

A STUDY ON THE REVOLUTION OF SMALL SCALE POWERLOOM INDUSTRY IN WEST BENGAL

***DR. UTTAM PAUL**

**Assistant Professor, Sreegopal Banerjee College, Bagati, Magra, Hooghly*

ABSTRACT

One of the most essential commodities of civilized human beings is the cloth and it comes from the textile industry. The textile and their products constitute the second largest industry in the world, just ranking below the food products. The textile industry occupies a unique place in the economy of our country by virtue of its contribution to the industrial production, employment generation and foreign exchange earnings. The textile industry in India is too much ancient and it started its glorious journey with hand-woven clothes. The powerloom sector is a weaving sector and is an important segment of the decentralized cotton textile industry of our country, popularly known as small scale (or decentralized) powerloom sector. West Bengal ranks the remarkable position in terms of unemployment. Under such an alarming condition of unemployment in West Bengal, the powerloom industry offers gainful employment to thousands of people either as purely workers, or as purely owners or both in capacity. Moreover, the powerloom industry contributes a lot of revenues to the Government exchequer by way of Central Excise on cloth, Income Tax, Sales Tax etc. It also helps to earn some foreign exchange by exporting a few quantity of export quality output.

Keyword: cloths, workers, powerloom sector, textile industry, weaving, employment.

INTRODUCTION:

The textile industry occupies a unique place in the economy of our country by virtue of its contribution to the industrial production, employment generation and foreign exchange earnings. The textile industry in India has been classified into three sectors: pre-weaving i.e. spinning, weaving and post-weaving i.e. finishing. In this sense, the powerloom industry is a weaving sector and is an important segment of the decentralized cotton textile industry of our country. The small scale powerloom industry was first patronized by Dr B.C.Roy, the then Chief Minister of West Bengal, for the rehabilitation of the displaced persons from East Pakistan (now Bangladesh).

Thousands of unskilled and semi- skilled refugees were employed in this cottage industry. Many of those who first joined this industry had left for better prospects in bigger mill sectors after getting necessary training and this practice is still continuing. The owners had little financial resources to run the industry for rehabilitation. More and more powerlooms came into existence in West Bengal in the co-operative sectors, consisting of sixteen powerlooms, each being sanctioned and partially funded by the Govt. of West Bengal, which regularized some unauthorized powerlooms in the state.

REVIEW OF LITERATURE:

There is no authentic and huge number of literatures about this area but some literature are there, which are helpful for the study and research purposes, some such references are Book India 2006 a reference annual compiled and edited by research, reference and training division, Ministry of Information and Broadcasting, Govt. of India. West Bengal Human Development Report, Development and Planning Dept; Govt. of India, first published in may 2004, India Year Book 2004, Institute of Applied Manpower Research, Textile Souvenir-1981-82, Textile Souvenir-1984, 1986, Yojana-Dhanadhanye- June & July-2007, Tex Vision-2008, The Kolkata Gazette-2008, Govt. of West Bengal, Encyclopedia of Textile, “Tantu O Rang”- A book of Textile Technology – basu, T.N., Majumder, Dipak, “The issue of small versus large in the Indian Textile Industry”, Govt. of West Bengal: Report of the Power loom Enquiry committee- 1967, Schemes and Initiatives for the Development of the Textile Industry, Govt. of India, West Bengal Economy- present, past and future-basu, kalipada, etc.

METHODOLOGY AND SOURCES OF DATA:

Most of the data which have been used in the present study are primary and some are, of course, secondary.. Primary data are collected through convenient sample survey. One basic limitation of the study is the lack of availability of sufficient data. I have tried my level best to make the data as current and accurate as possible.

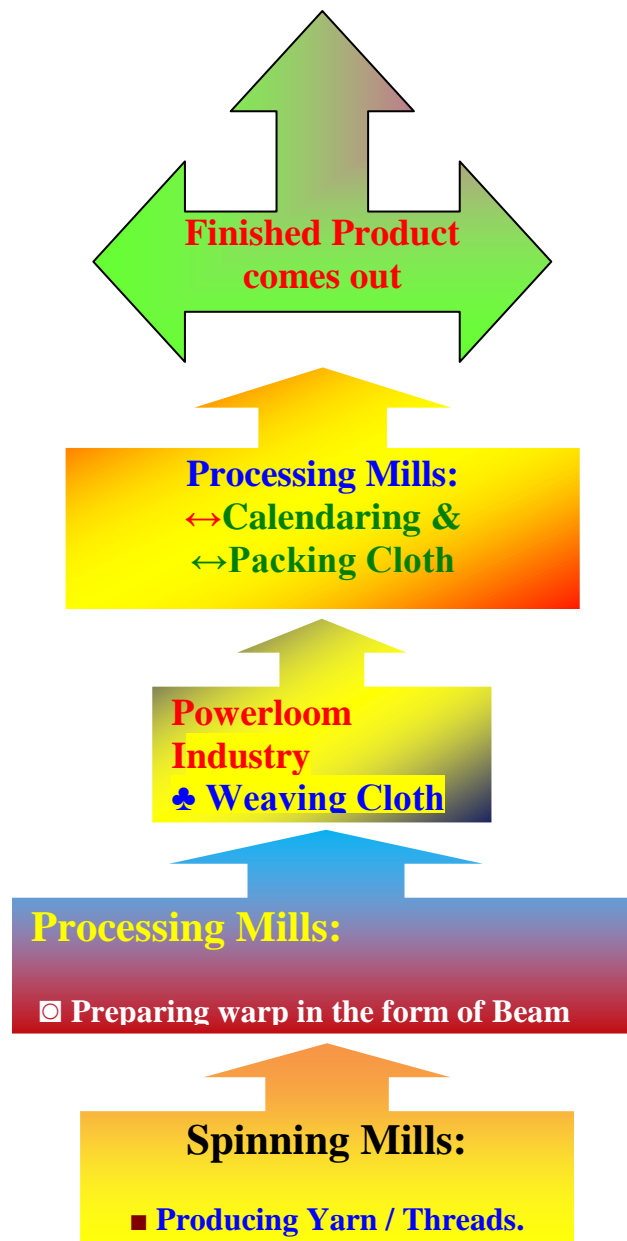
OBJECTIVES:

The following are the objectives of the study:

- i. To portray the nature and concept of small scale powerloom industries in West Bengal;
- ii. To evaluate the revolution of this sector in West Bengal;
- iii. To discuss the types of powerlooms;
- iv. To explain the Role and Importance of Powerloom Industry and
- v. Making concluding remarks.

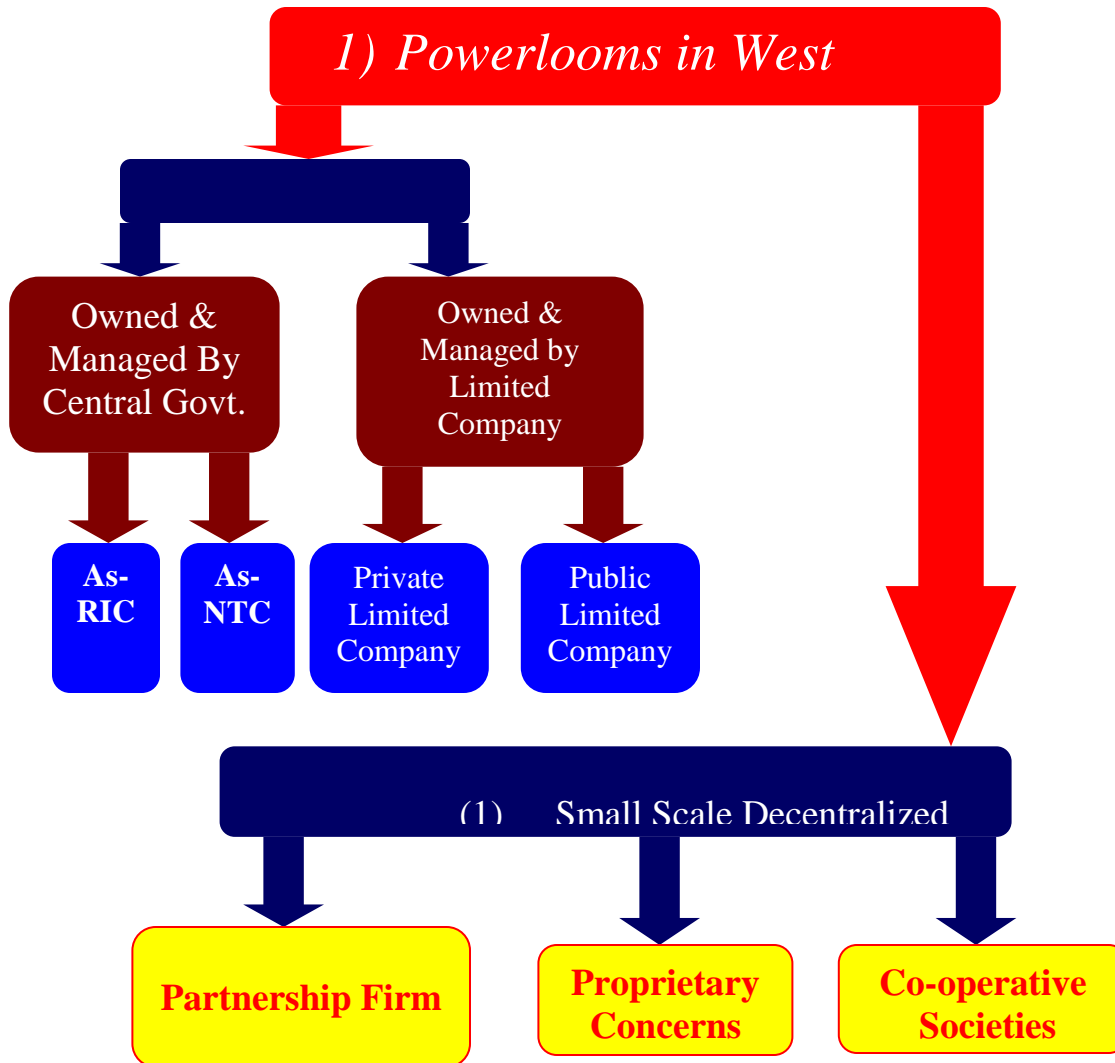
POWERLOOM INDUSTRY:

Powerloom industries are the industries, which, in general, weave grey cotton by power-operated machines or looms. Such looms work into a fabric with the help of warp in the form of beam and weft directly through bobbins. Beams come from processing mills and weft yarn from spinning mills. Spinning mills produce only yarn / thread as raw materials to the powerloom industries. Such threads are stretched out lengthwise in a loom to be crossed by a woof (weft). This comes through the processing mills and from processing mills the warps in the form of beams are used in the powerloom industries just to weave the projected clothes. These clothes after calendaring through processing mills take the form of finished goods of such industries. The schematic representation of the above discussion can be shown in the following figure



It is quite clear from Figure-1.1 that the powerloom industries function in the middle level of work to produce a cloth in its finished form.

According to the demand of time, powerloom industries in West Bengal, passing through a long evolution, takes the following organizational set-up: -



More specifically, it is evident in India that power loom industry comprises the powerlooms in small scale sector (or decentralized sector as it is called in India) and Rehabilitation Industrial Corporation (RIC). The powerlooms in National Textile Corporation (NTC) and in limited companies are generally known as mills. In the present study our concern is with only the powerlooms which are in small-scale sector of West Bengal.

REVOLUTION OF SMALL SCALE POWERLOOM INDUSTRY IN WEST BENGAL:

One of the most essential commodities of civilized human beings is cloth and it comes from the textile industry. Textiles and their products constitute the world's second largest industry, ranking just only below the food products. At least 10 % of the world's productive energies is devoted to this activity and a huge segment of our global population earns its living and obtains its creative satisfaction from the same source. The textile industry in India is too much ancient and it started its glorious journey with hand-woven clothes. About one thousand years later, the industry had attained its brilliant shape as organized mill sector and unorganized handloom and powerloom sector - popularly known as small scale (or decentralized) handloom and powerloom sector. The textile industry in India has, again, been revised and classified into three sectors: spinning, weaving and finishing. In this sense, the powerloom sector is a cloth-weaving sector of textile industry in India.

There are no authentic records to indicate the first introduction of power loom in our country, but evidence is there for the existence of power loom during the Second World War. The powerloom industry started in the early part of the century when some weavers of handloom set up small factories with second- hand non-automatic looms sold off as scrapped by the mills. But the rapid growth of the powerloom industry in India is really a post 1950 phenomenon. The Fact Finding Committee (handlooms and mills) 1942 reported that while it was extremely difficult to collect accurate statistics of powerlooms from the brief estimates received from different sources, as the estimate of the number of powerlooms in the country at that time could be put at 15000 for the whole of India.

In West Bengal, the origin of powerlooms dates back to the early thirties and most of the units set up were relatively of large size, styled as "non- spinning mills". We may point out here that the first textile mill in India was set up in Bengal in 1818, but it was soon closed down due to unequal policies pursued by the British Govt. in India.

The Small Scale Powerloom Industry in West Bengal (SSPIWB) has been traced to the initiative taken by the handloom weavers to switch over to powerlooms. In 1948, Mr. Brojagopal Basak, the owner of Ranaghat Textile Mills, first set up four power- looms under the separate name of "Tantushilpa *Pratishtan*" at Ranaghat, Nadia and another pioneer Mr. Atul Paul, the proprietor of United Spinning and Weaving Mills had installed five powerlooms at Ranaghat, Nadia in 1950. Initially, these power- looms were run by power from diesel generators. The availability of power from 1954 led to the expansion of powerlooms in decentralized sector in nearby centres of the district of Nadia.

When the oldest handloom industry in the country plunged into a tremendous crisis in 1952, the Government of India appointed a Textile Enquiry Committee with Shri Nityananda Kanungo as chairman to look into the affairs of the mills, handlooms and powerlooms in India. This committee made certain recommendations with regard to the three sectors of the textile industry. The Kanungo Committee also laid down the scheme for conversion of handlooms into powerlooms as the powerlooms were found to be more profitable in comparison with handlooms.

As a result of the partition of Bengal, a large number of people being uprooted from their home and hearth in East Pakistan (now Bangladesh) migrated to and settled in the state of West Bengal. Thus, a new problem in the state was created. The number of people was found to be much more than the land could absorb. So, for providing economic employment to all concerned, the need for rapid and extensive industrialization became necessary. In that situation, emphasis was laid on the growth of small scale and village industries considering that they are labour-intensive requiring less capital investment and are capable of uplifting the rural economy within a comparatively short period. Most of the migrated people from East Pakistan (now Bangladesh) were handloom weavers. Consequently, the stress was given on handloom industry along with other small scale industrial sectors and later on understanding the essence of economic potentiality of the small scale industrial sectors of this state, small scale powerloom units were set up in 1956-57 at the initiative taken by the then Chief Minister of West Bengal late Dr. B.C. Roy for the rehabilitation of the displaced persons. The Refugee Relief and Rehabilitation Department, Govt. of India, issued permits for the installation of units of four power looms to these persons only on the recommendation of the Government of West Bengal for the purpose of their economic rehabilitation. These permits were issued on such condition that the refugee workers were to be employed in the country. Under this scheme, 4000 powerlooms were installed in West Bengal. Meanwhile, the Government of India took the policy of bringing these establishments into co-operative sectors. The Kanungo Committee indicated in the report that in the long run these co-operative societies would be gradually shrinking employment in the handloom sector. For maintaining the level of employment, the Kanungo Committee considered that the handlooms should be replaced by powerlooms ultimately and accordingly recommended small scale powerloom industry to avoid the crisis that plagued the handloom industry. Again, the committee also proposed certain specific measures of financial assistance. Thereafter, about 1600 power looms in West Bengal came into existence under the co-operative sector in 1960-61 and these 1600 power looms were controlled by 100 co-operative societies each consisting of 16 power looms. The Government of West Bengal tried to develop these societies with grants and low interest bank loans.

In 1963, the Government of India again appointed a committee under the chairmanship of Shri Ashoke Mehta to enquire into the affairs of the power industry which had already come into existence. The Mehta

Committee observed that the policy with regard to setting up the powerlooms in clustered area as per recommendation of the Kanungo Committee did not meet with full success due to insufficient financial assistance provided for working capital, imposition of condition for installing powerloom in rural areas with a population of less than 30,000, absence of facilities for preparatory, processing and finishing arrangement in rural areas and absence of arrangement to ensure distribution of financial benefits amongst all the members of the co-operative societies. Thus the co-operative movement in power loom sector of West Bengal failed to flourish. As a result, in 1988, only about 33 co-operative societies were working and in the year of 2005-06 there were 40 power-loom co-operatives out of which only 18 co-operative societies were active in production with the help of “Agent Financer”. Agent Financer is a class of traders who have required amount of capital, business experience, and control on marketing channel and entrepreneurship, but without production apparatus, i.e. powerlooms in this case. They came forward with their resources and entered into an agreement with the societies, perhaps not in writing anywhere, that they would supply sized beams and get fabrics woven in the factories of the societies. In return, the societies were paid a certain amount as remuneration.

Under the Refugee Relief and Rehabilitation Scheme, the Central Government established different loom shades throughout India in the name of Rehabilitation Industries Corporation (RIC). In West Bengal, only two shades –one at Taherpur, Nadia and another at Bonhooghly, Baranagar, Kolkata consisting of 75 powerlooms were set up. All the powerlooms under RIC were installed in 1968, but were closed soon after 1974.

From 1972 onwards, the Government of India nationalized 14 composite sick mills as National Textile Corporation (NTC) for West Bengal. These composite mills consisted of nearly 10,000 powerlooms. At present, most of them are closed. These mills and co-operative societies sold their scrapped looms at a minimum price. Besides, a few scrapped looms from other states, e.g. Gujrat, Maharastra, Bihar etc. entered into West Bengal as small scale sectors. Mainly, the handloom weavers of West Bengal got the chance of conversion of their handlooms into powerlooms at a minimum cost. In this way, the small scale powerloom industry in West Bengal came into existence.



Reverend Edmund Cartwright (1743-1823)

Edmund Cartwright of England invented the powerloom and the comber frame in 1774. In 1785 he received his second set of patents for his further inventions on the powerloom. At this time he brought out the warp –stop motions on a loom.

Edmund Cartwright was originally from Nottingham. After graduating from Oxford University in 1779, he became the rector of Goadby church, Marwood in Leicestershire. In 1784 he visited Arkwright's cotton-spinning mill. Cartwright was sure that he could develop similar technology to benefit weaving. In 1785, he patented the first version of his powerloom and set up a factory in Doncaster. He was not a businessman, however, and he went bankrupt in 1793, which forced him to close his factory.

Cartwright was a prolific inventor. He patented a wool-combing machine in 1789 and a steam engine that used alcohol, as well as a machine for making rope, in 1797. He even helped the American, Robert Fulton, with his steamboat inventions. The power loom was quickly integrated into the weaving industry. It was improved upon by William Horrocks, famous for his invention of the variable speed batton in 1813. The powerloom was used alongside Crompton's Spinning Mill in many factories. Although Cartwright did not make a lot of money from any of his patents, in 1809 the House of Commons voted him a sum of £10000 in recognition of his contribution to the textile industry.

Plain Loom:

A plain loom is a loom by which simple cloth without any colour decoration is produced by a number of special weavers.



Plain loom & Dobby Loom

Dobby Loom

A dobbie loom is a type of floor loom that controls the whole warp threads using a device called a dobbie. Dobbie is short for "draw boy" which refers to the weaver's helpers who control the warp thread by pulling on draw threads. A dobbie loom is an alternative to a treadle loom. Dobbie looms first appeared around 1843 -- roughly forty years after M. Jacquard invented the Jacquard device that can be mounted atop a loom to lift the individual heddles and warp threads. A manual dobbie uses a chain of bars or lags each of which has pegs inserted to select the shafts to be moved. A computer - assisted dobbie loom uses a set of solenoids or other electronic devices to select the shafts. Activation of these solenoids is under the control of a computer programme. In either case the selected shafts are raised or lowered by either leg on a dobbie pedal, or electricity, or other power sources. A dobbie loom is able to handle much longer sequences in the pattern. A weaver working on a treadle loom must remember the entire sequence of treading that make up the pattern, and must keep track of where they are in the sequence at all times. Getting lost or making a mistake can ruin the cloth being woven. On a manual dobbie the sequence that makes up the pattern is represented by the chain of dobbie bars. The length of the sequence is limited by the length of the dobbie chain. This can easily be several hundred dobbie bars, although an average dobbie chain will have approximately fifty bars. Computer-dobbie, a computer - controlled dobbie loom, takes this one step further by replacing the mechanical dobbie chain with computer - controlled shaft selection. In addition to being able to handle sequences that are virtually unlimited, the construction of the shaft sequences is done on the computer screen rather than by building a mechanical dobbie chain. This allows the weaver to load and switch weaves drafts in seconds without even getting up from the loom. In addition, the design process performed on the computer provides the weaver with a more intuitive way to design fabric; seeing the pattern on a computer screen is easier than trying to visualize it by looking at the dobbie chain.

Dobbie looms expand the weavers' capabilities and remove some of the tedious work involved in designing and producing fabric. Many newer cloth design techniques such as network drafting can only reach their full potential on a dobbie loom.



The Workshop Dobbie Loom & Industrial Dobbie Loom.

Box Loom:

A box loom is also known as a tape loom. Based on a 16th century design, this loom is designed for weaving narrow wares ("tapes") on the go. Each box loom comes with a heddle, a beater sword, and three bobbins.



Box Loom

Jacquard Loom:

Jacquard loom is a mechanical loom invented by Joseph Marie Jacquard in 1801. Today, most high quality tapestry reproduction is currently woven on Jacquard looms. The computer - guided looms are perfect to reproduce the details and allow for the many colours required for the elegant motifs of today's popular wall hangings. J M Jacquard used the first punched data cards invented before there were any computers in the world. These data cards were the “programme” that ran the loom. The cards were carried in linked chains and they controlled the weaving pattern by influencing the position of the needles. Small sensing pins detected the presence or absence of holes in the cards and determined whether or not a needle would pick up a thread.

Air – jet Loom:

It is a loom in which the weft yarn is propelled through the shed by means of a jet of air. It is a shuttleless loom which uses an air - jet to propel the filling yarn through the shed at a very high speed.



Jacquard Loom & Air – jet Loom:

Water – jet Loom:

It is a loom using a jet of water to carry the yarn through the shed. This loom was invented by J.R.Reynolds in 1980.It is a loom in which heat is generated by the vacuum source blower and is recycled to the fabric heater to reduce the amount of auxiliary heat needed to dry the fabric as it passes to the take-up roll.



Water – jet Loom



Lino Loom & Pile Fabric loom



Double Cylinder Loom & Indian Type Loom

ROLE AND IMPORTANCE OF POWERLOOM INDUSTRY:

In the textile industry, West Bengal was the pioneer in India. The first cotton mill named Fort Gloster Mills was set up in 1818 at Howrah, West Bengal, presently known as Bowreah Cotton Mills Co. Ltd. The first jute mill was set up at Rishra in Hooghly district of West Bengal in 1855 and the first cotton hosiery Oriental Hosiery Ltd. was established in 1833 at Khidirpur, Kolkata and the Belting and String Industry was also first established in West Bengal. Thus the spinning mill, weaving mill, jute mill etc. were first established in West Bengal and once the state reached a stage of first bench level in cotton textile industry in India. The powerloom industry also took a place of its own in the Indian textile market. But unfortunately, due to some constraints the power loom industry in West Bengal had lost its prime position in the textile industry in India.

When competition was not so tough, the powerloom industry of West Bengal had a ready market in Bihar, Madhya Pradesh, Assam etc. It cannot be gainsaid that these days Maharashtra, Tamil Nadu, Bihar and Orissa have captured the present market of textile industry almost every year. However, the produced articles of the powerloom industry of West Bengal, particularly *dhuties*, *sarees*, *lungies*, *chadar*, bed sheet, *marking* etc. were used by the rich as well as poor families as these were comparatively cheap.

The number of the registered unemployed in our country is more than the total number of population in Australia or Ethiopia or Burma. If a queue (for every metre) is formed by those unemployed, its length would be 8,750 kilometres (of which 1250 kilometres is allotted for West Bengal) and the queue length is increasing by one kilometer per hour or in every second at least one is enrolling his / her name in the registered book of unemployment in our country. In fact, the total number of the unemployed is more or less 2.3 times the registered

unemployed. At present, West Bengal ranks the remarkable position in the number of the unemployed. Under such an alarming condition of unemployment in West Bengal, the powerloom industry offers gainful employment to thousands of people either as purely workers, or as purely owners or both in capacity. Moreover, the powerloom industry contributes a lot of revenues to the Government exchequer by way of Central Excise on cloth, Income Tax, Sales Tax etc. It also helps to earn some foreign exchange by exporting a few quantity of export quality output.

CONCLUSION:

During the course of our visits to powerloom centres we studied various facets of the powerloom industry and one profound impression left on us by our spot observations and discussions is that power loom is much more than an instrument of production. It is the symbol of a vast country-wide process of economic transition and techno- social change. Behind it, millions of people had to break through the coils of poverty, to improve, though very little, their levels of living and to escalate themselves to a slightly higher social layer. Again, employments in powerloom, without ownership, yielded in most cases higher earnings than that on in handloom. Not only the handloom weaver, but also the low-paid agricultural labourer, the industrial workers, the refugee, the cured leper and the physically handicapped were all attracted to power loom as a source of livelihood. According to the Powerloom Enquiry Committee Report, 1964, West Bengal, had all the ingredients of installation of thousands of small scale powerlooms. The small scale powerloom industry had got a great impetus at its initial stage. But today, it cannot be gainsaid that the industry in West Bengal has lost its prime position. To speak about the power loom industry in West Bengal, at first, it seems that the industry is in a moribund condition. The statement is partly true. At present these sectors are in a good position in terms of productions as well as employments.

REFERENCES:

1. Awachat, Anil "The warp and the weft" – I & II, Economic and Political Weekly, Vol. XXIII No. 34. August 20, 1988 and Vol. XXIII No.35, August 27, 1988. A Sameeksha Trust Publication.
2. Balogh, Thomas. (1987) 'Economics of Poverty', MacMillan, New York, 1966.
3. Bandapadhyay, B. (2004) 'Karbar *Niyantraner Ruporekha*, ' Rabindra Library, Kolkata.
4. Bedi Jatinder, S. (2002) 'Economic Reforms and Textile Industry: Performance and Prospects, Commonwealth, New Delhi.
5. Datt, Ruddar and Sundharam (1981) 'K.P.M. Indian Economy', S. Chand & Company Ltd., New Delhi. 1984.
6. *Tantu –o – Rang*. A Book of Textile Technology Basu, T.N. Page-50

7. Majumer, Dipak. The issue of small versus large in the Indian Textile industry. Page-2
8. Govt. of West Bengal: Report of the power loom Enquiry Commission 1967 (June) page- 4.
9. Govt. of India: Report of the power loom enquiry Committee 1964 ,Page - 16
10. Dasgupta, Shyamal, “Crisis in power loom industry in West Bengal”
11. Textile Souvenir, 1981 – 82, published by Textile Technologists’ Association, West Bengal. Page – 20.
12. Decentralized power loom industry in West Bengal, problems and Prospect. Survey report. Vol – I Page – 47.
13. *Bekar Samasya – Bhobisyat ki?* State Committee, Democratic Students centre. (West Bengal)
14. “*Powerloom silper Unnoti –o- Bikash*” an article written by Sri Gurudash Basak, Member, Power loom Owner Association of Bengal, Ranaghat, published in Textile souvenir 1981-82.
15. <http://www.cotti.in>
16. <http://www.tradeindia.com>
17. [http// www.pdexcil.org](http://www.pdexcil.org)
18. [http//www.theijes.com](http://www.theijes.com)