

Project Management

8. Unsecured Loans

When promoters are unwilling or unable to bring in equity to the extent wanted by the financial institutions, they extend unsecured loans to the venture. Such unsecured loans, which do not carry any interest, may also be extended by friends and relatives of the promoters and cannot be withdrawn without the permission of the lending institutions.

9. Deposits

Public deposits are also unsecured, and can be raised by the firm subject to the rules made by the Central government and the RBI in this regard.

10. Leasing and Hire Purchase

As already mentioned, non banking financial companies finance only a part of the project, and rarely the entire project, unlike the FIs. Therefore, the willingness of the financial institutions to let a third company finance a part of the project should be kept in mind while deciding on the financing mix. Comparison of:

- the finance charges demanded by the hire purchase company (or the finance charge implicit in the lease) with the cost of funds from other sources and
- the outflow on hire payments or lease rentals with the expected cash inflows should be done to decide on which source of finance to choose.

ESTIMATION OF PROFITS

It is the projected financial statements that reveal the desirability or otherwise of the project. In the statements, the crux is the estimation of the revenue and the corresponding costs. In estimating the cost of production, assessment is made of various inputs and also the production capacity build-up. The aspects which have to be considered while estimating the cost of production and sales revenue are:

i. Product mix

Depending upon the demand projections, product mix is selected. Given adequate demand for each of the product, product mix is determined depending upon the contribution of each product towards profitability and the adequacy of the plant and utilities.

ii. Installed Capacity

First, the installed capacity of the entire plant is assessed based upon the capacity guaranteed by the supplier for each equipment/section of the plant, direct inputs, product mix etc. The installed capacity is indicated in terms of physical quantities per unit of time.

As installed capacity is based upon the product mix, inputs, etc. it may vary during the project life.

iii. Capacity utilization

It may not be possible to fully utilise the installed capacity of the plant due to several factors like teething problems in the plant and machinery, technological/process constraints, frequent changes in product-mix, inherent characteristics of the industry etc. In some industries, 100 percent capacity utilization is not possible during the entire life of the project.

The production capacity over a period is decided based upon the average capacity utilization of the industry over the past few years and the capacity build up achieved by similar units during the early stages of their operations. Generally, only 80% capacity is utilized even during the third or fourth year of operation.

Sales Estimation

For products which are manufactured in the country, the basis of assuming a selling price is the pricing pattern laid down by the government, if the products' price is controlled by the governments or the current market price and price trends in the past. For products which are not manufactured in the country and are being imported, the landed cost of a similar imported product is assumed to be the selling price.

The selling price for Mini Garments was estimated to be Rs.250, Rs.190 and Rs.130 per piece of pant, shirt and kids wear. At 100% capacity utilization, the project is estimated (as shown in table below) to produce 1,14,000 pieces of pants, 1,06,875 pieces of shirts and 1,28,250 pieces of kids wear (excluding 5% rejected material). Rejected material is expected to be sold at Rs.125, Rs.85 and Rs.65 per piece of Pants, Shirts and Kids Wear respectively. The sales realization at 50%, 60% and 80% capacity per pieces of pants, shirts and kids wear levels is given in the table below.

The following points have to be borne in mind while estimating working results or profits:

- The unit is assumed to sell all that it produces. That is, production is considered to be equal to sales and hence no adjustment is necessary for opening or closing stock.
- Adjustments are not made for inflation. That is, projections of revenues and costs are made at today's prices. It is assumed that the impact of inflation on revenues will be offset by that on costs.
- Sales are generally estimated net of excise duty while commission paid to salesmen is shown as an expense in the income statement.

Exhibit 5.7

The capacity of Mini Garments Limited at 100% levels was estimated to be 1,14,000, 1,06,875 and 1,28,250 pieces per annum of pants, shirts, and kids wear respectively determined as follows:

Capacities at 100% levels						
Product Mix	No. of Machines used	Pieces/ Machine	Pieces/ day (2 shifts)	Pcs/ annum (300 days)	Reject @ 5%	Pcs/ annum
Pants	40	5	400	1,20,000	6,000	1,14,000
Shirts	30	6.25	375	1,12,500	5,625	1,06,875
Kids Wear	30	7.5	450	1,35,000	6,750	1,28,250

Its capacity utilization was estimated to be 50%, 50% during 1st & 2nd years and 80% from 3rd year onwards.

The production capacity of the project is determined as follows:

Table 5.6

Production Capacity (Pcs/annum)				
Product mix	Capacity at 100% levels	I Year @ 50% capacity	II Year @ 50% Capacity	III Year onwards @ 80% capacity
Pants	1,14,000	57,000	68,400	91,200
Shirts	1,06,875	53,438	64,125	85,500
K. Wear	1,28,250	64,125	76,350	1,02,600

Revenue from Sales for Mini Garments is calculated as below:

Table 5.7

Product Mix	Prod. at 100% capacity (pieces)	I Year		II Year		III Year onwards	
		No. of pieces	Amount (Rs.)	No. of pieces	Amount (Rs.)	No. of pieces	Amount (Rs.)
Pants	1,14,000	57,000	142.50	68,400	171.00	91,200	228.00
Shirts	1,06,875	53,438	161.53	64,125	121.84	85,500	162.45
K. Wear	1,28,250	64,125	83.95	76,350	109.03	1,02,600	133.38
'A'			327.39		392.87		523.83
Sale of rejects							
Product	S.P. (Rs.)	Reject (pieces)	Sales (Rs. lakhs)	Reject (pieces)	Sales (Rs. lakhs)	Reject (pieces)	Sales (Rs. lakhs)
Pants	125	3,000	3.75	3.60	4,800	6.00	6.00
Shirts	85	2,815	2.39	3.375	2.87	4,500	3.82
K. Wear	65	3,375	2.20	4,050	2.63	5,400	3.51
B			8.34		10.00		12.33
Total		(A + B) = 335		492.87			537.16
Sales Realization							

Cost of Production

The cost of production includes the cost of raw materials, components, consumables and utilities comprising power, fuel, water etc. The initial theoretical calculations are adjusted taking into account the actual consumption pattern in the industry. The cost of inputs, besides the basic cost, includes loading, transportation and unloading expenses. Suitable provisions are also made for seasonal fluctuation in prices.

The various elements of total cost of production are -

- Raw materials
- Chemicals
- Components
- Consumables

- Total Raw Material Cost (a) + (b) + (c) + (d)
- Utilities
- Power
- Water
- Fuel
- Total utilities (e) + (f) + (g) + (h)
- Wages
- Factory supervision salaries,
- Bonus and Provident Fund
- Total Labour (i) + (j) + (k)
- Repairs and maintenance
- light
- Rent and taxes on factory assets
- Insurance on factory assets
- Packing material
- Miscellaneous factory overheads
- Contingency at 5%
- Total factory overheads (l to r)
- Cost of manufacture/operating cost I + II + III + IV
- Total Administration Expenses
- Total Sales Expenses
- Royalty and Know-how payable
- Total cost of production (V) + (VI) + (VII) + (VIII)

Exhibit 5.8

Mini Garments estimates its unit cost and total cost of raw materials and consumables to be:

Unit Cost				
Product Mix	Cloth/ piece (mst. Cloth/ piece ml (Rs.))	Cloth cost/ (Rs.)	Consumables/ piece	Unit cost of RMs
Pants	1.20	75	90	10.00
Shirts	1.80	40	72	3.00
K. Wear	1.00	45	45	5.00

Exhibit 5.9

Total Cost (in lakhs)				
Product Mix	Cost of RMs at 100% level	Cost during I year at 50% level	Cost during II year at 50% level	Cost from III year onwards at 80% level
Pants	1,20,000 x 100 = 120	60	72	96
Shirts	1,12,500 x 75 = 84.38	42.19	50.63	67.50
K. Wear	1,35,000 x 50 = 67.5	33.75	40.50	54.00
Total	271.88	135.94	163.13	217.50

The cost of power includes demand and energy charges. The requirements of utilities are calculated on the basis

of actual need and also on the experience of similar units in the industry. If the project contemplates generation of power internally, then the cost of power generated is to be segregated from power obtained from the Electricity Board. The cost of generating power internally will be added to other expenses such as fuel, salaries, depreciation etc.

Power Estimates of Mini Garments:

Exhibit 5.10

Maximum demand	350 KVA
Average demand	275 KVA
Power factor	0.9
Units/hour	250
Units/year	$250 \times 12 \times 300 = 9$ lakh units at 100% capacity utilization (assuming 12 hours/day working)
Demurrage Charges	1st year Rs. 3.00 lakhs, II year onwards Rs. 4.00 lakhs

The total cost of power is determined as follows:

Table 5.8

	I Year at 50% utilization	II year at 60% utilization	III year onwards at 80% utilization
i. Units Consumption (in lakhs)	4.5	5.4	7.2
ii. Average cost/unit (Rs.)	2.25	2.25	2.25
iii. Energy cost (i) x (ii) (Rs.) lakhs	10.13	12.15	16.2
iv. Dem. charges (Rs.) lakhs	3.00	4.00	4.00
v. Total cost (iii) + (iv) (Rs.) lakhs	13.13	16.15	20.20
Water and infrastructural facilities required for the project were expected to be available easily without any further cost.			

The other items of cost forming part of operating cost are labour and supervision, repairs and maintenance, packing materials and other miscellaneous factory overheads. Under labor and supervision, the size of the labor force, skills required of them and wage rate determines the total wage bill. The wage rate is taken either as per the statutory provisions or the rates prevailing in similar units and the location of the plant. A provision is added for allowances, provident fund etc. Every year it is estimated to escalate by 5%. Unless the plant and machinery has some special characteristics, for profit projections, repairs and maintenance are taken at 2 to 3 percent of the value of fixed assets and subsequently increased during later years. In case of those industries where wear and tear is high, a higher provision may be made.

Table 5.9

The total labour and factory overheads of Mini Garments Limited was estimated to be -			
Wages (during 3rd year at 80% capacity)			
		Rs. in lakhs	
Category	Nos.	Rs./year/person	Annual Salary
Finishers	225	24,000	54.00
Roughers	100	18,000	18.00
Cutters	16	18,000	2.88
Epote: Stitches	60	14,400	8.64
Chief designer	1	90,000	0.90
Asst. designers	3	60,000	1.80
Works Manager	1	1,00,000	1.00
Purchase Manager	1	1,00,000	1.00
Purchase Staff	4	36,000	1.44
			89.55
Other Perks @ 33%			29.48
			119.03
Henceforth, wages are estimated to escalate by 5% Wages during the I and II year is calculated based on the capacity utilization. Cost of packing materials for Mini Garments was estimated to be 1% of sales value.			

Table 5.10

Repairs and Maintenance was estimated to be -	
I year	- Rs. 3.52 lakhs
II year	- Rs. 4.07 lakhs
III year	- Rs. 5.22 lakhs

Apart from raw materials, consumables and utilities cost, overall cost of production also includes administrative expenses comprising of salaries, electricity, postage and other office supplies, insurance and taxes, etc. sales expenses and royalty know-how. Depending on the project, administrative and sales expenses can be taken at 3 to 5 percent and 5 to 10 percent of the sales respectively.

The estimates may be based on the average of the expenses incurred by similar units, if any.

Salaries for Mini Garments was estimated to be Rs. 18.49 lakhs as follows:

Table 5.11

Category	Nos.	Rs./Yr./Person	Annual Salary
Admn. Manager	1	60,000	60,000
Sales Manager	1	1,00,000	1,00,000
General Manager	1	1,50,000	1,50,000
Admn. Staff	5	35,000	1,75,000
Sales Staff	5	36,000	1,80,000
Supervisors	5	38,000	1,90,000
Maint. Staff	5	38,000	1,90,000
Watch/Ward	12	18,000	2,16,000
Other Subord. Staff	10	14,400	1,44,000
			13,90,000
Other perks @ 33%			4,58,700
			18,48,700
= Rs. 18.49 lakhs			
Salaries are expected to increase by 6% every year. Salaries during I and II years are calculated on the basis of capacity utilization. Administrative Expenses, of Mini Garments Limited were estimated to be Rs. 12 lakhs, Rs. 18 lakhs and 24 lakhs during I, II and III year onwards respectively. Sales Expenses were estimated to be 5% of sales value.			