrasayer and Kotulpur.
The prospect for the leather industry is bright. There is extensive supply of raw hides in the district. There are only 7 leather manufacturing units in the district, but 500 rawhide processing unit. 550 craftsmen were engaged in processing hides and skin in 1991. On the processing of raw hides there is the need for improved flaying techniques, and skill in proper selection and preservation.

The village pottery is another important industry in the rural areas. 353 units are spread throughout the district employing 688 persons. The men use primitive potter wheel and low temperature wood fired kilns to produce unglazed wares. The items produced are vessels for cooking, water carriers and containers.

Installation of mechanised oven and new products, glazed table wares, water filters, containers, can alter fate of this industry. Panchmura in Bankura Police station is ideal e.g. for the change.
The Handloom Industry

This leaves us with the Handloom industry. Of the Cottage industries, the handloom industry of Bankura has always occupied a paramount position. As discussed in Chapter V the artistic skills of the weavers of Bankura had spread far and wide. Bishnupur and Sonamukhi was renowned for their silk products, despite of very many problems by the weaver and the weaving industry, it still occupies a predominant position in the district household sector. As per 1981 census 23.58% of the household were exclusively weaving household. Others took it as an extra source of income. As per 1982-83 statistics, 85.95% of cottage and small scale workers were weavers, and were spread uniformly over all the Police Stations. Because of its predominance in the household sector this section has been discussed in detail.

Bankura is popularly known for its handloom products and handloom weaving. It is one of the oldest industries of the district providing the largest number of employment next to agriculture. The weavers attained a high degree of excellence during the hey days of Malla Raj and with the decline of the Malla Kings the decay of industries started, further the introduction of cheaper English piece goods towards the middle of the nineteenth century hit the weaving industry hard (The details of which have been dealt with in Chapter V).
THE DISTRICT INDUSTRY CENTRE, BANKURA.
With the view of placing the industry on the road to progress, the All India Handloom Board laid stress on the formation of handloom weavers co-operative society and in 1963 there were 96 societies in the district with a total membership of 5847. There were 15 handloom co-operative in Bankura town, 14 in Onda, 7 each in Taldangra, Simlapal, Raipur, Gangajalghati and Borjora, 1 each in Chatna, Mejhia, Saltora, Indpur, Manibandh, Bishnupur, Joypur, Sonamukhi, Patrasager and Indas Police Station.

Systematic reorganisation of the industry was taken up by the Directorate of Industries West Bengal, the Khadi and Village Board and the Handloom Board. The main object of these bodies were to (i) import training to the local weavers, (ii) to provide better marketing facilities by forming a marketing society and (iii) to arrange for procurement and distribution of raw materials. Even after such efforts not much improvement of the industry had taken place, the weavers started looking for alternative source of income. By 1977 there were only 8260 registered looms, the rest remained inactive.

Various types of looms are in operation in the district, viz. pitloom, framloom, and semi-automatic loom, producing items based on cotton, silk, wood and synthetic. In Bankura the looms are situated most in the houses of the
DEVELOPMENTAL TRENDS OF HANDLOOM INDUSTRIES OF BANKURA DISTRICT

FIG 34.
weavers of workshop owned by co-operative societies. Pre-
weaving operations, such as sizing, winding etc. are done
by wives and children. During the decade of seventies state
assistance to the weavers co-operative was provided in the
shape of improved designs, assistance in marketing the pro-
ducts. Improved appliances and semi-automatic looms were
 supplied to a number of weavers. As a result of such efforts
slow but gradual progress took place in the following decade,
i.e. from 1981 to 1991.

As is seen from the Fig. 34, the number of looms
operating increased from 11000 to 11742 from 1980 to 1982-83
and the number of weavers increased from 27500 to 29294 in
the same year. Thus there was gradual progress, and till
1983-84 the number of looms and employment had not reached
the figures it had achieved in 1961 (12105 looms and 30,000
weavers). The momentum increased from 1984, when the number
of weavers increased to 30605 working in 122242 looms by
1987-88. There were 12850 looms providing employment to
32125 weavers, and in 1991 the number of looms increased to
13650 with 34125 weavers operating on it.

According to the 1982-83 handloom census there were
9120 handloom units in the district, under which 10695 were
cotton looms, 870 were silk, 196 wool and 20 synthetic.
There were 12041 weavers operating in these looms. The
largest number of units were located in Bankura municipality.
where in 2968 units there were 4019 looms operating, 3890 looms produced cotton and 129 wool. Bankura P.S. is the main handloom weaving centre, in 1982-83 Bankura alone had 51.35% of the districts total looms, 53.90% of the district cotton looms and 10.57% of the districts silk loom.

Next improvement centre was Bishnupur where 1232 looms were operating, employing 3080 persons following by Indpur with 927 looms.

Of the 870 silk weaving looms 349 (40%) was located in Sonamukhi municipality, 178 in Patrasayer, 139 in Bishnupur municipality, 92 in Bankura, 79 in Joypur and 31 in Onda P.S.

Wool is also woven in the district, it is mostly centralised in Bankura P.S. Out of the districts 196 looms, 192 is alone located in Bankura P.S. of which 129 is located in Bankura town. The looms produce rough woolen blankets locally known as Kambal, and mostly sold in local markets, the surplus is procured by the co-operative societies.

Various types of looms are in operation in the district viz. 6830 pitloom, 4663 framloom, 248 semi-automatic looms. The traditional pattern of weaving is still predominant in the district, only 2.11% are semi-automatic looms, the rest are all hand-operated looms, this is one the main reasons for slow production. There exists no power-loom in the district. The method is crude and simple,
48% of the loom used yarn count's up to 20 and only 0.87% used yarn counts up to 100, none of the looms used 12 counts, the details are given below in Table 7B.

Table 7B. Pattern use of yarn

<table>
<thead>
<tr>
<th></th>
<th>1982 - 83</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>20' Count</td>
</tr>
<tr>
<td>Looms</td>
<td>4385</td>
</tr>
<tr>
<td>%</td>
<td>48%</td>
</tr>
</tbody>
</table>

The contribution of Bankura's handloom industry to the economy of West Bengal accounts for 10.53 percent of the state's handloom production, 6.0% of the state's unit. The percentage fig. of district to total is given in Table 7C.

Table 7C. Bankura's Percentage to West Bengal

(In per cent)

<table>
<thead>
<tr>
<th>Unit</th>
<th>Total No. of weavers</th>
<th>Total No. of Looms</th>
<th>Cotton Looms</th>
<th>Silk Looms</th>
<th>Woolen Looms</th>
<th>Synthetic Looms</th>
</tr>
</thead>
<tbody>
<tr>
<td>6.0</td>
<td>4.00</td>
<td>4.57</td>
<td>4.39</td>
<td>6.77</td>
<td>20.74</td>
<td>5.37</td>
</tr>
</tbody>
</table>

Source: Computed from Handloom Census Report.
Realising the importance of the handloom industry in the economy of the district and the State, the Central and State Government have given vigorous thrust towards the organisation of scattered handloom weavers and co-operative fold, providing raw materials, managerial assistance, marketing etc. The R.B.I. Scheme of handloom finance operated by NABARD provided refinance facilities to the State Co-operative Bank, for financing the procurement and marketing of cloth by apex societies and on behalf of the Central Co-operative banks for financing production and marketing activities of primary weavers society.

As a result of such measures remarkable growth of the handloom sector took place in the decade of 80's.

The growth of handloom weavers from 1982 to 1988 was only 15.10%, the clockwise growth rate of the weavers of Bankura district has been illustrated in Fig. 35.
In the map one prominent feature to be noticed is that Bankura which is the principal centre for the handloom weaving industry had recorded a negative growth rate (-42.56%). This is mainly because most of the looms had become sick and hence closed down, the return is too low, for sustenance and hence Bankura being a municipal town, most of the weaver have turned to the tertiary sector, which gave better returns. Two other towns, viz., Sonamukhi and Patrasayar also recorded negative growth because of similar reasons.
GROWTH OF HAND LOOM WEAVERS IN BANKURA DISTRICT 1982-1988

INDEX (in percent)

- 50-0
- 0-50
- 51-100
- 101-150
- 151-200
- 201-250
- > 300

FIG 35.
Only 21% of the Police Stations recorded 300% growth rate, i.e. 3 times its previous record, these are the Police Stations of Mejhia, Gangajalghati, Taldangra and Raipur. The rest all recorded growth rate of 100 to 200%, Bishnupur another important weaving centre recorded a slow growth rate of 40% the reasons of which have been dealt with at the end of this chapter.

The blockwise status of looms as per 1987-88 census is given in Fig. 30. Once again the largest number of looms were located in Sankura P.S. amounting to 3463, providing employment to 8656 people, followed by Indour where 1628 looms generated employment to 4070 weavers and Bishnupur where 1300 looms employed 3249 persons. In the other blocks the looms were distributed evenly ranging from 200 to 700.

In 1987-88 there were in total 12387 weaving households. The weavers procured 421 kg handspun yarn and 12495 kg. of mill spun yarn. The different types of yarn consumed by the looms were 255789 kgs of cotton yarn, 3020 kg of silk yarn, and 5044 kg of woolen yarn.

The various items produced during the same period were 10705 metres of Dhoti, 6,93784 metres of saree, 49246 metres of lungis, 63561 metres of shirtings, 5375 metres of suitings, 1383 metres of dress material, 1304087 metres of gamcha,
111821 metres of towel, 106415 metres of bed sheet (monthly production). The total monthly production was 2498926 metres. 52% of the produce were gamcha, 14% saree, 2.14% dhoti, 4% towel, 2.5% shirting and 4% bed-sheet. The weavers are poor and cannot procure large amount of yarn at a time, so they take to gamcha weaving, which is a cloth of 1.25 metre in length, which serves the purpose of a towel. To turn a pair of gamcha it cost Rs. 18.50 (Rs. 16.50 for thread Rs. 2 for processing) and the market price is Rs. 22.50 which fetched a profit of only Rs. 4.

The regression equation has been computed to find out the correlation between productivity and income level which has been plotted in Fig. 37. It shows that there is a positive correlation between the two parameters. The mean productivity for the district is 10 metres per loom per day and the approximate mean income is Rs. 261.77 per month. But if the productivity is increased by 50%, the increase in income will be only 12.22%. This is mainly because of high cost of raw materials and participation of middlemen in marketing the products. Therefore, not only is it necessary to increase the productivity by modernisation of machinery and adequate supply of raw materials at reasonable prices etc., but also the means for higher return to the weavers is to be emphasised on a large scale. This can be done by
direct selling facilities or produce to the market by elimination of middlemen who usurp the major chunk of the profit, or through organised co-operatives who will give the weaver his due share of profit.

The income of the weaver household ranges from Rs. 100 to Rs. 750 per month. It is not uniform and to prove this the Lorenze Curve has been plotted in Fig. 38. It indicates that the monthly income (1987-1988) of 43.94% of the weaver household was between Rs. 200 to Rs. 300. 28% of the weaving household earned between Rs. 100 to Rs. 200. 21% of the household earned Rs. 300 to Rs. 500. Only 5.09% fall in the comparatively higher income group of which 3.77% earned Rs. 500 to Rs. 750 per month. The monthly income of Rs. 750 and more was concentrated only in 1.32% of the weaving household. The Gini's coefficient of variation calculated was 0.8051 for the year 1987-1988, which further proves that the monthly income of the weaver household of the district was not uniformly distributed.

The income is very low, though a large segment of the cottage and small scale workers are engaged in this sector. The low return from the loom is not sufficient for the sustenance of their family, so many are now looking forward to other sectors for alternative source of income.
Table 7D. Incomewise break-up of weaving household.

<table>
<thead>
<tr>
<th>No. of household</th>
<th>Percent to total weaving H.H.</th>
<th>Percentage of income from weaving capacity</th>
</tr>
</thead>
<tbody>
<tr>
<td>8521</td>
<td>68.78</td>
<td>above 80%</td>
</tr>
<tr>
<td>1950</td>
<td>15.74</td>
<td>60.1 to 80</td>
</tr>
<tr>
<td>1360</td>
<td>10.97</td>
<td>40.1 to 60</td>
</tr>
<tr>
<td>496</td>
<td>4.00</td>
<td>20.1 to 40</td>
</tr>
<tr>
<td>60</td>
<td>0.48</td>
<td>Upto 20</td>
</tr>
</tbody>
</table>

Source: Computed from D.H.C. data.

From the above computed table it has been derived that of the total number of household only 68.78% gets 80% of their income from weaving, the rest 20% is derived from other sources. Again 15.74% derived 60% to 80% income from weaving 40% to 20% from other sources, mainly from cultivation, another 10.97% turned to other sources of income as they get only 40% to 60% of their income from weaving. This inequality in the income level can be further verified by statistical correlations. In this case Pearsonian product moment correlation has been applied with the help of the formula:

$$r = \frac{\sum xy}{\sqrt{(\sum x^2)(\sum y^2)}}$$
where \( x = (x - \bar{x}) \), \( y = (y - \bar{y}) \), \( n = \text{number of observation} \)

\[ x = \text{weaving household (percentage)} \]

\[ Y = \text{percentage of income from weaving capacity.} \]

\[ r = 0.84, \text{ the corresponding confidence level of significance of correlation (found from t test) lies between 95\% to 97.5\% the above value is a confirmatory evidence of dependance of a large portion of the weaving household on weaving for their major income.} \]

The increase of the number of looms and the production of cloth, has been plotted in Figure 39 from 1981 to 1991.

A long term trend analysis has been worked out with the help of regression analysis.

\[ Y = bx + a \]

Where

\[ a = Y - b\bar{x} \]

\[ b = \frac{\Sigma xy - \frac{\Sigma x \Sigma y}{n}}{\Sigma x^2 - \frac{(\Sigma x)^2}{n}} \]

\[ Y = 2.44x + 10.23 \]

From the above equation, it is seen that the production of the handloom fabric at the turn of the century (2000 A.D.) is expected to be 59.13 lakh metres, which is 50\% higher than the 1991 figure, i.e. the growth is a meagre 5\% a year.
PLATE NO 11

FINISHED HANDLOOM PRODUCTS ON THE WAY TO MARKET
Thus we see that the weaving industry has a significant role to play in the economy of Bankura district, significant portion of the cottage and small sector workers belong to this sector. The looms are well distributed but they remain inactive for a major part of the year. This is because the weaver confronts various types of problem. These are mainly,

(1) Raw material: The cost of thread is soaring high. As this is not a raw material based industry, the raw material is procured from other states mainly Maharashtra and U.P. West Bengal has to procure thread at a higher cost as compared to other states. For per bale the state has to pay Rs. 100 extra as compared to other states. As a result, the cost of thread within the state soars up, the poor weaver cannot afford this high rate, hence production is hampered and the looms remain inactive for months, till the weaver earns money from the other sources to procure the thread. This way the skilled labours are turning to the fields or to the tertiary sector for alternative income.

(2) Obsolescence: The traditional pattern of weaving still exists in the district. The method is crude and simple, 97.87% are hand operated looms, hence the productivity per loom per day is low (10 metres) for e.g. after
a days work manik Chand Pal of Gopinathpur manufactures 2 pairs of Gamcha (napkin). The cost of turning 1 pair is Rs. 18 (Rs. 10 for thread, Rs. 2 for processing), the market price for 1 pair is Rs. 22 to Rs. 24, his daily income is Rs. 10, monthly income Rs. 300, monthly production (if he weaves regularly) is 300 metres. But this is not the story, he sits idle for many days for want of thread. So, if the looms are turned to power looms the productivity will certainly increase but the product will not be that of handloom. So Chittaranjan type of looms should be introduced. In this type of loom the sizing and rolling machines may be fixed separately. The sizing and rolling of threads will be done with the help of machines. This will certainly double the production and will be less energy consuming.

(3) Demand: The weavers of Bankura follow traditional pattern. In recent times the demand for handwoven goods have remarkably increased. Handwoven cotton sarees are in vogue. Silk suitings are all time necessary for a Bengali marriage ceremony. But in Bankura, 52% of the total produce is gamcha (which has great demand in the rural market), only 27.7% of the produce are sarees, 4.28% dhoti, and meagre 2.51% and 0.21% of the produce constitute of shirting and suiting material. The weaver must take account of the demand factor. The variety of the products must be increased, and the design must be changed to cater to the demands of the modern consumer.
(4) Market: The functioning of the middlemen between the weaver and consumer, deprives the weaver of his share of profit and he is forced to stay content with minimum profit. The middlemen buys the product from the weaver at paikar rate who then sells it to big businessmen, who then sell it in markets of urban centres or send it to Calcutta for higher prices. Thus the lion’s share is taken by the big businessmen. And the weavers, the main functionary gets a bare minimum return which is not sufficient for the sustenance of his family and so he turns to the field as cultivating labourer or to the tertiary sector as a rickshaw puller which gives better return.

(5) Competition: The handloom industries are facing tough competition from power looms. The product of power loom is superior to that of handloom, the cost of power loom made product is cheaper. In 1971, 100 licences were sanctioned by the West Bengal Government for installing power loom. Thus in the face of such tough competition it is difficult to save the handloom industry. Unless immediately adequate measure is taken to revive this old time industry, it will not be very far when this old time famous industry will see its end.

The Government has taken various measures, which has been discussed in Chapter VIII to resuscitate the old industry, the benefit have by passed the rural poor. So in
view of the problems, emphasis should be laid on:

(1) Adequate supply of raw materials: Very recently (1989) a cotton bank has been registered in the district, from where the cotton will be supplied to the weaver and the finished product will be bought by the institute. The Kansabati spinning mill under construction in Hatasuria in Borjora P.S. may solve the problem to some extent.

(2) Modernisation of looms: With the establishment of Chittaranjan handloom, processing institutes should also be set up, so that sizing, bleaching, moisturing, dying and calendering could be done there, this will help in reducing the cost of production.

(3) Finance: Refinance facilities, for financing the procurement and marketing of cloth by apex societies like, Manjusha Samabaya Samiti. The institute must ensure that the facilities reach the weaver society.

(4) Design support to improve the competitiveness of the product, improve marketing and infrastructure support etc.
The Sericulture & Silk Industry

The sericulture and silk industry is another most important cottage industry of the district. There is a high appreciation of Bishnupur silk sarees in the Indian market. Bishnupur enjoys a special reputation for the manufacture of prettily embroidered silk scarves. It also works in artificial silk imported from abroad.

At present there are only 870 units manufacturing silk fabrics of which 31 units are in Onda, 139 in Bishnupur municipality, 79, and 178 units in Joypur and Patrasayer. Maximum number of units are located in Sonamukhi municipality. And silk of Sonamukhi is famous for suiting and shirting. Tasar shirting, matka, dhoti etc. are amongst the main item of production.

The silk looms are mostly a throw shuttle type which is considered more suitable for weaving delicate yarn. The looms of Bankura district consumes 3020 kgs of silk yarn of which 2070 kgs is consumed by the looms in Sonamukhi alone.

Mention may be made of the Baluchari sarees of Bishnupur. In the Metropolitan and urban centre this particular saree is in vogue. This special kind of saree is also widely appreciated abroad. But the artisans are unable to cater to the demand. There are only 7 units, all located in Bishnupur manufacturing this type of sarees. It takes 4 to 6 months, sometimes even a year to turn a Baluchari saree but the
returns are high. A baluchari artisan can earn ₹ 3000/- per month (if he works continuously), but inadequate supply of yarn has resulted in the low level of production.

The basic problem of the silk industry of Bankura is the high cost of production due to inferior race of silk worms being reared in the district, silk worms are reared and silk is spun in many villages in the district. There is about 500 acres of land under mulberry cultivation in the district (1991) but the yield of mulberry leaves does not exceed 6000 lbs per acre. A portion of the raw material is produced locally and high quality silk yarns is obtained from Malda and Murshidabad. The sericulture industry, is gaining importance in the district, the area under mulberry plantation has increased from 378 acres in 1989 to 500 acres in 1991, and the area under Tasar plantation has increased from 832 acres in 1989 to 1145 acres in 1991. The blockwise description of the area under mulberry and tasar plantation is given in Fig.40 & Fig. 41 respectively.

The annual production of mulberry cocoons in 1991 was 1000 quintals, the total value amounting to ₹ 60 lakhs and generating employment to 70,000 labours. The production of Tasar cocoons was 60 quintals amounting to a value of ₹ 25 lakhs and generating employment to 75,000 labour. Thus it is evident that the sericulture industry plays an important role in the districts economy, providing employment
to 12 to 13 persons all through the year, for every hectares of mulberry garden. No other agro-based industry provides as much employment as the sericulture does, income generated through every acre of land is also very high. It is estimated that every acre of land generates a net income of ₹20,000 a year. It also provides fodder enough for one cow. The basic nurseries for mulberry at Bishnupur and Jhanka (Saltora) meant for stocklots and training to rearers, supply of mulberry cutting etc. Tasar farms at Taldangra and Patrasayer produce disease free layings and have contributed to the tune of 12 lakhs layings per year.

The bottleneck still effecting this subsector is the non-availability of high grade worm races, inadequate supply of disease free seeds, decentralised and rural nature, of reeling leading to non-standardization of yarn and lack of reeling facilities.

In the credit plan from Bankura district, silk weaving has a special status and its credit needs, therefore, received special attention. In 1980 ₹30,000 was sanctioned for the sericulture industry, and ₹20 lakhs in 1991.

So inspite of the protection rendered by the government to the industry (against import of foreign raw silk and silk goods), the indigenous silk industry cannot flourish unless the basic problem is satisfactorily tackled, viz, the cost of production of raw silk is substantially reduced so as to
enable the industry to stand in

1) **Competition of improved raw silk, and substitute such as artificial silk and rayon.**

2) **Produce disease free high grade seeds.**

3) **Increase irrigated acreage under mulberry.**

4) **Increase infrastructure facilities like supply of good seeds, grainage for production of disease free layings, chawkie rearing better reeling facilities, testing and grading etc.**

If all the above problems are tackled with care then the industry can be put on a footing of equality with Mysore and Japanese silk industry.