

**37. PROFILE ON PRODUCTION OF LEATHER
SANDALS & CHAPALS**

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I. SUMMARY

This profile envisages the establishment of a plant for the production of leather sandals and chapels with a capacity of 10,000 pairs per annum.

The present demand for the proposed product is estimated at 7,517 pairs per annum. The demand is expected to reach at 115,815 pairs by the year 2022.

The plant will create employment opportunities for 12 persons.

The total investment requirement is estimated at Birr 1.45 million, out of which Birr 580,000 is required for plant and machinery.

The project is financially viable with an internal rate of return (IRR) of 13 % and a net present value (NPV) of Birr 187,080, discounted at 8.5 %.

II. PRODUCT DESCRIPTION AND APPLICATION

Leather sandals are leather made products that are widely known to cover the feet of individuals of all ages. It possesses best quality due to its softness and light weight. The demand for leather sandals and chapals depend on the size of the population, income level, the degree of urbanization and consumers attitude.

III. MARKET STUDY AND PLANT CAPACITY

A. MARKET STUDY

1. Past Supply and Present Demand

The country's requirement for leather sandals and chapels has been met through domestic production and imports. However, data on domestic production of the product is not

readily available. The amount of imports of the product during 1997-2006 is shown in Table 3.1. Varying from a minimum of 42 pairs in 2003 to a maximum of 25,810 pairs in 2004, imports of leather sandals and chapels highly fluctuated during the period under reference. On the average, the country imported 6,264 pairs of leather sandals and chapels during the reference period.

Table 3.1
IMPORTS OF LEATHER SANDALS AND CHAPELS

Year	Imports (Pairs)
1997	514
1998	9,367
1999	12,310
2000	397
2001	287
2002	5,634
2003	42
2004	25,810
2005	3,226
2006	5,051
Average	6,264

*Source: Customs Authority, External Trade
Statistics, 1997-2006.*

Assuming supply is driven by demand, the average annual supply of the product, which comprises of only imports for the period under reference, is considered as the effective demand for the product for the year 2006. The average rate of growth of imports of leather sandals and chapels during the reference period is extremely high. However, a

conservative rate of growth of 20% is adopted in estimating the demand for the product. The present demand for the product (i.e. 2007) is, thus, estimated at 7,517 pairs.

2. Projected Demand

As stated above, a rate of growth of 20% is considered in projecting the demand for leather sandals and chapels. Table 3.2 depicts the projected demand for the product.

Table 3.2

PROJECTED DEMAND FOR LEATHER SANDALS & CHAPELS (PAIRS)

Year	Projected Demand
2007	7,517
2008	9,020
2009	10,824
2010	12,989
2011	15,587
2012	18,705
2013	22,446
2014	26,935
2015	32,322
2016	38,786
2017	46,543
2018	55,852
2019	67,022
2020	80,427
2021	96,512
2022	115,815

3. Pricing and Distribution

Based on average CIF price of recent external trade statistics, and allowing 30% for import duty and other clearing expenses, the factory-gate price for the envisaged plant is estimated at Birr 75 a pair.

The product can get its market outlet through the existing retail network and the factory's own shop.

B. PLANT CAPACITY AND PRODUCTION PROGRAMME

1. Plant Capacity

The envisaged plant will have a production capacity of 10,000 pairs of leather chapals 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 75% of its capacity in the first year, 85% in the second year, and reach at 100% in the third year and then after.

IV. MATERIALS AND INPUTS

A. RAW AND AUXILIARY MATERIALS

The raw materials required for manufacturing of leather chapels and 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 and auxiliary materials requirement and cost at full operation capacity of the plant is depicted in Table 4.1.

Table 4.1
RAW AND AUXILIARY MATERIALS REQUIREMENT AND COST

Sr. No.	Description	Qty	Cost ('000 Birr)
1	Upper leather	20,000 sq.ft	176
2	Lining leather	20,000 sq.ft	50
3	PVS soles	5,000 sq.ft	75.0
4	Insoles	1,500 kg	15.0
5	Sewing thread	20 kg	1.0
6	Adhesive	500 kg	5.0
7	Eyelets	70,000 pcs	7.0
8	Tacks	156 kg	14.0
9	Counters and toe putts	1,600 pcs	6.4
10	Shoe cartons	10,000 pcs	25.0
11	Other auxiliary materials element late heel and top lifts etc.		6.0
	Grand total		380.40

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 380,400.

B. UTILITIES

Electricity and water are utilities required by the foot wear plant. Annual electricity requirement is estimated to be 5,000 kWh. At the rate of Birr 0.4738/kWh, annual expenditure on electricity will be Birr 2,369. Annual water consumption is estimated at 300 m³, which costs Birr 3,000. Therefore, total annual utilities expenditure will be about Birr 5,369.

V. TECHNOLOGY AND ENGINEERING

A. TECHNOLOGY

1. Production Process

Manufacturing process of leather sandals/chapals first involves cutting out the upper components from leather 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@dersVsnl.Net.In.

India.

B. ENGINEERING

1. Machinery and Equipment

The required machinery and equipment along with estimated cost are shown in Table 5.1. The total cost of machinery and equipment is about Birr 580,000, out of which Birr 530,000 will be required in foreign currency.

Table 5.1

LIST OF REQUIRED MACHINERY AND EQUIPMENT AND COST

Sr. No.	Item	Qty (In No.)	Cost '000 Birr		
			FC	LC	Total
1	Strap cutting machine	1	50	-	50
2	Cementing sewing machine	3	170	-	170
3	Cementing air press 2 bed	2	100	-	100
4	Double ended buffing with exhaust motor I.H.P	2	100.0	-	100.0
5	Tools and equipments	Set	30.0	-	30.0
6	Straps fitting machine	2	80		80
	FOB		530		530
	Various charges		-	50	50
	CIF landed cost		530	50	580

2. Land, Building and Civil Works

The plant site will have a total area of about 1,000 square meters, of which 350 m² will be occupied by production hall and other rooms for general purpose such as storage and offices. The estimated total building and civil work cost at the rate of Birr 1,500 per m² is Birr 525,000. Lease value of land at the rate of Birr 1 per m² and for 80 years is estimated at Birr 80,000. Total land lease and building construction cost, thus, amounts to Birr 605,000.

3. Proposed Location

Location of a plant is determined on the basis of proximity to local raw materials, availability of infrastructure and distance to major market outlets. Potential woredas identified are Awassa zuria, Wonago and Arbamich zuria. Among these the selected woreda is wonago. The plant will, therefore, be established in Dilla town.

VI. MANPOWER AND TRAINING REQUIREMENT

A. MANPOWER REQUIREMENT

The total manpower requirement of the plant is estimated at 12 persons. Details of manpower requirement and the annual labour cost are shown in Table 6.1.

Table 6.1
MANPOWER REQUIREMENT AND ANNUAL LABOUR COST BIRR

Sr. No.	Job Title	Req. No.	Monthly Salary	Annual Wages
	<u>A. Administration</u>			
1	Plant manager	1	1,800	21,600
2	Secretary	1	500	6,000
3	Sales person	1	700	8,400
4	Store keeper	1	700	8,400
5	Cashier	1	500	6,000
6	General services	3	250	9,000
	Sub total	8		59,400
	<u>B. Production</u>			
1	Skilled workers	3	600	21,600
2	Unskilled workers	1	250	3,000
	Sub-total	4	-	24,600
	Workers' Benefit (25% BS)	-		21,000
	Total	12		105,000

B. TRAINING REQUIREMENT

As there are trained personnel in the field of leather goods in the country, there is no need to train the production workers.

VII. FINANCIAL ANALYSIS

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

Construction period	1 year
Source of finance	30% equity 70 % loan
Tax holidays	3 years
Bank interest	8.5 %
Discount cash flow	8.5 %
Accounts receivable	30 days
Raw material local	30 days
Work in progress	5 days
Finished products	30 days
Cash in hand	10 days
Accounts payable	30 days

A. TOTAL INITIAL INVESTMENT COST

The total investment cost of the project including working capital is estimated at Birr 1.43 million, of which 19 per cent will be required in foreign currency.

The major breakdown of the total initial investment cost is shown in Table 7.1.

Table 7.1
INITIAL INVESTMENT COST

Sr. No.	Cost Items	Total Cost (‘000 Birr)
1	Land lease value	80.0
2	Building and Civil Work	525.0
3	Plant Machinery and Equipment	580.0
4	Office Furniture and Equipment	35.0
5	Pre-production Expenditure*	141.9
6	Working Capital	74.1
	Total Investment cost	1,436.0
	Foreign Share	19

** N.B Pre-production expenditure includes interest during construction (Birr 80.92 thousand) and Birr 61 thousand costs of registration, licensing and formation of the company including legal fees, commissioning expenses, etc.*

B. PRODUCTION COST

The annual production cost at full operation capacity is estimated at Birr 644,530 (see Table 7.2). The material and utility cost accounts for 59.85 per cent, while repair and maintenance take 1.2 per cent of the production cost.

Table 7.2**ANNUAL PRODUCTION COST AT FULL CAPACITY ('000 BIRR)**

Items	Cost	%
Raw Material and Inputs	380.40	59.02
Utilities	5.37	0.83
Maintenance and repair	10.3	1.2
Labour direct	45.6	7.07
Administration Costs	59.4	9.22
Total Operating Costs	490.78	76.15
Depreciation	99.95	15.51
Cost of Finance	53.8	8.35
Total Production Cost	644.53	100

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 profit to total sales, net profit to equity (Return on equity) and net profit plus interest on total investment (return on total investment) show an increasing trend during the life-time of the project.

The income statement and the other indicators of profitability show that the project is viable.

2. Break-even Analysis

The break-even point of the project including cost of finance when it starts to operate at full capacity (year) is estimated by using income statement projection.

$$\text{BE} = \frac{\text{Fixed Cost}}{\text{Sales} - \text{Variable Cost}} = 20 \%$$

3. Pay Back Period

The investment cost and income statement projection are used to project the pay-back period. The project's initial investment will be fully recovered within 6 years.

4. Internal Rate of Return and Net Present Value

Based on the cash flow statement, the calculated IRR of the project is 13 % and the net present value at 8.5 % discount rate is Birr 187,080.

D. ECONOMIC BENEFITS

The project can create employment for 12 persons. In addition to supply of the domestic needs, the project will generate Birr 237,840 in terms of tax revenue. The establishment of such factory will have a foreign exchange saving effect to the country by substituting the current imports.