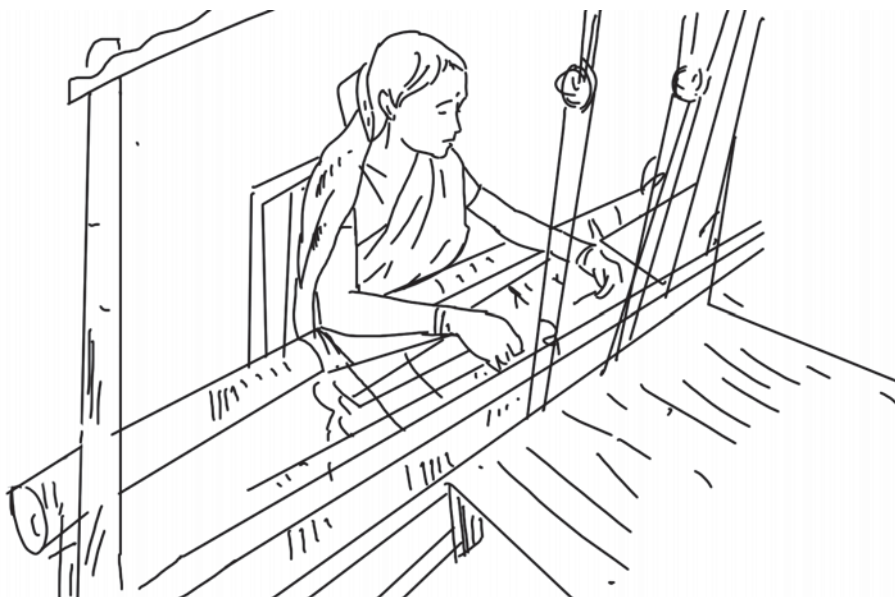


# HANDLOOM WEAVING



## 1.0 INTRODUCTION:

Handloom Industry in India is an ancient cottage industry with a decentralized set up. The industry is an age old source of livelihood for millions of people in the country. Traditionally, handlooms have been the tools and weavers have been the people that have predominantly woven fabric over the ages in the country. The handloom sector in India now operates within a larger textile industry, which is quite different from the one within which it operated in the first half of the 20th century.

The industry plays a vital role in economic development of the rural masses of North Eastern States. As many small units in handloom sector have taken weaving at a commercial level while more women weavers are associated with weaving as a part time weaver. The activities that women performed for their domestic needs during their leisure time, has now been transformed into their professional work.

Some of the handloom products, which are known for their excellent craftsmanship are carpets of Arunachal Pradesh, Muga silk products of Assam, Laishangphee of Manipur, Shawls of Nagaland and Mizoram. Other common handloom products such as bed sheets, chaddar, scarf, jackets are found in almost all the states of the region.

This project profile is for setting up of a handloom weaving unit, based on 300 working days per annum and 8 working hours per day. The installed production capacity of the unit per annum is as follows;

Cotton Products - 600 Nos.  
Silk Products - 300 Nos.

Cotton products would include Gamocha, Salwar Cloth, Bed cover, Mekhela Chaador etc. and Silk products would include Muga/Mulberry Mekhela Chaador, Saree etc.

## 2.0 MARKET POTENTIAL

There exists good demand for handloom products in the domestic market as well as in the international markets. As a part of the marketing strategy and publicity measures, the office of the Development Commissioner for Handlooms has been organizing National Handloom Expos and Special Expos. With the passage of time, these events have gained popularity and sales generated at these events have increased significantly. These expos are organised for a period ranging 2 to 3 weeks. The Development Commissioner (Handlooms) plans every year number of events at several places. Participants are allowed to sell only handloom products. Awareness about factors like customer satisfaction, new market demand, changes in market place, competitive products and value

proposition etc. should be taken care by any industry to sustain in the market for long time.

### 3.0 PROCESS DETAILS

The major process steps are.

#### A) Pre-loom process:

- (i) Sorting of Yarn.
- (ii) Dyeing- Dyeing for handloom is normally done in and around weaving villages.
- (iii) Winding- Yarn in the hank form is wound on to bobbins in this process. This is the first step in transforming the yarn from the hank form to a linear form. Dyed hank yarn is wound on to bobbins with the help of charkhas. This process enables the laying out of yarn lengths for weaving. Bobbin winding is done by the weaver.
- (iv) Warping- The warp is a set of threads attached to the loom lengthwise before weaving begins. Warping is the process of creating the base yarn that runs along the length of fabric through which the “weft” yarns are filled in to make the fabric. Typically, yarn are aligned by wrapping them around the circular warping drum.
- (v) Street Sizing- The warps are stretched out onto two beams and natural adhesives are applied to add strength to the yarn and lubricate it to withstand the rigors of weaving. In most handloom centres, rice starch / gruel is mixed with coconut / groundnut oil and applied as “size”

material. Sizing is carried out by weavers or specialists in the village. Since this activity is done on the street, it is called “street sizing”.

(v) Attaching the Warp onto the Loom- Individual warp threads are drawn through heddles taken through a set of reeds and tied onto beams located on both ends of the loom. The heddles separate the warp into two sections which allows the weft threads to pass between them easily. Checks and stripes are created by segmenting the warp and weft yarn. For motifs, looms are equipped with “dobbies” or “jacquard” cards which help in lifting segments of warp yarn into the weft. Heddles are made out of rods or cords, each with an eye through which the warp thread is drawn. Reed is a comb like frame that pushes the weft yarn firmly against the finished cloth after each insertion.

(vi) Weaving- The process of weaving is the interlacing of two sets of yarn – the warp and the weft. The equipment that facilitates this interlacement is the loom. A “handloom” is a loom that is used to weave fabrics without the use of electricity. The manipulation of the foot pedals to lift the warp has to be in sync with the throwing of the shuttle which carries the weft yarn. A perfect weave demands coordination between mind and body.

#### B) Post-loom process:

- i) Cutting as per requirement.
- ii) Packaging.

### 4.0 COST OF THE PROJECT

The estimated project cost is given below:

(Rs. in lacs)	
Particulars	Amount (Rs)
Land & Site Development	Own Land/On Lease
Building & Civil works	1.32
Plant & Machinery	2.09
Misc. Fixed assets	0.33
Preliminary & pre-operative expenses	0.23
Contingencies & escalation @ 3%	0.11
Working capital	0.76
<b>TOTAL</b>	<b>4.85</b>

#### 4.1 Land & Site Development: Nil

Total Land: 2,500 Sq. Ft. ; Covered Area: 1,000 Sq. Ft.

**4.2 Building & Civil Works:** Details of building & civil works are given below.

Particulars	Area (Sq. ft.)	Rate (Rs)	Amount (Rs)
Work Shed (Simple Construction)	1000	120	120000
<b>Sub total</b>			<b>120000</b>
Add: Electrification @ 10%			12000
<b>TOTAL</b>			<b>132000</b>
<b>Say (Rs. in lacs)</b>			<b>1.32</b>

**4.3 Plant & Machinery:** Details of plant & machinery are given below.

Particulars	Qty	Rate (Rs)	Amount (Rs)
Plain Country Looms with accessories like Slay, Beam, Charkha, Reed, Bobbin and Shuttle etc	10	10000	100000
Dobby Machine with complete accessories	5	8000	40000
Jacquard Machine with complete accessories	5	8000	40000
Miscellaneous items	LS	--	10000
<b>Sub total</b>			<b>190000</b>
Add: Installation, transportation, etc @ 10%			19000
<b>TOTAL</b>			<b>209000</b>
<b>Say (Rs. in lacs)</b>			<b>2.09</b>

**4.4 Misc. Fixed assets:** Details of miscellaneous fixed assets are given below.

Particulars	Qty	Rate (Rs)	Amount (Rs)
Wooden Working Table	1	2000	2000
Office Table	1	2000	2000
Working and Office Chairs	20	450	9000
Steel Almirah	2	7500	15000
Miscellaneous items	LS	--	2000
<b>Sub total</b>			<b>30000</b>
Add: Installation, transportation, etc @ 10%			3000
<b>TOTAL</b>			<b>33000</b>
<b>Say (Rs. in lacs)</b>			<b>0.33</b>

**4.5 Contingencies & escalation:** Contingencies & escalation has been assumed at 3% of the cost of building & civil works, plant & machinery and miscellaneous fixed assets.**4.6 Preliminary & pre-operative expenses:** Details of preliminary & pre-operative expenses are given below.

Particulars	(Rs. In lacs) Amount (Rs)
Travelling expenses	2000
Professional & other fees	4000
Interest during implementation	14960
Non Refundable Deposits	2000
<b>TOTAL</b>	<b>22960</b>
<b>Say (Rs. in lacs)</b>	<b>0.23</b>

**4.9 Working capital:** Details of working capital are given below.

(Rs. in lacs)

	Period (Days)	Total Current Assets		
		Year 1	Year 2	Year 3
Raw materials	15	0.29	0.34	0.38
Power & Utility	30	0.01	0.01	0.01
Salary	30	0.49	0.50	0.50
Finished Goods	15	0.55	0.60	0.65
Receivables	15	0.57	0.67	0.77
<b>Total</b>		<b>1.91</b>	<b>2.11</b>	<b>2.31</b>
<b>Working capital margin in Year 1 (40%)</b>	<b>0.76</b>			

**5.0 MEANS OF FINANCE**

The means of finance for the project is estimated as below.

(Rs. in lacs)

Particulars	Percent	Amount
<b><u>EQUITY</u></b>		
A. Equity from Promoters	40%	1.94
B. Subsidy from Central/State Govt.	-	
<b><u>DEBT</u></b>		
Term Loan from Banks/Financial Institutions	60%	2.91
<b>TOTAL</b>	<b>100%</b>	<b>4.85</b>

**6.0 PROFITABILITY STATEMENT**

(Rs. in lacs)

Particulars	Yr 1	Yr 2	Yr 3	Yr 4	Yr 5
<b><u>A. INCOME</u></b>					
Production capacity (In Nos.)	1000	1000	1000	1000	1000
Capacity utilization	60%	70%	80%	80%	80%
Production at capacity utilisation (In Nos.)	600	700	800	800	800
<b>Total income/annum</b>	<b>13.98</b>	<b>16.31</b>	<b>18.64</b>	<b>18.64</b>	<b>18.64</b>
<b><u>B. OPERATING EXPENSES</u></b>					
Raw materials	7.02	8.19	9.36	9.36	9.36
Power & Utility	0.09	0.10	0.12	0.12	0.12
Salary	6.00	6.03	6.06	6.09	6.12
Repair & Maintenance	0.06	0.06	0.06	0.06	0.06
Other Expenses	0.14	0.16	0.19	0.19	0.19
<b>Total Operating Expenses</b>	<b>13.31</b>	<b>14.55</b>	<b>15.78</b>	<b>15.82</b>	<b>15.85</b>
<b>Operating profit</b>	<b>0.67</b>	<b>1.76</b>	<b>2.86</b>	<b>2.82</b>	<b>2.79</b>
<b><u>C. FINANCIAL EXPENSES</u></b>					
Depreciation	0.18	0.18	0.18	0.18	0.18
Interest on Term Loan	0.23	0.18	0.13	0.08	0.03
Interest on Working Capital Loan	0.09	0.10	0.11	0.11	0.11
<b>Net Profit</b>	<b>0.18</b>	<b>1.31</b>	<b>2.44</b>	<b>2.46</b>	<b>2.48</b>
Net cash accruals	<b>0.35</b>	<b>1.48</b>	<b>2.61</b>	<b>2.63</b>	<b>2.65</b>
Principal Repayment	0.32	0.65	0.65	0.65	0.65

**6.1 Production capacity and Sales Realisation:** Total production of Handloom Products at 100% capacity utilization is estimated as below.

Cotton Household/Decorative Products	600 Nos.
Silk Products (Mekhela Chaddar and Sarees)	400 Nos.
<b>Total production Per Annum (In Nos.)</b>	<b>1000 Nos.</b>

	Qty	Average Price Per Unit (Rs.)	Amount (Rs.)
Cotton Household/Decorative Products	600 Nos.	1050	630000
Silk Products (Mekhela Chaddar and Sarees)	400 Nos.	4250	1700000
<b>Total Sale Turnover Per Annum at 100% Capacity</b>	<b>1000</b>		<b>2330000</b>

**6.2 Raw materials:** Total expenses on raw materials at 100% capacity utilization are estimated as below.

	Amount (Rs.)
Cotton Yarn 300 Kgs @ Rs. 500 Per Kg	150000
Muga Silk Yarn 52 Kgs @ Rs. 12,500 Per Kg	650000
Other Silk Yarn 75 Kgs @ Rs. 4,150 Per Kg	310000
Packaging Materials @ Rs. 5,000 Per Month	60000
<b>Expenses on raw material at 100% capacity (Rs)</b>	<b>1170000</b>

**6.3 Power & utility:** Total expenses on power & utility at 100% capacity utilization is estimated as below.

Particulars	Quantity	Power (Kw)	Total (Kw)
General Lighting	10	0.10	1.00
Total power requirement/ day (Kw)			1.00
No. of hrs/day	8		
No. of Working Days Per Annum	300		
Annual power requirement (kwh)	2400		
Rate per unit (Rs)	3.50		
Expenses on power (Rs)	8400		
Expenses on Utility (Rs)	6000		
<b>Expenses on power &amp; utility at 100% capacity (Rs)</b>	<b>14400</b>		

**6.4 Salary:** Total expenses on salary in the 1<sup>st</sup> year are estimated as given below. It is assumed that salary expenses will increase @ 0.5% every subsequent year.

Particulars of Employees	Numbers	Salary/ Month (Rs)	Cost/ annum (Rs)
Manager	1	5000	60000
Skilled Weavers	10	4000	480000
Unskilled workers	2	2500	60000
<b>Expenses on salary in the 1st year (Rs)</b>			<b>600000</b>

**6.5 Repair & Maintenance:** Total expenses on repair & maintenance in the 1<sup>st</sup> year is estimated as given below. It is assumed that expenses on repair & maintenance will increase @ 2% every subsequent year.

(Rs. in lacs)

Particulars	Cost (Rs)	Rate	Amount (Rs)
Building & civil works	1.32	1.00%	0.01
Plant & Machinery	2.09	2.00%	0.04
Misc. Fixed assets	0.33	1.50%	0.00
<b>Expenses on Repair &amp; Maintenance in year 1</b>			<b>0.06</b>

**6.6 Other Expenses:** Other expenses have been assumed at 1% of sales realisation.

**6.7 Depreciation:** Depreciation has been calculated by straight line method. The details of calculation are given below.

(Rs in lacs)

Description	Cost (Rs)	Rate	Amount/ annum (Rs)
Building & Civil works	1.32	3.34%	0.04
Plant & Machinery	2.09	5.28%	0.11
Misc. Fixed assets	0.33	6.33%	0.02
<b>TOTAL</b>			<b>0.18</b>

**6.8 Interest on term loan & principal repayment:** Interest rate has been assumed at 8.00%. Duration of Loan repayment has been considered for a period of 5 years including moratorium period of 6 months with equal monthly instalments. The details of calculation are given below.

(Rs in lacs)

Month	Year	1	2	3	4	5
Month 1	Opening balance	2.91	2.58	1.94	1.29	0.65
	Repayment	0.00	0.05	0.05	0.05	0.05
	Interest (8.00%)	0.02	0.02	0.01	0.01	0.00
	<b>Closing balance</b>	<b>2.91</b>	<b>2.53</b>	<b>1.88</b>	<b>1.24</b>	<b>0.59</b>
Month 2	Opening balance	2.91	2.53	1.88	1.24	0.59
	Repayment	0.00	0.05	0.05	0.05	0.05
	Interest	0.02	0.02	0.01	0.01	0.00
	<b>Closing balance</b>	<b>2.91</b>	<b>2.48</b>	<b>1.83</b>	<b>1.18</b>	<b>0.54</b>
Month 3	Opening balance	2.91	2.48	1.83	1.18	0.54
	Repayment	0.00	0.05	0.05	0.05	0.05
	Interest	0.02	0.02	0.01	0.01	0.00
	<b>Closing balance</b>	<b>2.91</b>	<b>2.42</b>	<b>1.78</b>	<b>1.13</b>	<b>0.48</b>
Month 4	Opening balance	2.91	2.42	1.78	1.13	0.48
	Repayment	0.00	0.05	0.05	0.05	0.05
	Interest	0.02	0.02	0.01	0.01	0.00
	<b>Closing balance</b>	<b>2.91</b>	<b>2.37</b>	<b>1.72</b>	<b>1.08</b>	<b>0.43</b>
Month 5	Opening balance	2.91	2.37	1.72	1.08	0.43
	Repayment	0.00	0.05	0.05	0.05	0.05
	Interest	0.02	0.02	0.01	0.01	0.00
	<b>Closing balance</b>	<b>2.91</b>	<b>2.32</b>	<b>1.67</b>	<b>1.02</b>	<b>0.38</b>
Month 6	Opening balance	2.91	2.32	1.67	1.02	0.38

	Repayment	0.00	0.05	0.05	0.05	0.05
	Interest	0.02	0.02	0.01	0.01	0.00
	<b>Closing balance</b>	<b>2.91</b>	<b>2.26</b>	<b>1.62</b>	<b>0.97</b>	<b>0.32</b>
Month 7	Opening balance	2.91	2.26	1.62	0.97	0.32
	Repayment	0.05	0.05	0.05	0.05	0.05
	Interest	0.02	0.02	0.01	0.01	0.00
	<b>Closing balance</b>	<b>2.85</b>	<b>2.21</b>	<b>1.56</b>	<b>0.92</b>	<b>0.27</b>
Month 8	Opening balance	2.85	2.21	1.56	0.92	0.27
	Repayment	0.05	0.05	0.05	0.05	0.05
	Interest	0.02	0.01	0.01	0.01	0.00
	<b>Closing balance</b>	<b>2.80</b>	<b>2.15</b>	<b>1.51</b>	<b>0.86</b>	<b>0.22</b>
Month 9	Opening balance	2.80	2.15	1.51	0.86	0.22
	Repayment	0.05	0.05	0.05	0.05	0.05
	Interest	0.02	0.01	0.01	0.01	0.00
	<b>Closing balance</b>	<b>2.75</b>	<b>2.10</b>	<b>1.45</b>	<b>0.81</b>	<b>0.16</b>
Month 10	Opening balance	2.75	2.10	1.45	0.81	0.16
	Repayment	0.05	0.05	0.05	0.05	0.05
	Interest	0.02	0.01	0.01	0.01	0.00
	<b>Closing balance</b>	<b>2.69</b>	<b>2.05</b>	<b>1.40</b>	<b>0.75</b>	<b>0.11</b>
Month 11	Opening balance	2.69	2.05	1.40	0.75	0.11
	Repayment	0.05	0.05	0.05	0.05	0.05
	Interest	0.02	0.01	0.01	0.01	0.00
	<b>Closing balance</b>	<b>2.64</b>	<b>1.99</b>	<b>1.35</b>	<b>0.70</b>	<b>0.05</b>
Month 12	Opening balance	2.64	1.99	1.35	0.70	0.05
	Repayment	0.05	0.05	0.05	0.05	0.05
	Interest	0.02	0.01	0.01	0.00	0.00
	<b>Closing balance</b>	<b>2.58</b>	<b>1.94</b>	<b>1.29</b>	<b>0.65</b>	<b>0.00</b>
<b>Principal Repayment</b>		<b>0.32</b>	<b>0.65</b>	<b>0.65</b>	<b>0.65</b>	<b>0.65</b>
<b>Interest</b>		<b>0.23</b>	<b>0.18</b>	<b>0.13</b>	<b>0.08</b>	<b>0.03</b>

## 7.0 DEBT SERVICE COVERAGE RATIO (DSCR)

(Rs. in lacs)

Year	1	2	3	4	5
Profit After Tax (Net Profit)	0.18	1.31	2.44	2.46	2.48
Depreciation	0.18	0.18	0.18	0.18	0.18
Interest	0.23	0.18	0.13	0.08	0.03
<b>Total</b>	<b>0.58</b>	<b>1.66</b>	<b>2.75</b>	<b>2.71</b>	<b>2.68</b>
Interest	0.23	0.18	0.13	0.08	0.03
Loan repayment	0.32	0.65	0.65	0.65	0.65
<b>Total</b>	<b>0.55</b>	<b>0.83</b>	<b>0.78</b>	<b>0.73</b>	<b>0.67</b>
<b>DSCR</b>	<b>1.06</b>	<b>2.01</b>	<b>3.53</b>	<b>3.74</b>	<b>3.98</b>

Average DSCR = 2.92



**8.0 BREAK EVEN POINT (BEP)**

(Rs. in lacs)

Year	1	2	3
<b>A. Net sales</b>	<b>13.98</b>	<b>16.31</b>	<b>18.64</b>
<b>B. Variable cost</b>			
Raw materials	7.02	8.19	9.36
Power & Utility	0.09	0.10	0.12
Other expenses	0.14	0.16	0.19
Interest on Working Capital Loan	0.09	0.10	0.11
<b>Total variable cost</b>	<b>7.34</b>	<b>8.56</b>	<b>9.77</b>
<b>C. Contribution (A-B)</b>	<b>6.64</b>	<b>7.75</b>	<b>8.87</b>
<b>D. Fixed &amp; Semi-fixed Costs</b>			
Salary	6.00	6.03	6.06
Repair & maintenance	0.06	0.06	0.06
Interest on Term Loan	0.23	0.18	0.13
Depreciation	0.18	0.18	0.18
<b>Total fixed cost</b>	<b>6.46</b>	<b>6.45</b>	<b>6.43</b>
<b>E. BREAK EVEN POINT</b>	<b>97.30%</b>	<b>83.17%</b>	<b>72.50%</b>
<b>F. BEP at operating capacity</b>	<b>58.38%</b>	<b>58.22%</b>	<b>58.00%</b>
<b>G. Cash BEP</b>	<b>56.79%</b>	<b>56.63%</b>	<b>56.42%</b>

**9.0 INTERNAL RATE OF RETURN (IRR)**

(Rs. in lacs)

Year	0	1	2	3	4	5
<b>CASH OUTFLOW</b>						
Capital Expenditure	3.85	0.00	0.00	0.00	0.00	0.00
Working Capital	0.00	1.91	0.20	0.20	0.00	0.00
<b>Total (A)</b>	<b>3.85</b>	<b>1.91</b>	<b>0.20</b>	<b>0.20</b>	<b>0.00</b>	<b>0.00</b>
<b>CASH INFLOW</b>						
Profit After Tax		0.18	1.31	2.44	2.46	2.48
Add: Depreciation		0.18	0.18	0.18	0.18	0.18
Add: Interest		0.23	0.18	0.13	0.08	0.03
Add: Salvage Value						
<b>Total (B)</b>	<b>0.00</b>	<b>0.58</b>	<b>1.66</b>	<b>2.75</b>	<b>2.71</b>	<b>2.68</b>
<b>NET FLOW (B-A)</b>	<b>-3.85</b>	<b>-1.33</b>	<b>1.47</b>	<b>2.55</b>	<b>2.71</b>	<b>2.68</b>

IRR= 33%