

**50. PROFILE ON LEATHER SHOES  
AND LADIES SANDALS**

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## **I. SUMMARY**

This profile envisages the establishment of a plant for the production of 150,000 pairs of leather shoes and ladies sandals per annum.

The current demand for the envisaged product is estimated at 1,437,555 pairs and it is projected to reach at 2,988,573 pairs by the year 2019.

The plant will create employment opportunities for 84 persons.

The total investment requirement is estimated at Birr 5 million, out of which Birr 1.1 million is required for plant and machinery.

The project is financially viable with an internal rate of return (IRR) of 24% and a net present value (NPV) of Birr 4.6 million, discounted at 10.5%.

## **II. PRODUCT DESCRIPTION AND APPLICATION**

Leather shoes and ladies sandals are products with leather upper and PVC soles used as a walking shoe. Such conventional design shoes have cement lasted leather uppers and cemented on sole units that do not require finishing once assembled. It is usually consumed by persons of average / higher income.

## **III. MARKET STUDY AND PLANT CAPACITY**

### **A. MARKET STUDY**

#### **1. Past Supply and Present Demand**

Until recently, state - owned leather products enterprises largely controlled by National Leather and Shoe Corporation (NLSC), which administered six shoe manufacturing enterprises and one leather goods producing enterprise, used to be the

major domestic suppliers of leather shoes. However, with increased privatization, private sector factories and workshops are now the largest producers.

Since the domestic producers were unable to satisfy the demand, both in terms of quantity and quality a considerable proportion of leather shoes and sandals are also imported. Table 3.1 shows the historical apparent consumption of leather shoes and ladies sandals which constitute imports and domestic production.

**Table 3.1**  
**APPARENT CONSUMPTION OF LEATHER SHOES AND LADIES**  
**SANDALS (1993-2002)**

<b>Year</b>	<b>Domestic Production <sup>1</sup> (pairs)</b>	<b>Import<sup>2</sup> (pairs)</b>	<b>Total Consumption (pairs)</b>
1993	928,831	67000	995831
1994	1,199,174	6124	1,205,298
1995	1,159,392	29332	1,188,724
1996	1,384,703	28153	1,412,856
1997	1,179,602	625946	1,805,548
1998	1,080,430	82972	1,163,402
1999	1,400,748	275576	1,676,324
2000	1,585,034	176752	1,761,786
2001	1,326,253	84161	1,410,414
2002	1,098,574	77275	1,175,849

**Source:-** 1. CSA, *Survey of the Manufacturing & Electricity Industries*  
2. *Excise and Tax Authority, External Trade Statistics.*

One can infer from Table 3.1, that the apparent average consumption of leather shoes and sandals during the recent five years covered by the data set (1998-2002) was 1,437,555 pairs. Assuming that apparent consumption fairly approximates demand, this amount is considered to represent the current demand for leather shoes and ladies sandals in Ethiopia.

## 2. Projected Demand

For the foreseeable future, demand for leather shoes and sandals in Ethiopia will be largely influenced by the growth in number and income of the urban population. A growth rate of 5%, which is a little higher than the urban population growth rate of 4.5%, is thus used to project demand for the product. The result, as shown in Table 3.2, ranges from 1,509,432 pairs in the year 2005 to about 3,000,000 pairs by the year 2019. Assuming existing domestic production to be about 1.3 million pairs the unsatisfied demand will range from 284,904 pairs by the year 2006 to about 1.7 million pairs by the year 2019.

**Table 3.2**  
**PROJECTED DEMAND FOR LEATHER SHOES & LADIES SANDALS**  
**(2004-2019)**

<b>Year</b>	<b>Existing Domestic Production (pairs)</b>	<b>Projected Demand (pairs)</b>	<b>Unsatisfied Demand (pairs)</b>
2004	1,300,000	1,437,555	137,555
2005	1,300,000	1,509,432	209,432
2006	1,300,000	1,584,904	284,904
2007	1,300,000	1,664,149	336,149
2008	1,300,000	1,747,357	447,357
2009	1,300,000	1,834,724	534,724
2010	1,300,000	1,926,461	626,461
2011	1,300,000	2,022,784	722,784
2012	1,300,000	2,123,923	823,923
2013	1,300,000	2,230,119	930,119
2014	1,300,000	2,341,625	1,041,625
2015	1,300,000	2,458,706	1,158,706
2016	1,300,000	2,581,642	1,281,642
2017	1,300,000	2,710,724	1,410,724
2018	1,300,000	2,846,260	1,546,260
2019	1,300,000	2,988,573	1,688,573

By considering the location of region, the market share for the project is estimated to be about 25% of the unsatisfied demand. Hence, taking the unsatisfied demand of the year 2010 a plant with a capacity of 150,000 pairs per annum is recommended.

### **3. Pricing and Distribution**

The price of locally produced shoes varies from Birr 40 to about Birr 120 depending on the quality and brand. For the purpose of financial analysis, an average factory-gate price of Birr 65 per pair of shoe is adopted.

## **B. PLANTS CAPACITY AND PRODUCTION PROGRAMME**

### **1. Plant Capacity**

The envisaged plant will have a production capacity of 150,000 pairs of leather shoes and ladies sandals per annum working 300 days a year and single shift of 8 hours a day.

### **2. Production Programme**

Considering the time required for market penetration and skill development, the plant is assumed to start production at 70% of its capacity in the first year, 85% in the second year, and reach at 100% in the third year and thereafter.

## **IV. MATERIALS AND INPUTS**

### **A. MATERIALS**

The raw materials required for manufacturing of leather shoes/ sandals are upper leather, lining leather, insoles, sewing thread, eyelets, tacks, adhesive, pvc soles, etc. The raw materials and related inputs required by the envisaged plant will be obtained from local producers and importers. The annual raw materials requirement and costs at full capacity operation of the plant is depicted in Table 4.1.

**Table 4.1**  
**RAW MATERIAL REQUIREMENT AND COST**

<b>Sr. No.</b>	<b>Description</b>	<b>Qty.</b>	<b>Cost ('000 Birr</b>
1	Upper leather	300,000 sq.ft	1,800
2	Lining leather	300,000 sq.ft	750
3	PVC soles	225,000 sq.ft	3,375
4	Insoles	22,500 kg	337
5	Sewing thread	300 kg	15
6	Adhesive	7,500 kg	37
7	Eyelets	1,000,000 pcs	100
8	Tacks	2,340 kg	210
9	Counters and toe putts	24,000 pcs	96
10	Shoe cartons	150,000 pcs	225
11	Other auxiliary materials element late heel and top lifts etc		80
	<b>Grand Total</b>		<b>7,025</b>

As shown in the above table, the total cost of raw and auxiliary materials at full production capacity of the plant is estimated at Birr 7.025 million.

## **B. UTILITIES**

Electricity and water are utilities required by the foot wear plant. Annual electricity requirement is estimated to be 20,000 kWh. At the rate of Birr 0.4738/ kWh, annual expenditure on electricity will be Birr 9,460. Annual water consumption is estimated at 750 m<sup>3</sup>, which costs Birr 1,875. Therefore, total annual utilities expenditure will be about Birr 11,335.

## **V. TECHNOLOGY AND ENGINEERING**

### **A. TECHNOLOGY**

#### **1. Production Process**

Manufacturing process of leather shoes first involves cutting out the upper components from skins and the linings and insoles from leather or fabric and man-made sheets. Next, the edges of the upper components are tapered, or skived, to reduce the bulk of seams. The eyelets are then inserted in lacing styles and the various upper components are stitched and cemented together.

The insoles are then attached temporarily to the bottom of the last by tacks, and the heel stiffeners and the toe puffs (which respectively help to shape the backs and toes) are located. Cement lasting, involves stretching the edge of the upper round the last bottom and attaching it to the insole bottom with cement. After removing the tacks holding the insole to the last, the shoes are conditioned, the shanks which stiffen up the waist of the shoe are attached to the insoles, and the sole units are stuck on to the bottom. The final manufacturing stage involves cleaning, inspecting and packaging.

#### **2. Source of Technology**

The machinery and equipment required by the envisaged plant can be obtained from the following company.

JAY PEE EXPORTS.

Tel. 6564022, 6525820.

Fax. 91-11-6859019.

E-mail japee@ ders Vsnl. Net.In.

India.



## B. ENGINEERING

### 1. Machinery and Equipment

The machinery and equipment required by the foot wear plant will be procured from foreign sources. The total cost of plant machinery and equipment is estimated at Birr 1.155 million, of which about Birr 0.92 million is required in foreign currency. The list of plant machinery and equipment is depicted in Table 5.1.

**Table 5.1**  
**LIST OF MACHINERY & EQUIPMENT**

Sr. No.	Description	Qty.
1	Mechanical swing clicking press	5
2	Band knife splitting machine	1
3	Lining stamping machine	1
4	Manually operated stitch marking machine	1
5	Perforating machine	1
6	Semi-auto sock embosser	1
7	Manually controlled skiving machine	2
8	Mechanical edge folder and cementer	1
9	Sewing machines	10
10	Seam reducing machine	1
11	Tape dispensing machine	1
12	Hole punching machine	1
13	Auto feed eyeletter	1
14	Loose upper roughing machine	1
15	Powered trimming machine	2
16	Insole moulding machine	1
17	Insole beveling machine	1
18	Lasting heater	1
19	Manually operated drafting machine	1
20	Pull toe lasting machine	1
21	Back part moulding machine	1
22	Wrinkle chasing machine	1
23	Bottom roughing machine	1
24	Twin station hydraulic sole presses	1
25	Hot blast treeing machine	1
26	Spray booth and guns	1
27	Mopping and polishing machine	1
28	Manually operated cementing machine	1

## **2. Land, Building and Civil Works**

The envisaged plant requires a total area of 3,000 square meters, of which 1,500 square meter will be a built up area. Assuming lease value of land Birr 1.5 per m<sup>2</sup>, the total land value will be about Birr 315,000 for 70 years of land holding. Assuming average construction cost of Birr 1200/m<sup>2</sup>, the total cost of building will be about Birr 1.8 million. Therefore, the total cost of land, building and civil works assuming that the total land lease cost will be paid in advance is estimated at Birr 2.115 million.

## **3. Proposed Location**

There is no tanning plant in the region that can supply the main raw material for the envisaged plant. So, the availability of infrastructure like water, electricity, transportation, road, etc. labour and market for end product will dictate the location of the plant. Accordingly, the plant is proposed to be located in Assosa town.

# **VI. MANPOWER AND TRAINING REQUIREMENT**

## **A. MANPOWER REQUIREMENT**

The total manpower requirement of the plant is estimated at 84 persons. Details of manpower requirement and the annual labour cost are shown in Table 6.1.

**Table 6.1****LIST OF MANPOWER REQUIREMENT AND LABOUR COST (BIRR)**

<b>Sr. No.</b>	<b>Description</b>	<b>No. of persons</b>	<b>Monthly</b>	<b>Annual Salary</b>
1	General manager	1	2,000	2,400
2	Executive Secretary	1	800	9,600
3	Technical & production manager	1	1,800	21,600
4	Finance and administration manager	1	1,500	18,000
5	Commercial manager	1	1,500	18,000
6	Secretary	1	600	7,200
7	Accountant	1	900	10,800
8	Personnel	1	1,200	14,400
9	Salesperson	1	1,200	14,400
10	Store keeper	1	600	7,200
11	Cashier	1	500	6,000
12	Time keeper	1	500	6,000
13	Mechanic	1	800	9,600
14	Electrician	1	800	9,600
15	Skilled production operators	43	700	361,200
16	Semi skilled operators	10	500	60,000
17	Un skilled operators	11	300	39,600
18	Driver	1	500	6,000
19	Messenger	1	300	3,600
20	Guard	4	300	14,400
	<b>Sub-total</b>	<b>84</b>		<b>661,200</b>
21	Employees' benefits 25% of basic salary			165,300
	<b>Grand total</b>	<b>84</b>		<b>826,500</b>

## **B. TRAINING REQUIREMENT**

Technical and production workers should be given two months training on production technology, machine operation and maintenance by expatriate personnel from the machinery supplier during erection and commissioning period. The total cost of training is estimated at Birr 100,000.

## **VII. FINANCIAL ANALYSIS**

The financial analysis of leather shoes and ladies sandals project is based on the data provided in the previous chapters and the following assumptions:-

Construction period	2 years
Source of finance	30% equity
	70% loan
Tax holidays	3 years
Bank interest	10.5%
Discounted cash flow	10.5%
Repair and maintenance	5 % of Plant machinery and equipment
Accounts receivable	30 days
Raw material (local)	30 days
Work in progress	1 day
Finished products	30 days
Cash at hand	5 days
Accounts payable	30 days

## **A. TOTAL INITIAL INVESTMENT COST**

The total initial investment cost of the project including working capital is estimated at Birr 5 million, out of which about 18% will be required in foreign currency. Details are indicated in Table 7.1.

**Table 7.1**  
**INITIAL INVESTMENT COST ('000 BIRR)**

<b>Sr. No.</b>	<b>Cost Items</b>	<b>Foreign Currency</b>	<b>Local Currency</b>	<b>Total</b>
1	Land	-	315.0	315.0
2	Building and Civil Work	-	1,800.0	1,800.0
3	Plant Machinery and Equipment	920.00	357.0	1,155.0
4	Office Furniture and Equipment	-	150.0	150.0
5	Vehicle	-	250.0	250.0
6	Pre-production Expenditure*	-	741.02	741.02
	<b>Total Investment Cost</b>	<b>920.0</b>	<b>3,491.02</b>	<b>4,411.02</b>
7	Working Capital		643.95	643.95
	<b>Grand Total</b>	<b>920.0</b>	<b>4,134.97</b>	<b>5,054.97</b>

## **B. PRODUCTION COST**

The annual production cost at full operation capacity of the plant is estimated at Birr 8.64 million (see Table 7.2). The material and utility cost accounts for 81 per cent while repair and maintenance take 1.13 per cent of the production cost.

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\* *Pre-production expenditure include interest during construction (Birr 591.020 million), training (Birr 100,000 ) and cost of registration, licensing and formation of the company including legal fees, commissioning expenses, etc.*

**Table 7.2**  
**ANNUAL PRODUCTION COST**  
**(‘000 BIRR)**

Items	Year			
	3	4	7	10
Raw Material and Inputs	4,917.50	5,971.25	7,025.0	7,025.0
Labour Direct	347.13	421.51	495.90	495.90
Utilities	7.93	9.63	11.34	11.34
Maintenance and repair	40.43	49.09	57.75	57.75
Labour overheads	144.64	175.63	206.63	206.63
Administration cost	231.42	281.01	330.60	330.60
<b>Total operating costs</b>	<b>5,689.05</b>	<b>6,908.13</b>	<b>8,127.21</b>	<b>8,127.21</b>
Depreciation	305.0	305.0	305.0	225.0
Cost of Finance	342.83	308.54	205.70	102.85
<b>Total Production Cost</b>	<b>6,336.87</b>	<b>7,521.67</b>	<b>8,637.91</b>	<b>8,455.06</b>

## C. FINANCIAL EVALUATION

### 1. Profitability

According to the projected income statement, the project will start generating profit in the first year of operation. Important ratios such as the percentage of net profit to total sales, net profit to equity (return on equity) and net profit plus interest to total investment (return on total investment) will show an increasing trend throughout the production life of the project. The income statement and other profitability indicators show that the project is viable.

## 2. Break-even Analysis

The break-even point of the project is estimated by using income statement projection.

$$\text{Be} = \frac{\text{Fixed Cost}}{\text{Sales-Variable Cost}} = 18 \%$$

## 3. Pay-Back Period

The investment cost and income statement projection are used to project the pay-back period. The project will fully recover the initial investment and working capital within 5 years time.

## 4. Internal Rate of Return and Net Present Value

Based on the cash flow statement, the calculated IRR of the project is 24 % and the net present value at 10.5% discount rate is Birr 4.6 million.

## D. ECONOMIC BENEFITS

The project can create employment opportunities for 84 persons. In addition to supply of the domestic needs, the project will generate Birr 10.3 million in terms of tax revenue. Moreover, the Regional Government can collect employment, income tax and sales tax revenue. The establishment of such factory will have a foreign exchange saving effect to the country by substituting the current imports.