



PROJECT PROFILE ON MANUFACTURING OF LEATHER FOOTWEAR



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ADDIS ABEBA CITY ADMINISTRATION INVESTMENT COMMISSION
A.A

PROJECT PROFILE ON MANUFACTURING OF LEATHER FOOTWEAR

TABLE OF CONTENT

I. EXECUTIVE SUMMARY	1
1. BACKGROUND INFORMATION.....	3
1.1. INTRODUCTION	3
1.3. PROJECT LOCATION AND JUSTIFICATION	4
1.3.1. Location of Addis Ababa	4
1.3.2. Demography of Addis Ababa	4
1.3.3. Economic activity of Addis Ababa.....	4
1.4. WHY IS IT BENEFICIAL TO INVEST IN ADDIS ABABA?	6
1.4.1. The city benefit from the investment	7
1.5. AVAILABILITY OF RAW MATERIALS.....	8
2. MARKETING STUDY	9
2.1. MARKET ANALYSIS SUMMARY.....	9
2.2.1. Local footwear Supply.....	9
2.2.2. Import.....	10
COMPILED: - BY CONSULTANT	12
2.3. FOOTWEAR DEMAND PROJECTION	12
2.4. DEMAND-SUPPLY GAP ANALYSIS.....	14
3. TECHNOLOGY AND ENGINEERING	15
3.1. TECHNOLOGY	15
3.1.3. Production Capacity and Production Program	17
3.2.1. Land, buildings and civil works.....	18
3.2.2. Machinery and equipment	21
4. FACTORY ORGANIZATIONAL STRUCTURE	23
4.1. MANPOWER REQUIREMENT AND ESTIMATED ANNUAL MANPOWER COSTS	23
5. FINANCIAL ANALYSIS.....	24
5.1. GENERAL	24
5.2. INITIAL FIXED INVESTMENT COSTS.....	25
5.3. WORKING CAPITAL.....	26
5.4. PROJECT FINANCING	26
5.5. PRODUCTION COSTS	26
5.5.1. Material inputs.....	27
5.5.2. Utilities	28
5.5.3. Over heads.....	29
5.5.4. Financial costs	30
5.5.5. Depreciation	30

PROJECT PROFILE ON MANUFACTURING OF LEATHER FOOTWEAR

5.6.	BREAK EVEN POINT AND ROI.....	31
5.6.1.	<i>Break Even point (BEP)</i>	31
5.6.2.	<i>Return on investment</i>	32
5.7.	PROJECT BENEFITS	32

LIST OF TABLES

Table 1	Local manufactured footwear export trends in last five years	10
Table 2	Volume of imported footwear from 2012 to 2021 in pcs	11
Table 3	Future forecast of import of Footwear by trend adjusted exponential smoothing method.....	12
Table 4	Projected Demand for Footwear in Ethiopia	13
Table 5	Demand supply gap Analysis.....	14
Table 6	Production mix in pcs	18
Table 7	Building costs	19
Table 8	Land lease period in Addis Abeba	20
Table 9	Land lease floor price in Addis Abeba	20
Table 10	Lists of machineries required for footwear production.....	21
Table 11	Annual manpower costs	23
Table 12	Initial Fixed investment costs.....	25
Table 13	Materials input required to produce one men footwear	27
Table 14	Utilities of the factory'000'Birr	28
Table 15	Overhead costs	29
Table 16	Depreciation in Birr'000"	30
Table 17	Source of revenue in Birr'000"	33
Table 18	Annual total production costs'000'	36
Table 19	Calculation of working capital	37
Table 20	Projected Net income statement "000"	38
Table 21	Debt services schedule and computation'000'	39
Table 22	Projected Cash flow statement	40
Table 23	Total investment costs'000'	41
Table 24	Total Assets	41
Table 25	Sources of finance.....	42
Table 26	Summary of financial efficiency tests	42
Table 27	Calculation of payback period'000'	43
Table 28	Calculation of NPV at 17% D.F.....	44

I. Executive summary

This project profile is prepared to assess the viability of running leather footwear manufacturing factory, in Addis Abeba city administration. Hence Market, Technical, Organizational and Financial study was made to investigate the viability of the envisaged project.

This project profile on leather footwear manufacturing factory has been developed to support the decision –making process based on a cost benefit analysis of the actual project viability. This profile includes marketing study, production and financial analysis, which are utilized to assist the decision-makers when determining if the business concept is viable. Ethiopia has a private sector driven ladies hand bag manufacturing industry. According to the latest data sourced from Ethiopian investment commission there are more than 74 registered companies to invest on footwear manufacturing factory in Ethiopia.

The location of the plant will be decided on the basis of access to raw materials, infrastructure namely power, water, transport and telecom to easy access to international market. The most locally available raw materials for the factory are leather.

The factory at full capacity operation can produce 500,000 pairs of leather footwear, per year based on 260 working days and their shifts of 24 hours per day.

The total investment capital including establishing the factory is Birr353.70 million. Out of the total investment capital, the owners will cover Birr 106.11 million (30 %) while the remaining balances amounting to Birr 247.60 million (70 %) will be secured from bank in the form of term loan.

PROJECT PROFILE ON MANUFACTURING OF LEATHER FOOTWEAR

As indicated in the financial study, the cash flow projection of the project shows surplus from the first year on. The net cash flows of the project range from Birr 97.90 Million in the first year to Birr 139.86 million at the end of the 10th year of operation. At the end of the 10th year of operation period the cumulative cash balance reaches Birr 138 billion. The Benefit-cost ratio and Net present value (NPV) have been calculated at 17% discount factor (D.F) for 10 years of the project activity. Accordingly, the project has NPV of 831.76 million Birr at 17%D.F. and the benefit-cost ratio of 1.4 at 17% D.F.

Therefore, from the aforementioned overall market technical and financial analysis we can conclude that the footwear manufacturing factory business is a viable and worthwhile.

1. Background information

1.1. Introduction

The footwear sector is a very significant segment of the leather industry in Ethiopia; rather it is the engine of growth for the entire Ethiopian leather industry. A shoe is an item of footwear intended to protect and comfort the human foot while doing various activities. Shoes are also used as an item of decoration. The design of shoes has varied enormously through time and from culture to culture, with appearance originally being tied to function. Any shoe has an upper part that helps hold the shoe onto the foot. Footwear's are made with different shapes, designs, colours, and functions. No matter whether you are young or old, everyone will feel that their appearances will not be complete without footwear.

There is various shape of footwear from loafers to sandals, in addition, footwear use a variety of materials including leather, plastic, cloths, buttons, zips, and iron that are decorated with a variety of decorations. In today's market there are countless types and designs of the latest footwear with interesting patterns, colours, and decorations.

1.2. Product description

The product mix would include men's shoes in all sizes. This product mix is divided into further categories: casual, semi-formal and formal footwear which includes dress shoes, slippers, causal sneakers, loafers, sandals and boots etc. made of leather and other materials. There are two different product qualities Imported and Local, ranging between 800 birr to 5,000 birr.

1.3. Project location and justification

1.3.1. Location of Addis Ababa

Addis Ababa is the seat of the Ethiopian federal government. It is located on the central highlands of Ethiopia in the middle of Oromia Region. The absolute location is around the intersection point of 9°01'48''N latitude and 38°44'24''E longitudes. This is very near to the geographical center of the country. It is, therefore, equidistant to the peripheral areas or is equally accessible to almost all parts of Ethiopia. Addis Ababa is located on a well-watered plateau surrounded by hills and mountains. The city is in the highlands on the edge of the Ethiopian rift valley or the eastern slopes of the Entoto Mountain ranges bordering the Great Rift Valley. The total area of Addis Ababa is about 540 km² of which 18.2 km² are rural. Addis Ababa's built-up urban area spans 474 km². It is also the largest city in the world located in a landlocked country.

1.3.2. Demography of Addis Ababa

According to the CSA (2013) population projection, Ethiopia's total population reaches about 105 million people in 2022. Of the total population 22.9% (24 million people) live in urban areas. Ethiopia's urban population is expected to triple by 2037 (World Bank, 2015). Addis Ababa hosts an estimated 3,859,638 people. Currently, Addis Ababa is experiencing an annual growth rate of 3.8% and is estimated to reach 4,696,629 inhabitants by 2032 (CSA, 2015).

1.3.3. Economic activity of Addis Ababa

The transformation of Addis Ababa has especially been rapid since 1991. According to the data from the city's Bureau of Finance and Economic Development (2006), per capital income of Addis Ababa has grown from USD 788.48 in 2010 to USD 1,359 in 2015. The city also achieved a decline in the

PROJECT PROFILE ON MANUFACTURING OF LEATHER FOOTWEAR

poverty index from a high of 29.6 in 2012 to 22.0 in 2014. Moreover, the current poverty headcount index for Addis Ababa is estimated at 18.9 while the poverty severity account for 5 and 1.8 index points respectively. Even though, the poverty status of Addis Ababa has an improvement over previous years, there is still much work to be done to curb both the incidence and severity of poverty.

The major contributor to the economic growth of the city is the implementation of publicly financed mega urban projects like condominium housing, the Light Rail Transit, the international airport and industrial zone development (The state of Addis Ababa, 2017). The existence of international large and medium-size enterprises in and around Addis Ababa have also significant role in creating huge opportunity for employment and technology transfer. Furthermore, there are strong demand for goods and services following the existence of many embassies and inter-governmental organizations like the African Union, the United Nations Economic Commission for Africa.

The manufacturing sector's contribution to Addis Ababa's GDP is high. Despite the fact that 86% of the industries in the city are micro and small scale (cottage and handicrafts, and small-scale), the majority of the country's large and medium scale industries are found in the city. Noticeable increases are also registered currently in other aspects of industrial growth.

The service sector is both the largest contributor to the city's economy and the largest employer. It contributes to 76.4% of the city's GDP while industry's share makes up (almost all) the rest. This sector is dominated by three major sub-sectors: Transport and communication; Real estate, Renting and Business services; and Trade, Hotel and Restaurants. According to the state of Ethiopian Cities 2015 report, the service sector has also been responsible for more than 50% of the growth in the estimated annual growth of the city's GDP. Although 75% of employment in the city is also generated in the service sector, a large proportion of the employed work in low skill and low paying

PROJECT PROFILE ON MANUFACTURING OF LEATHER FOOTWEAR

jobs as shop salespersons, petty and 'gullit' traders, sales workers in small shops, domestic helpers or doorkeepers and restaurant service workers.

Analysis of the economic structure of Addis Ababa reveals that the services sectors (63%) dominates with industry (36%) in second place indicating that these sectors account for almost all of the Addis Ababa's GDP (The State of Addis Ababa, 2017).

Addis Ababa has a great share in the economy of the country due to its attractiveness to businesses, companies, individuals and foreign direct investment. Overall primacy index of the city is 24.8 based on urban employment and unemployment survey (CSA 2015). According to the State of Addis Ababa 2017 report, the simultaneous high rates of economic growth and urbanization in Addis Ababa indicates a likely further rising dominance of the city in Ethiopia's economy as well as growing agglomeration of economic activities in and around the city.

1.4. Why is it beneficial to invest in Addis Ababa?

Addis Ababa is the largest and most economically significant city in the country. Ethiopia's urban population share is only 17 percent (as of 2012, World Bank 2015). The city is the only urban area in Ethiopia capable of delivering scale economies in terms of concentrated demand, specialization, diversity and depth of skills, innovation, and technology transfers. Thus, investors will be benefited in getting capable human power from the market.

The capital is the country's main industrial hub. The city dominates industrial capacity in almost all the braches of light manufacturing that Ethiopia prioritizes. As a result Addis Ababa completely dominates production in various subsectors. This can be taken as the political and social stability of the city.

PROJECT PROFILE ON MANUFACTURING OF LEATHER FOOTWEAR

Overall, the city has a beautiful environment, favorable location, and strong industrial base. Its advantage as an economic powerhouse of the country and human resource center are the most attractive features for local and overseas investors.

Moreover, investors will be getting a comprehensive set of incentives for priority sectors. These include:

- Customs duty free privilege on capital goods and construction materials, and on spare parts whose value is not greater than 15% of the imported capital goods' total value.
- Investors have the right to redeem a refund of customs duty paid on inputs (raw materials and components) when buying capital goods or construction materials from local manufacturing industries.
- Income tax exemption of up to 6 years for manufacturing and agro-processing, and up to 9 years for agricultural investment.
- Additional 2-4 years income tax exemption for exporting investors located within industrial parks and 10-15 years exemption for industrial park developers.
- Loss Carry forward for half of the tax holiday period. Several export incentives, including Duty Draw-Back, Voucher, Bonded Factory, and Manufacturing Warehouse, and Export Credit Guarantee schemes.

1.4.1. The city benefit from the investment

The city will be benefited from investment. These are discussed below.

- Employment opportunity

PROJECT PROFILE ON MANUFACTURING OF LEATHER FOOTWEAR

Investment is expected to provide direct and indirect employment. These range from unskilled casual workers, semi-skilled and skilled employees.

- Improving growth of the economy

Through the use of locally available materials and exporting products, the investment contributes towards growth of the economy by contributing to the growth of domestic product. These eventually attract taxes including VAT which will be payable to the government hence increasing government revenue while the cost of local materials will be payable directly to the producers. In addition, domestic products save foreign exchange and exports also bring money to the country.

1.5. Availability of raw materials

1.5.1. Leather production in Ethiopia

The industry bases itself on the country's livestock resources. Ethiopia possesses one of the world's largest livestock population with 65 million cattle, 40 million sheep, and 51 million goats, 8 million camels and 49 million chickens in 2020 (Central Statistics Agency, CSA, 2020). This enormous population of livestock provides ample opportunity for the development of the leather industry in the country. This makes Ethiopia the 1st from Africa and the 10th from the world in its cattle population which enable the country to have a strong raw material base for the leather industry.

2. Marketing study

2.1. Market analysis summary

The current drive and emphasis by the government on the diversification of the industrial base away from the other sector presents an opportunity for production industry to a valuable contribution towards achieving goal. Having undertaken a thorough and comprehensive research of the market we realized that there was a vast opportunity for domestic products. Aware of the fact operating in such a market is largely dependent on good networking, the promoter intends to establish networks and strategic relationships with various wholesalers and retailers to ensure a steady stream of orders. In so doing the owner intend to ensure that the products they produce are of extremely high quality and fully serve the customers purpose.

2.2. The Supply of footwear

2.2.1. Local footwear Supply

In Ethiopia there are More than 75 domestic and foreign leather and leather product factories have invested in Ethiopia. Though there were only few tanneries a decade ago, in the industry there are 29 tanneries, 21 medium- and large-scale footwear manufacturers and 19 leather products firms. In addition, about 50 small and micro enterprises and a huge number of small workshops are operating in the leather goods and leather garment sector in the country. The design capacity of those large scale, medium scale and small scale footwear manufacturing factories is estimated to be about 46 million pairs of footwear/year. However, due to various problems, the large and medium factories not operate at full capacity, average capacity utilization of factories is 52% which 24 million pairs of footwear per year and out of this on average 3.13 million pairs has been supplied to the foreign market .

PROJECT PROFILE ON MANUFACTURING OF LEATHER FOOTWEAR

Table 1 Local manufactured footwear export trends in last five years

Year in E.C	Quantity in pair	Net weight in kg	FOB value in USD
2008	3,543,559	1,882,672	35,028,529
2009	4,168,707	2,093,156	38,566,552
2010	4,502,416	2,353,514	49,039,054
2011	4,164,968	2,122,993	44,206,970
2012	1,844,289	1,031,052	19,028,346
2013	571,725	362,348	5,123,582
Grand Total	18,795,664	9,845,735	190,993,033
Average	3,132,611	1,640,956	31,832,172

2.2.2. Import

The supply of footwear has been met both through import and domestic production. Although there is no apparent trend in the growth of import footwear has continuously been appearing in the import statistics.

PROJECT PROFILE ON MANUFACTURING OF LEATHER FOOTWEAR

Table 2 Volume of imported footwear from 2012 to 2021 in pcs

year	Gross Wt. (Kg)	Net Wt. (Kg)	CIF Value (ETB)	CIF Value (USD)	Total tax (ETB)	Total tax (USD)	Quantity in pair
2012	9,854,419	9,718,873	970,139,367	54,302,087	722,319,816	40,430,762	12,463,560
2013	11,324,008	11,253,735	1,203,610,175	64,021,477	894,011,631	47,553,557	21,577,472
2014	13,569,543	13,502,851	1,359,098,641	67,470,494	997,864,219	49,537,531	24,719,787
2015	19,896,702	19,838,960	1,867,698,724	89,870,981	1,110,071,075	53,415,026	35,800,352
2016	10,074,192	10,060,747	1,051,585,645	48,687,902	684,813,358	31,706,524	16,876,629
2017	20,274,611	20,237,923	2,612,819,878	107,892,417	1,780,798,035	73,535,342	40,920,958
2018	11,268,637	11,200,678	1,635,472,284	59,106,335	1,019,792,386	36,771,223	22,612,696
2019	657	657	213,908	7,323	157,811	5,403	6,000
2020	10,171,863	10,128,409	2,636,025,301	75,422,755	1,912,050,966	54,708,182	22,210,247
2021	10,840,463	10,826,709	3,453,629,717	77,916,742	2,498,922,120	56,378,783	22,524,901
Average	11,727,510	11,676,954	1,679,029,364	64,469,851	1,162,080,142	44,404,233	21,971,260

Source: Ethiopia customs Authority

As it has been shown in table 2 import of Footwear which was 12,463,560 pcs at the beginning of the period (2012) has increased to 22,524,901 by the end of, 2021. A closer observation at the data set reveals that imported Footwear over the study period has shown varying patterns. Based on the data obtained from Ethiopia customs Authority, the annual average volume of imported Footwear is 21,971,260 pcs from 2012 through 2021.

PROJECT PROFILE ON MANUFACTURING OF LEATHER FOOTWEAR

2.2.2.1. Forecasted future import of footwear

Table 3 Future forecast of import of Footwear by trend adjusted exponential smoothing method

Year	Actual	Trend adjusted exponential smoothing
2012	12,463,560	
2013	21,577,472	
2014	24,719,787	
2015	35,800,352	
2016	16,876,629	
2017	40,920,958	
2018	22,612,696	
2019	6,000	
2020	22,210,247	
2021	22,524,901	
2022		22,524,901
2023		23,531,035
2024		24,537,169
2025		25,543,303
2026		26,549,437
2027		27,555,572
2028		28,561,706
2029		29,567,840
2030		30,573,974
2031		31,580,108
2032		32,586,242

Compiled: - by Consultant

2.3. Footwear Demand Projection

The demand for Footwear can be influenced by a number of factors. The size of population and its growth rate, disposable income and prices are few among many variables. However, data on some of these parameters are not readily available in Ethiopia. Consequently, it is difficult if not impossible to objectively quantify the actual demand. Nevertheless, for the purpose of this study,

PROJECT PROFILE ON MANUFACTURING OF LEATHER FOOTWEAR

attempts have been made to forecast the likely future demand for Footwear on the basis of the following assumptions:

- i. Local supply of Footwear assumed to be increased by 2.5% every year.
- ii. Ethiopia population is estimated to be 120,202,679 in 2022
- iii. Annual growth of population is taken to be 2.5%

i. Per capital usage = $\frac{\text{Effective demand}}{\text{Urban population}}$

ii. Effective demand = usage of domestic supply footwear+ Average imported footwear= 24,000,000 pair + 21,971,260 pair = 45,971,260 pair/year, which means effective demand in year 2021 is 45,971,260 pair of shoes/117,270,906= 0,392 pair of shoes/person/year.

Table 4 Projected Demand for Footwear in Ethiopia

Year	Population	Per capital usage of footwear is 0.392 pair per year in 2021 and will increase by 2.5% every year	Total demand for footwear
2022	120,202,679	0.402	48,321,477
2023	123,207,746	0.412	50,761,591
2024	126,287,940	0.422	53,293,511
2025	129,445,138	0.433	56,049,745
2026	132,681,267	0.444	58,910,483
2027	135,998,298	0.455	61,879,226
2028	139,398,256	0.466	64,959,587
2029	142,883,212	0.478	68,298,175
2030	146,455,292	0.490	71,763,093
2031	150,116,675	0.502	75,358,571
2032	153,869,592	0.515	79,242,840

As it is indicated above the effective demand for Footwear in 2022 is 48,321,477 pair. This volume will increase to 79,242,840 pair in the year.

PROJECT PROFILE ON MANUFACTURING OF LEATHER FOOTWEAR

2.4. Demand-Supply Gap Analysis

When we see the historical supply volume of Footwear in Ethiopia there is no apparent trend in the growth. Because both the import and production data are found to be erratic. Hence, it is found difficult to objectively forecast the future supply volume. Single exponential forecasted method was used, for forecasting purposes. A 2.5% supply growth rate, is also assumed for local production increase, for new as well as the capacity utilization increase for the existing unit.

Table 5 Demand supply gap Analysis

Year	Domestic production in pair	Forecasted Import in pair	Total supply in pair	Demand pair	Excess demand If import totally substitute by local production (in pair)
2022	24,000,000	22,524,901	46,524,901	48,321,477	70,846,378
2023	24,600,000	23,531,035	48,131,035	50,761,591	74,292,626
2024	25,215,000	24,537,169	49,752,169	53,293,511	77,830,680
2025	25,845,375	25,543,303	51,388,678	56,049,745	81,593,048
2026	26,491,509	26,549,437	53,040,946	58,910,483	85,459,920
2027	27,153,797	27,555,572	54,709,369	61,879,226	89,434,798
2028	27,832,642	28,561,706	56,394,348	64,959,587	93,521,293
2029	28,528,458	29,567,840	58,096,298	68,298,175	97,866,015
2030	29,241,670	30,573,974	59,815,644	71,763,093	102,337,067
2031	29,972,711	31,580,108	61,552,819	75,358,571	106,938,679
2032	30,722,029	32,586,242	63,308,271	79,242,840	111,829,082

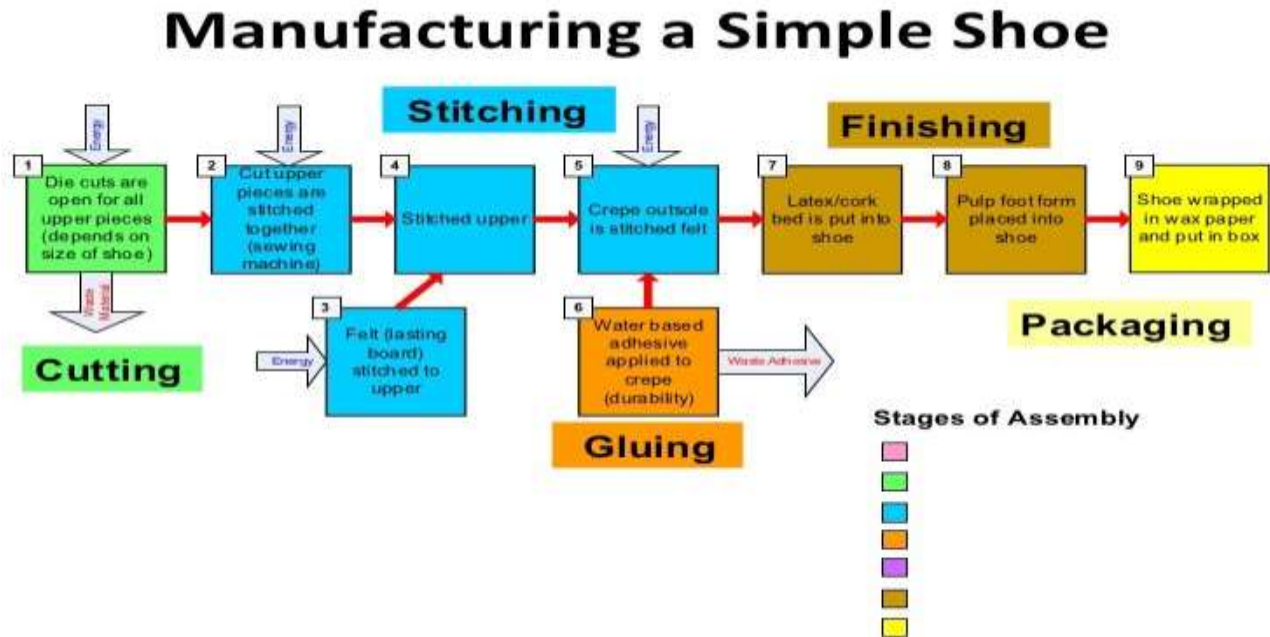
Compiled by: - Consultant

As shown in the above table, the product will have unsatisfied demand for the coming ten years' period. The projected unsatisfied demand will continue to be positive until 2032, if footwear import is blocked by the government, have to be substituted that also helps in saving the foreign currency outflow from the country.

3. Technology and engineering

3.1. Technology

3.1.1. Leather footwear production process



The manufacturing of full shoes involves the following sequence of operations.

Designing and pattern cutting: As per the selected designs, the patterns are prepared, checked for accuracy, and then master patterns are developed. Then these patterns are graded into different sizes and dies are prepared.

Clicking: The upper, lining and stock components are cut from suitable materials by the help of dies with the clicking press. While clicking, it is essential to consider the importance of the components and the corresponding portion of leather, directional properties of components and that of leather portion, degree of defects, and the best possible inter lock to have minimum wastage. The components are to be necessarily marked with sizes and sides are kept separately to avoid the confusion

PROJECT PROFILE ON MANUFACTURING OF LEATHER FOOTWEAR

Closing: The cut components are checked to sizes and defects, skived to the edges, folded and other edge treatments are done as per specification. These are then assembled together initially with adhesive and finally with stitching. The eyelets are fixed, the upper is checked and then sent for next operation.

Bottom components preparation: Bottom components such as the insole, toe – puff and stiffeners are cut from suitable materials and skived as per specification. The sole is cleaned with the solvent.

Construction and shoe making: The toe – puff, stiffeners are inserted between upper and lining at the toe and back part. The insole is fixed on the last and the upper is mounted (Lasting) onto it by pulling the toe part, back part and finally the side portion. The edges are hammered for smooth feather edge. The bottom filling is done into the cavity formed due to lasting. The surface is then scoured and roughened to get levelled but rough surface is then cleaned with solvent like MEK and dried. Both the sole and lasted upper surface are then applied polyurethane adhesive and allowed to dry completely. The dried surfaces are then reactivated to gain adhesion properties and then the sole is fitted on the lasted upper accurately and pressed under sole attachment machine for strong and permanent bond. In this condition the shoe is kept for few hours for a permanent shape.

Finishing: The upper and sole is then cleaned and finished with the wax and other finishing chemicals. The shoe is then de – lasted, cleaned from inside, inserted with stamped sock lining, the laces are attached, inspected and packed for dispatch

3.1.2. Environmental and social impact assessment of the project

Typically, any developmental projects also trigger a set of environmental and social impacts. These environmental and social due to development projects occur in different forms. An Environmental and Social Impact Assessment (ESIA) has to be carried out to study the potential environmental and social impacts due to the production footwear. Potential environmental and social impacts due to the production of leather based products on attributes like air quality, noise, water quality, soil, flora, socio-economic, etc. have to be assessed as part of the ESIA study. Appropriate mitigation measures to help minimize/avoid impacts from the development have to be recommended in the study. The measures include avoidance measures, mitigation measures and environmental enhancement measures. For the purpose of including environmental costs, the costs of wastewater treatment plant and solid waste incineration systems are included in the cost of machinery and equipment.

3.1.3. Production Capacity and Production Program

3.1.3.1. Plant capacity

The annual production capacity of the plant in full capacity is 500,000 pair of footwear per year. The production capacity is based on projected demand and realistic market share that could be captured. The production commences three shift and 260 working days a year. The production program does not include Sundays and national and public holidays.

3.1.3.2. Production program

. The plant initially produces 70 % of its annual rated capacity bound to initial operating problems such as machine set up and marketing. The production capacity will increase by 10 % and attain its full capacity by the third year of its commencement.

PROJECT PROFILE ON MANUFACTURING OF LEATHER FOOTWEAR

Table 6 Production mix in pcs

	Period			Start-up			Full Capacity	
	Capacity utilization			70%	80%	90%	100%	100%
	Project year			1	2	3	4	5
	Product type		At full capacity Per year					
1	Leather footwear	pair	500,000	350,000	400,000	450,000	500,000	500,000

3.2. Engineering

3.2.1. Land, buildings and civil works

The required area (m²) and construction cost for the production facilities essential for the successful operation of the processing plant is shown in Table 8. A total area ready for the processing plant is 10,000 m² out of which 5,866 m² is to be covered by building while uncovered area of 4,134m² is left storage of parking, green area and for future expansion. In order to estimate the land lease cost of the project profiles it is assumed that all the project will be located in different land level from level 1/1 to level 4/3, their current market lease price is from 39,073.31 birr per M² to 2,800.71 birr per M² respectively. Therefore, for the profile a land lease rate of birr 3,885 per M² have been taken, which is between the ranges.

The cost of construction of building should be appropriate to the size and expected profitability of business, costs of building generally differs by the type of construction materials used, the type of foundation, wall height and location. The current building cost for simple storage and processing room is from 10,000.00 Birr per m² to 25,000.00 Birr per m². The total construction cost of buildings

PROJECT PROFILE ON MANUFACTURING OF LEATHER FOOTWEAR

and civil works, at a rate of Birr 20,000 per m² is estimated at Birr 122.232 million. Therefore, the total cost of land lease and construction of buildings and civil works is estimated at Birr 161.08 million.

The proposed plant layout comprises the following buildings and structures.

Table 7 Building costs

S/No	Descriptions	Total area	Estimated cost per square meter (in Birr)	Total estimated cost (in Birr)	Remarks
1	Raw materials store	1,500M ²	20,000.00	30,000,000.00	
2	Processing room	2,000M ²	20,000.00	40,000,000.00	
3	Main product store	1,000 M ²	20,000.00	20,000,000.00	
4	packing materials store	1,000 M ²	20,000.00	20,000,000.00	
5	Office and toilet	200M ²	20,000.00	4,000,000.00	
6	Canteen	160M ²	20,000.00	3,200,000.00	
7	Guard house	6M ²	20,000.00	120,000.00	
8	parking	600M ²	5,000	3,000,000.00	
9	Green area	625M ²	500	312,500.00	
10	For expansion	3,409	0.00	0.00	
11	Fence	1,200M	400*2*2,000	1,600,000.00	
	TOTAL	10,000 M²		122,232,500.00	

PROJECT PROFILE ON MANUFACTURING OF LEATHER FOOTWEAR

Table 8 Land lease period in Addis Abeba

Sector of development activity	Period of lease	Down payment
Education, health, culture and sports	90	10%
Industry (manufacturing)	70	10%
commerce	60	10%
For urban agriculture	15	10%
For others	60	10%

Sources: - city government of Addis Abeba land development and management bureau

Table 9 Land lease floor price in Addis Abeba

S/No	Land level	Current land lease floor price per M ²	Current lease price per M ² (Market price)
1	1/1	2,213.25	39,073.31
2	1/2	2,165.47	36,825.73
3	1/3	1,900.19	34,578.15
4	¼	1,552.93	31,119.21
5	1/5	1,531.91	29,096.45
6	2/1	1327.39	27,073.71
7	2/2	1,221.18	25,050.96
8	2/3	1,191.17	23,028.21
9	2/4	1,074.39	21,005.46
10	2/5	1,027.84	18,982.71
11	3/1	994.71	16,959.96
12	3/2	960.21	14,937.21
13	3/3	927.84	12,914.46
14	¾	904.77	10,891.71
15	3/5	873.74	8,868.96
16	4/1	814.06	6,846.21
17	4/2	786.45	4,823.46
18	4/3	748.80	2,800.71

Sources: - city government of Addis Abeba land development and management bureau

PROJECT PROFILE ON MANUFACTURING OF LEATHER FOOTWEAR

3.2.2. Machinery and equipment

The main plant and machinery consists Hydraulic Cutting Press, Skiving Machine, Needle Lock stitch, Machine and etc. Major part of the machinery will be imported.

Table 10 Lists of machineries required for footwear production

S/No	Machineries and equipment	Quantity	Total Amount
1	Swim arm hydraulic clicking press	4	125,000,000.00
2	Pneumatic stamping machine	4	
3	Stitching single needle	50	
4	Stitching double needle	25	
5	Stitching zig zag	4	
6	Binding machine	4	
7	Skiving machine	10	
8	Fusing machine	4	
9	Eyeleting machine	4	
10	Hammering machine	4	
11	Embossing machine	4	
12	Stamping machine	4	
13	Toe puff attaching machine	4	
14	Compressor	2	
	FULL SHOE PLANT FOR BOTTOM FINISHING		
15	Pulling Over and Cement Lasting M/C	4	
16	Tack Heel seat lasting M/c	4	
17	Sole Embossing machine	4	
18	Pounding Machine	4	
19	Upper Forming M/c	4	
20	Twin Sole Attaching M/c	4	
21	Out Sole Stitching M/c	4	
22	Sole Levelling M/c	4	
23	Band knife Splitting Machine	4	
24	Twin Sole Attaching M/c	4	
25	Oil dynamic clicking press with turning arm	4	
26	Ironing And Conditioning Machine	4	
27	Paste Drying Unit Chillier	4	

3.2.3. Lists of machinery suppliers

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PROJECT PROFILE ON MANUFACTURING OF LEATHER FOOTWEAR

4. Factory organizational structure

The selection of structure of the envisaged project is made based on the existing structure of manufacturing plants operating in the country, the capacity, complexity and technology mix of the plant. Organizational structure principles such as specialization, coordination, and departmentalization are also considered for design of structure that best suits the envisaged project

4.1. Manpower Requirement and Estimated Annual manpower costs

Table 11 Annual manpower costs

S/No	Description	Number of persons	Salary in birr	
			monthly	annually
1	General manager	1	35,000.00	420,000.00
2	Executive secretary	1	10,000.00	120,000.00
3	Manager- admin. and finance	1	25,000.00	300,000.00
4	Accountant	1	20,000.00	240,000.00
5	Cashier	1	7,500.00	90,000.00
6	Guards	5	3,500.00	210,000.00
6	Messenger and cleaner	1	3,500.00	42,000.00
7	Driver ii	4	7,500.00	360,000.00
8	Production and technical head	1	30,000.00	360,000.00
9	Chief quality controller	3	15,000.00	540,000.00
11	Machine operator	3	5,000.00	180,000.00
12	Assistant machine operator	6	5,000.00	360,000.00
13	Leather Assorter	5	5,000.00	300,000.00
14	Sticher	45	5,000.00	2,700,000.00
15	Attacher	10	5,000.00	600,000.00
16	Helper	30	4,000.00	1,440,000.00
17	Senior mechanics	3	12,000.00	432,000.00
18	Senior electrician	3	12,000.00	432,000.00
19	Store keeper	1	10,000.00	120,000.00
20	Manager- commercial	1	20,000.00	240,000.00
21	Purchaser	1	10,000.00	120,000.00
22	Sales- manager	1	15,000.00	180,000.00
23	Sales clerk	1	7,500.00	90,000.00
	Total	129	326,000.00	9,876,000.00

5. Financial Analysis

5.1. General

The financial analysis evaluation of leather footwear manufacturing project, are mainly consisted of capital investment as well as operating and maintenance costs. The capital investment costs include fixed investment costs (initial fixed investment and replacement costs) and working capital, while operating and maintenance costs comprise current expenses related to material inputs, manpower cost, utility, repair and maintenance costs, spare parts, Overheads, Sales and distribution, interest and depreciation expenses.

The financial analysis and evaluation has been conducted taking assumptions:

1. It is assumed that about 70% of the total capital investment costs including the working capital requirement could be covered through development bank loans of short and long-term credits. The remaining balance 30% will be covered by equity capital contribution of the project owner.
2. Even though the project might secure loans under different term and conditions as well as from different financial sources, for the purpose of calculation of debt service scheduling, the current development bank of Ethiopia credit terms and conditions have been used. Consequently. It is assumed that the project will secure loan facility on the basis of 11.5 % annual interest rate.
3. Even though the estimated project production life is more 10 years, the financial analysis has been undertaken for a period interval covering the first 10 years only, during which time

PROJECT PROFILE ON MANUFACTURING OF LEATHER FOOTWEAR

most of the capital assets are assumed to be depreciated, debts recovered and pay-back period accomplished.

4. It is assumed that the project will be start up production activity at 70 % capacity. During years 2 & year 3 the projects is anticipated to gradually increase capacity utilization to reach 100% in year 4. Therefore, starting from year 4 the project will be operational at full capacity.
5. Loading and unloading costs will be paid on piece rate (10 Birr per quintals)
6. For the project under reference promotional, sales and distribution expenses have been estimated at 3% of the sales revenue.
7. Maintenance and spare parts costs are 1.5% of the fixed investment costs.
8. Furniture and fixture costs assumed to be 500,000.00

5.2. Initial Fixed investment costs

Table 12 Initial Fixed investment costs

S/No	Fixed investment type	Unit of measurement	Quantity	Unit price	Total Amount	Remarks
1	Land	Square meter	10,000	3,885 birr/M ²	38,850,000.00	The period of land lease will be 70 years and 10% of the total lease amount will be paid in the first year.
2	Buildings and civil works	Square meter	5,100	lump sum	122,232,500.00	
	Sub total				161,082,500.00	
3	Machineries	set	2	Lump sum	125,000,000.00	
4	Transformer	set	1	Lump sum	2,000,000.00	
5	Weighbridge	Set	1	Lump sum	4,000,000.00	
6	Truck and vehicles	Pcs	2	Lump sum	6,000,000.00	
7	Furniture and fixture	Pcs			500,000.00	
	SUB TOTAL				137,500,000.00	
	Fixed capital investment costs				298,582,500.00	
8	pre-operational expenses				2,000,000.00	
	Working capital				53,123,000.00	
	TOTAL INVESTMENT COSTS				353,705,500.00	

5.3. Working capital

Working capital is the financial means required for smooth operation and maintenance of a project mathematically, it is a difference between current assets and current liabilities. In the particular case of the project under consideration, the current assets comprise receivables, inventories (local and imported material inputs, spare parts, work in progress, and products ready for delivery) and cash in hand, while current liabilities comprise accounts payable to creditors.

5.4. Project Financing

Fixed capital investment costs and working capital requirements are assumed to be financed by equity capital of the owner and through loans of short and long-term credits.

The company obtains loans under different terms and condition as well as from different sources, for the purpose of calculation of debt service scheduling the current development bank of Ethiopia credit terms and conditions have been used. Accordingly, it is assumed that the company will be able to obtain loan 70% of the total investment costs for construction of different buildings for purchase of machineries. The remaining balance that of the total investment costs will be expected to be covered by equity contribution of the project promoter.

5.5. Production costs


As it is depicted in Annex Table 18 major categories of the total production costs are assembled into the following cost elements.

PROJECT PROFILE ON MANUFACTURING OF LEATHER FOOTWEAR

5.5.1. Material inputs

In the project under study the basic material inputs are leather, sole, lining and packing materials etc. Therefore, the current prevailing local and international market prices have been used for estimation of material inputs costs. At full capacity operation the material inputs costs are estimated at Birr 852.77 million per annum.

Table 13 Materials input required to produce one men footwear

		Men footwear			
					
S. No.	Description	Unit of Meas.	Required Qty.	Unit Cost	Total Cost
1	Leather	Sq.ft.	3	50	150.00
2	Lining 1	Sq.ft.	2	25	50.00
3	Lining 2	Sq.ft.	1	25	25.00
4	Counter Stiffeners	Pair	1	70	70.00
5	Foam	Sq.ft.	2	30	60.00
6	Reinforcing cloth	Sq.ft.	2	15	30.00
7	Sack cushion	Sq.ft.	1	20	20.00
8	Glue	kg	0.02	358	7.16
Bottom					
9	Insole	Pairs	1	30	30.00
10	Laces	pairs	1	20	20.00
11	Sole	Pairs	1	100	100.00
Packaging					
12	Carton	Pair	1	40	40
13	Carriage inwards	Per/pair	1	30	30.00
14	Bottoming	Per/pair	1	30	30.00
15	Other materials	Per/pair	Lump sum	150	150.00
Sub total					812.16
Add wastage 5%					40.60
Total materials cost per pair					852.77

PROJECT PROFILE ON MANUFACTURING OF LEATHER FOOTWEAR

5.5.2. Utilities

In estimating costs of utility expenses for operation and maintenance of the project, Costs of fuel, oil and lubricant, electricity and water consumptions have been taken in to consideration, the rates of which have been estimated on the basis of the proposed capacity utilization program of the project and at the current official charging rates. At full capacity operation the project will have the following utility expense per annum which amounts to Birr 5.079 million.

Table 14 Utilities of the factory'000''Birr

Utility'000''Birr		Start-up			Full Capacity
		70 %	80 %	90 %	100 %
Capacity utilization		1	2	3	4
Project year					
Item description	Unit of measurement				
Fuel					
Gasoline for service vehicle	50km*260days*37Birr/LIT*8km/Li	42.09	48.10	54.11	60.13
Gasoline for transport truck	(200km*300days*37Birr/LIT*5km/Li)*3	311	355	400	444
Sub-Total		353.09	403.10	454.11	504.13
Change of oil and lubricant	10% of the fuel consumption	35.30	40.30	45.40	50.40
Sub-Total		388.40	443.40	499.51	554.53
Electricity	260days*24 hrs.*650kwh* 0.4736Birr/kwh	2,839	3,245	3,650	4,056
Sub- Total		2,839	3,245	3,650	4,056
Water	365days*100m ³ /day*15 Birr/m ³	255.50	292.00	328.50	365.00
Sub -Total		255.50	292.00	328.50	365.00
Telecommunication					
Telephone	5 lines* 1,500Birr/month/line+18Birr/line/month	31.08	31.08	31.08	31.08
Mobile	5 lines*1,500 Birr/month/line	30.00	30.00	30.00	30.00
Fax	2line*1,000Birr/month + 17 Birr/line/month	12.40	12.40	12.40	12.40
Internet	2,500 Birr/month	30.00	30.00	30.00	30.00
Sub-Total		103.48	103.48	103.48	103.48
TOTAL		3,586.40	4,083.88	4,581.50	5,079.01

PROJECT PROFILE ON MANUFACTURING OF LEATHER FOOTWEAR

5.5.3. Over heads

In the expenses under this title have been included land and building taxes, buildings, vehicles as well as machinery and equipment insurance, vehicles annual inspection; postage, telephone and e. mail, stationery and office supplies; printing and copying; audit fee; cash indemnity etc. The overhead costs and divided in to direct overheads and administration overheads.

Table 15 Overhead costs

Direct Overhead"000"Birr		Year 1	Year 2	Year 3	Year 4
Annual land lease Payment		5,550	5,550	5,550	5,550
Insurance					
Building and Civil works	0.10%	112.23	112.23	112.23	112.23
Machinery and Equipment	0.20%	156.00	156.00	156.00	156.00
Motor vehicle and Truck	1%	60.00	60.00	60.00	60.00
Vehicles annual inspection and registration	25,000 Birr per annum per vehicle	50.00	50.00	50.00	50.00
Work cloth	Two times per annum per workers at 800 Birr	31.20	31.20	31.20	31.20
Cleaning and sanitation	An estimate of 300 Birr/day	78.00	78.00	78.00	78.00
Sub Total		6,037	6,037	6,037	6,037
Administration Overhead "000' Birr					
Audit fee	40,000 Birr per annum	40.00	40.00	40.00	40.00
Office cleaning and sanitation	2,000 Birr per month	24.00	24.00	24.00	24.00
Stationery and office supplies	2,000 Birr per month	20.00	20.00	20.00	20.00
Printing and Copy	2,000 Birr per month	24.00	24.00	24.00	24.00
Sub Total		108.00	108.00	108.00	108.00
GRAND TOTAL		6,145	6,145	6,145	6,145

PROJECT PROFILE ON MANUFACTURING OF LEATHER FOOTWEAR

5.5.4. Financial costs

As it has been outlined earlier under "project Financing" the current Development Bank of Ethiopia credit terms and conditions for newly establishing projects have been used to compute the financial costs, estimated to be incurred in connection with that of the total investment costs assumed to be covered through loan financing. The amount of the loan capital to be obtained and the financial costs to be incurred thereof have been determined depending on the amount of fixed investment cost and pre-production expenses.

5.5.5. Depreciation

Table 16 Depreciation in Birr"000"

Period			Start-up			
			70 %	80 %	90 %	100 %
Capacity utilization			1	2	3	4
Project year						
Item description	Original Value					
Structure and civil works	122,232,500.00	5% of original value	6,112.00	6,112.00	6,112.00	6,112.00
Machinery and equipment	125,000,000.00	15 % of original value	18,750.00	18,750.00	18,750.00	18,750.00
Transformer	2,000,000.00	15 % of original value	300.00	300.00	300.00	300.00
Motor vehicles and trucks	6,000,000.00	15 % of original value	900.00	900.00	900.00	900.00
Weighbridge	4,000,000.00	15 % of original value	600.00	600.00	600.00	600.00
Office equipment and furniture	500,000.00	20% of original value	100.00	100.00	100.00	100.00
Pre-operation expense	2,000,000.00	25% of original value	500.00	500.00	500.00	500.00
Total			27,262.00	27,262.00	27,262.00	27,262.00

5.6. Break Even point and ROI

5.6.1. Break Even point (BEP)

Three kinds of break-even point

- A. BEP Sales Revenue(BR)
- B. BEP production (Volume)
- C. BEP Percentage (%)

A. Break-even point(BEP) Sales

To determine BEP Annual Sales, multiply annual sales found in income statement by the annual fixed cost, and divided by Annual sales less Annual variable cost.

$$\text{BEP (sales)} = \frac{\text{Annual sales} \times \text{Annual fixed costs}}{\text{Annual sales} - \text{Annual variables costs}}$$

Annual sales = 750,000,000Birr

Unit selling price = 1,500 Birr/pair

$$\text{BEP (sales)} = \frac{\text{Annual sales} \times \text{Annual fixed costs}}{\text{Annual sales} - \text{Annual variables costs}} = \frac{750,000,000 \times 65,719,000}{750,000,000 - 322,285,000}$$

BEP (Sales) = 115,238,535 Birr

B. BEP production

To determine BEP production volume, divided BEP sales by the unit selling price (USP)

$$\text{BEP production} = 115,238,535 / 1,500 = 76,826$$

$$\begin{aligned} \text{c. BEP percentage} &= \frac{\text{Annual fixed costs} \times 100\%}{\text{Annual sales} - \text{Annual variables costs}} \\ &= \frac{65,719,000 \times 100\%}{750,000,000 - 322,285,000} \\ &= 15.40\% \end{aligned}$$

5.6.2. Return on investment

Return on investment = Net profit /Total capital requirement

$$= 146,499,000/353,705,500$$

$$= 41.40\%$$

The return on owners' investment (ROOI)

= Annual net profit /owners' investment

$$= 146,499,000/106,111,650$$

$$= 138\%$$

5.7. Project benefits

For financial analysis and evaluation of the given project, the current leather price, and packing materials buying price and final packed footwear price at the project gate has been taken as a basis. Consequently, based on the recent market survey, materials input price at the nearby market pints is estimated has been indicated in table 17.

As it has been stated earlier the project is envisaged to reach full capacity operation four years after commencement of production activities which are assumed to begin with 70% of the estimated total capacity.

At full capacity operation the project is envisaged to have the following revenue components.

PROJECT PROFILE ON MANUFACTURING OF LEATHER FOOTWEAR

Table 17 Source of revenue in Birr"000"

	Period			Start-up			Full Capacity	
	Capacity utilization			70%	80%	90%	100%	100%
	Project year			1	2	3	4	5
	Product type	U/M	Unit price					
1	Men footwear	pcs	1,500	525,000	600,000	675,000	750,000	750,000
	Total			525,000	600,000	675,000	750,000	750,000

Thus, according to the computation in Annex Table 20 and Annex Table 22, the net income and cash flow statements analysis revealed that at full capacity operation the project will generate a total income (gross revenue) amounting to 225 million Birr per annum. The corresponding Annex Table 20 of “Net Income Statement” shows a steady growth of gross profit starting from 130 million Birr in year 1 reaching the peak of 264 million Birr in year 10. In its 10 years of manufacturing activities, the project is expected to generate a total net profit of 1.4 billion Birr and contribute 786.38 million Birr to the government treasury in form of 35% income tax.

According to the current investment Law, machinery and equipment are anticipated to be imported duty- free. The liquidity position of the project is very strong. The corresponding Annex Table 22 of “Cash Flow Statement” shows the positive cumulative cash balance of Birr 1.4 billion and the project will not face any cash shortage throughout its production life.

PROJECT PROFILE ON MANUFACTURING OF LEATHER FOOTWEAR

The computation of the pay-back period as depicted in Annex table 27 indicates that the project will be able to reimburse itself from its net cash-income within three years after commencement of production activities, the period which is considered to be very good for the project of this nature.

In Annex Table 28 of the Benefit-cost ratio and Net present value (NPV) have been calculated at 17% discount factor (D.F) for 10 years of the project activity. Accordingly, the project has NPV of 768 million Birr at 17%D.F. and the benefit-cost ratio of 1.4 at 17% D.F. These results are most appreciable, especially, when related to the external capital borrowing interest rate which ranges from 8.50% to 18.5 % for newly establishing projects.

Break-even point (BEP) have been undertaken the project under study when implemented will have BEP at about 15.40 % operation of the estimated full capacity

In addition to this, finally, summary of financial efficiency tests have been conducted in Annex table 26, Accordingly, all efficiency ratios indicated positive trends and consequently, it can be inferred that the project can operate in the frame work of free market mechanism on commercially and financially viable basis and is remunerative.

ANNEXES

PROJECT PROFILE ON MANUFACTURING OF LEATHER FOOTWEAR

ANNEX II

CALCULATION OF ANNUAL PRODUCTION COSTS

Table 18 Annual total production costs''000''

Period	Start-up			Full capacity						
	70 %	80 %	90 %	100 %	100 %					
Project Year	1	2	3	4	5	6	7	8	9	10
Cost category										
I. Material inputs	298,470	341,108	383,747	426,385	426,385	426,385	426,385	426,385	426,385	826,385
II. Labor	9,876	9,876	9,876	9,876	9,876	9,876	9,876	9,876	9,876	9,876
III. Utility	3,586	4,084	4,582	5,079	5,079	5,079	5,079	5,079	5,079	5,079
IV. Repair and Maintenance costs ,spare parts (1.5 % of fixed costs)	4,479	4,479	4,479	4,479	4,479	4,479	4,479	4,479	4,479	4,479
VI Direct overheads	6,037	6,037	6,037	6,037	6,037	6,037	6,037	6,037	6,037	6,037
A. Direct Production costs	322,448	365,584	408,721	451,856	451,856	451,856	451,856	451,856	451,856	451,856
VII. Administration over head	108	108	108	108	108	108	108	108	108	108
VIII. Marketing and Promotional expense 3 % of sales revenue	15,750	18,000	20,250	22,500	22,500	22,500	22,500	22,500	22,500	22,500
B. Operating costs	338,306	383,692	429,079	474,464	474,464	474,464	474,464	474,464	474,464	474,464
Interest	28,473	26,811	24,958	22,891	20,587	18,018	15,153	11,960	8,398	4,427
Depreciation	27,262	27,262	27,262	27,262	26,762	26,662	19,819	6,112	6,112	6,112
C. Total production costs	394,041	437,765	481,299	524,617	521,813	519,144	509,436	492,536	488,974	485,003

PROJECT PROFILE ON MANUFACTURING OF LEATHER FOOTWEAR

ANNEX IV CALCULATION OF WORKING CAPITAL REQUIREMENTS

- I. Minimum requirement of current assets and liabilities
- A. Accounts receivable: 26 days at total production costs minus depreciation and interest
- B. Inventory
1. Material inputs: 26 days
 2. Spare parts : 90 days
 3. Work under process: two days at direct costs
 4. Product ready for delivery: 8 days at direct costs plus administration overheads
- C. Cash on hand : 360 days
- D. Accounts payable 26 days for material inputs and utilities

ii. Working capital requirement

Table 19 Calculation of working capital

Cost category	Minimum Days of coverage	Coeff-icient of turnover	Project year									
			Start up			Full capacity						
			1	2	3	4	5	6	7	8	9	10
I. Current asset												
A. A/R	26	10	33,831	38,369	42,908	47,446	47,446	47,446	47,446	47,446	47,446	47,446
B. Inventory												
1. Material inputs	26	10	29,847	34,111	38,375	42,639	42,639	42,639	42,639	42,639	42,639	82,639
2. Spare parts	90	4	1,120	1,120	1,120	1,120	1,120	1,120	1,120	1,120	1,120	1,120
3. Work under process	2	130	2,480	2,812	3,144	3,476	3,476	3,476	3,476	3,476	3,476	3,476
4. Product ready for delivery	8	32.5	10,029	11,357	12,684	14,011	14,011	14,011	14,011	14,011	14,011	14,011
C. Cash on hand	360		6,022	6,146	6,271	6,395	6,395	6,395	6,395	6,395	6,395	6,395
D. Current assets			83,329	93,915	104,501	115,086	115,086	115,086	115,086	115,086	115,086	155,086
II. Current liabilities			30,206	34,519	38,833	43,146	43,146	43,146	43,146	43,146	43,146	83,146
A. A/p	26	10										
III. Working capital												
A. Net working capital			53,123	59,395	65,668	71,940	71,940	71,940	71,940	71,940	71,940	71,940
B. Increasing in working capital			53,123	6,272	6,273	6,272	0	0	0	0	0	0

PROJECT PROFILE ON MANUFACTURING OF LEATHER FOOTWEAR

ANNEX VI

PROJECTED NET INCOME STATEMENT

Table 20 Projected Net income statement "000"

Period	Start up			Full capacity						
	70 %	80 %	90 %	100 %						
Project year	1	2	3	4	5	6	7	8	9	10
Item description										
Product sales revenue	525,000	600,000	675,000	750,000	750,000	750,000	750,000	750,000	750,000	750,000
Less total production costs	394,041	437,765	481,299	524,617	521,813	519,144	509,436	492,536	488,974	485,003
Gross profit	130,959	162,235	193,701	225,383	228,187	230,856	240,564	257,464	261,026	264,997
Tax	45,836	56,782	67,795	78,884	79,865	80,800	84,197	90,112	91,359	92,749
Net profit	85,123	105,453	125,906	146,499	148,322	150,056	156,367	167,352	169,667	172,248
Accumulated net profit	85,123	190,576	316,482	462,981	611,302	761,359	917,725	1,085,077	1,254,744	1,426,992

PROJECT PROFILE ON MANUFACTURING OF LEATHER FOOTWEAR

ANNEX VII DEBT SERVICE SCHEDULE AND COMPUTATION PAYMENT OF EQUAL ANNUAL INSTALLMENTS

Table 21 Debt services schedule and computation '000'

Item description	Project year									
	1	2	3	4	5	6	7	8	9	10
A. Investment and working capital										
1. Investment										
2. Increment working capital										
Total										
B. Loan receipts and balances										
1. Loan receipts	247,594	233,140	217,023	199,054	179,015	156,679	131,770	108,996	73,028	38,500
2. Outstanding balance at end of year										
a. First year loan	247,594	233,140	217,023	199,054	179,015	156,679	131,770	108,996	73,028	38,500
Total										
A. Debt service										
1. First year Loan										
a. Interest	28,473	26,811	24,958	22,891	20,587	18,018	15,153	11,960	8,398	4,427
b. Repayment of principal	14,454	16,969	17,969	20,036	22,339	24,909	27,774	30,968	34,529	38,500

PROJECT PROFILE ON MANUFACTURING OF LEATHER FOOTWEAR

ANNEX VIII CASH-FLOW STATEMENT FOR FINANCIAL PLANING

Table 22 Projected Cash flow statement

Period	Start up			Full capacity						
	70%	80%	90%	100%	5	6	7	8	9	10
Project year	1	2	3	4						
Item description										
A. Cash - inflow	908,912	610,585	685,587	760,585	750,000	750,000	750,000	750,000	750,000	750,000
1. Financial resource (total)	383,912	10,585	10,587	10,585						
2. Sales revenue	525,000	600,000	675,000	750,000	750,000	750,000	750,000	750,000	750,000	750,000
B. Cash – outflow	810,981	494,839	550,388	606,860	597,255	598,191	601,588	607,504	608,750	610,140
1. Total assets schedule including replacement	383,912	10,585	10,587	10,585						
2. Operating costs	338,306	383,692	429,079	474,464	474,464	474,464	474,464	474,464	474,464	474,464
3. Debt service (total)										
a. Interest	28,473	26,811	24,958	22,891	20,587	18,018	15,153	11,960	8,398	4,427
b. Repayment	14,454	16,969	17,969	20,036	22,339	24,909	27,774	30,968	34,529	38,500
4. Tax	45,836	56,782	67,795	78,884	79,865	80,800	84,197	90,112	91,359	92,749
C. Surplus (Deficit)	97,931	115,746	135,199	153,725	152,745	151,809	148,412	142,496	141,250	139,860
D. Cumulative cash balance	97,931	213,677	348,876	502,601	655,346	807,155	955,567	1,098,063	1,239,313	1,379,173

PROJECT PROFILE ON MANUFACTURING OF LEATHER FOOTWEAR

ANNEX XII TOTAL INVESTMENT COSTS

Table 23 Total investment costs''000''

Period	Start up			Full capacity								
	1	2	3	4	5	6	7	8	9	10	11	
Project year												
Investment Category												
1. Fixed investment costs												
a. Initial fixed investment costs	298,583											
b. Replacement												
2. Pre-operational capital expenditure	2,000											
3. Working capital increase	53,123	6,272	6,273	6,272								
Total investment costs	353,706	6,272	6,273	6,272								

ANNEX XIII TOTAL ASSETS

Table 24 Total Assets

Period	Start up			Full capacity								
	1	2	3	4	5	6	7	8	9	10	11	12
Project year												
Investment Category												
1. Fixed investment costs												
c. Initial fixed investment costs	298,583											
❖ Cost of land												
d. Replacement												
2. Pre-operational capital expenditure	2,000											
3. Current assets increase	83,329	10,586	10,586	10,585								
Total assets	383,912	10,586	10,586	10,585								

PROJECT PROFILE ON MANUFACTURING OF LEATHER FOOTWEAR

ANNEX XIV SOURCES OF FINANCE

Table 25 Sources of finance

Period	Start up			Full capacity							
	1	2	3	4	5	6	7	8	9	10	Total
Sources of finance											
1. Equity capital	106,112	6,272	6,273	6,272							
2. Loan capital	247,594										
3. Current liabilities	30,206	4,313	4,314	4,313							
Total finance	383,912	10,585	10,587	10,585							

ANNEX XI SUMMARY OF FINANCIAL EFFECIENCY TESTS

Table 26 Summary of financial efficiency tests

Project year	Project year									
	1	2	3	4	5	6	7	8	9	10
Capacity utilization	70%	80%	90%	100%						
Financial ratio in %										
1. Gross profit : Revenue	25%	27%	29%	30%	30%	31%	32%	34%	35%	35%
2. Net profit : Revenue	16%	18%	19%	20%	20%	20%	21%	22%	23%	23%
3. Net profit : initial investment	34%	42%	48%	55%	56%	56%	59%	63%	64%	65%
4. Net profit : Equity	80%	94%	106%	117%	119%	120%	125%	134%	136%	138%
5. Gross profit : Initial investment	53%	64%	74%	85%	86%	87%	90%	97%	98%	99%
6. Operating costs : Revenue	64%	64%	64%	63%	63%	63%	63%	63%	63%	63%

PROJECT PROFILE ON MANUFACTURING OF LEATHER FOOTWEAR

ANNEX XV CALCULATIONS OF PAYBACK PERIOD

Table 27 Calculation of payback period”000”

Year	Amount Paid Back			Total investment	End of year
	Net Profit	Depreciation	Total		
1	85,123	27,262	112,385	353,706	-241,321
2	105,453	27,262	132,715	6,272	-114,878
3	125,906	27,262	153,168	6,273	+32,017

PROJECT PROFILE ON MANUFACTURING OF LEATHER FOOTWEAR

ANNEX XVI CALCULATIONS OF NET PRESENT VALUE AT 17% D.F.

Table 28 Calculation of NPV at 17% D.F.

Project year	Gross Revenue	1/(1+i) ⁿ At 17%	Present value at 17%	Project costs			
				Total investment	Operating costs	Total	Present value at 17%
1	525,000	0.854701	448,718	353,706	338,306	692,012	591,463
2	600,000	0.730514	438,308	6,272	383,692	389,964	284,874
3	675,000	0.624371	421,450	6,273	429,079	435,352	271,821
4	750,000	0.53365	400,238	6,272	474,464	480,736	256,545
5	750,000	0.456111	342,083		474,464	474,464	216,408
6	750,000	0.389839	292,379		474,464	474,464	184,965
7	750,000	0.333195	249,896		474,464	474,464	158,089
8	750,000	0.284782	213,587		474,464	474,464	135,119
9	750,000	0.243404	182,553		474,464	474,464	115,486
10	750,000	0.208037	156,028		474,464	474,464	98,706
Total			3,145,240				2,313,477

A. Benefit- cost ratio At 17% D.F. = 1.4

B. NPV At 17% D.F. = 831,764,000 Birr