PROFILE ON THE PRODUCTION LEATHER GOODS

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I. SUMMARY

This profile envisages the establishment of a plant for the production of leather goods with a capacity of 300,000 pieces of assorted leather goods per annum. Leather goods comprise a variety of leather made products including belts and bandoliers, ladies' hand bags, cases and containers, and jewelry beauty boxes, purses, wallets and other leather articles.

The country`s requirement of leather goods is met through local production and import. The present (2012) unsatisfied local demand and export demand for belts and bandoliers, bags, cases and containers, and jewelry beauty boxes is estimated at 3.32 million pieces, 2.85 million pieces, 2,883 pieces and 19,024 kg respectively. The unsatisfied local demand and export demand for belts and bandoliers, bags, cases and containers, and jewelry beauty boxes is projected to reach 8.06 million pieces, 10.46 million pieces, 4,883 pieces and 30,997 kg respectively by the year 2022.

The principal raw materials required are upper leather (finished leather from goat or sheep skin), lining fabrics, lining paper, cardboard, locks, zippers, buckles, glue-cement and thread which are available locally.

The total investment cost of the project including working capital is estimated at Birr 11.24 million. From the total investment cost, the highest share (Birr 5.96 million or 53.06%) is accounted by fixed investment cost followed by initial working capital (Birr 4.13 million or 36.74%) and pre operation cost (Birr 1.14 million or 10.20%). From the total investment cost Birr 1.64 million or 14.55% is required in foreign currency.

The project is financially viable with an internal rate of return (IRR) of 30.09% and a net present value (NPV) of Birr 12.67 million, discounted at 10%.

The project can create employment for 32 persons. The establishment of such factory will have a foreign exchange saving and earning effect to the country by substituting the current imports and exporting its products to the international market. The project will also create backward

linkage with the leather processing and textile sectors and also generates income for the Government in terms of tax revenue and payroll tax.

II. PRODUCT DESCRIPTION AND APPLICATION

Leather goods comprise a variety of leather made products which could be traditionally made or manufactured types. These can be in different forms; including belts and bandoliers, ladies' hand bags, cases and containers; and jewelry beauty boxes, purses, wallets and other leather articles.

Belts and bandoliers are strips of material worn around the waist, used to hold up clothing for the lower body, as decoration or to carry tools or weapons. Hand bag is a small light travelling bag that is easily carried by hand. Cases and containers are something that serves as container or covering. Jewelry and beauty boxes are containers used to keep ornaments such as necklaces, bracelets, earrings, or rings. A purse is a woman`s bag used for carrying everyday belongings such as keys, a wallet a date book and pens. Wallet is a small flat folding case that holds paper money, credit cards and the like usually carried in a pocket or purse.

III. MARKET STUDY AND PLANT CAPACITY

A. MARKET STUDY

1. Past Supply And Present Demand

The country`s demand for leather goods or articles such as belts and bandoliers; hand bags; cases, boxes and containers; purses; and wallets is met both through domestic production and import. Ethiopia also exports some amount of the leather articles to the world market. Although it is known that most of the products are produced locally for the domestic and export market, quantitative data on the domestic production could not be found either from the Statistical Abstract of Ethiopia or Report on Medium and Large Scale Manufacturing and Electricity Industries Survey of the Central Statistical Agency. Due to limitation of data on domestic production, the import and export data obtained from the Customs Authority has been used as a proxy for estimating the unsatisfied demand. Import data for the period covering 2001--2011 is given in Table 3.1.

Table 3.1
IMPORT OF LEATHER GOODS (`000 PIECES)

Year	Belts, Etc.	Bags	Cases & Containers	Jewelry, Etc ('000 kg)	CIF Value ('000 Birr)
2001	1,618	32.5	9,235	10.9	7,025.2
2002	1,927	40.6	9,788	10.3	6,384.0
2003	3,425	23.0	1,219	44.2	11,956.4
2004	4,364	21.8	3,075	21.1	13,445.1
2005	6,264	164.2	73,503	30.4	25,502.4
2006	3,721	121.8	84,131	14.7	18,833.4
2007	3,179	228.7	31,490	11.2	19,908.8
2008	3,277	194.8	5,013	37.7	18,160.9
2009	2,786	62.2	5,369	20.3	19,655.9
2010	2,421	1,273.1	582	20.0	17,768.5
2011	1,486	153.2	2,467	16.7	23,121.7

Note: - *For belts & bandolier the data for the year 2001-2011 is obtained in kg. To convert into pieces an assumption of 1 kg= 8 pieces is applied by taking the average weight of the product.*

Source: - *Ethiopian Revenues and Customs Authority.*

Table 3.1 reveals that the supply of belts from import during the period 2001--2011 has two distinct characteristics. During the period 2001--2005, imported quantity had a consistent increasing trend. The imported quantity increased from 1.62 million pieces in 2001 to 6.26 million pieces in 2005, with annual average growth rate of 40%. But the trend was reversed after year 2006. During the period 2006--2008, the yearly average imported quantity fell to about 3.4 million pieces, which is almost half of the quantity imported in 2006. It further declined to a yearly average of 2.23 million pieces during the period 2009--2011. This also indicates that imported quantity has declined by about 34% compared to the previous three years average.

Bags import followed a general increasing trend from 32.5 thousand pieces in the year 2001 to 228.7 thousands pieces in year 2007. A huge fluctuation in import of bags is observed during the remaining years of 2008--2011. The yearly average imported quantity during 2008/09 was about 128 thousand pieces but it suddenly increased to a level of 1.27 million pieces by the year 2010,

which is almost a tenfold increase. However, it again plummeted to 153.2 thousand pieces in 2011.

The import data on cases and containers is highly erratic. During the initial two years of the data set i.e. 2001/02 the imported quantity was about 9.5 million pieces. In the following two years i.e. 2003/04, it fell to a yearly average of about 2.15 million pieces. A huge increase of import is registered during 2005--2007, which amounts to a yearly average of more than 63 million pieces. This did not stay long and fell sharply to a yearly average of 3.36 million pieces during the period 2008--2011.

Import data of jewelry or beauty boxes does not show any tend in the past eleven years. It was fluctuating between the lowest 10.3 thousand kg to the highest 44.2 thousand kg, with a mean figure of 23.75 thousand kg.

The ERCA's custom data also revealed that the country has been paying a large sum in foreign exchange to fill the additional needs for leather articles. On the past five years the country`s annual average expenditure for importing the various articles was about Birr 20 million.The country has also been exporting different leather goods although the quantity is small. Leather articles exported to the world market covering the period 2001--2011 are shown in Table 3.2.

Table 3.2

EXPORT OF LEATHER GOODS

Year	Belts, etc. (PCS)	Bags (PCS)	Cases & Containers	Jewelry, etc (KGs)
2001	1,208		10	
2002	2,592		850	
2003	25,696			
2004	11,312	400		2,920
2005	1,568	2,589		286
2006	4,056	129	1000	3
2007	1,384	208		128
2008	4,200	1,349	182	2
2009	996	735	-	-
2010	920	3,222	130	31
2011	1,366	3,204	23	16

Source: *- Ethiopian Revenues and Customs Authority.*

The export data of leather articles from Ethiopia does not show a visible trend. Belts export was on the average at bout 2 thousand pieces in the year 2001/02. It increased to a yearly average of 18.5 thousand pieces by the year 2003/04. A sharp decline of export is observed in the remaining years of 2005-20011. During this period the yearly average quantity exported fell to about 2 thousand pieces.

Bags export started in 2004 with export of 400 pieces and reached 3,204 pieces in 2011, although it is characterized by high fluctuations from year to year. Exports of cases and containers as well as jeweler's or beauty boxes have been highly fluctuating. There were also a number of years where export is not performed. Generally, the exported quantity of these items is in the past eleven years was not significant. However, this indicates that there is a potential international market if the products are produced with acceptable quality and competitive price.

In the absence of a trend in the data set for all of the leather articles, the present unsatisfied demand is estimated by taking the average quantity imported in the last three years. Accordingly, current unsatisfied demand for each of the products is shown below.

- 2,231 thousand pieces for belts and bandoliers,
- 469 thousand pieces for bags,
- 2,806 pieces for cases and containers, and
- 19 thousands kilograms for jewelry and beauty boxes.

With regard to exports, recent three years average for belts & bandoliers and bags and recent two years average for cases & containers and jewelry & beauty boxes is assumed to reflect the current (year 2012) unsatisfied demand. Accordingly, the estimated present export demand for each of the products is given below.

- 1,094 thousand pieces for belts and bandoliers,
- 2,387 thousand pieces for bags,
- 77 pieces for cases and containers, and
- 24 kilograms for jewelry and beauty boxes.

2. Demand Projection

Demand for leather goods depends on disposable incomes and population growth. It is also believed that as far as competitive products are offered, there is an opportunity to enter the foreign markets which already have been done. Considering that domestic consumption will be increasing by 5% and that of export by 15%, the demand for the different leather goods is projected in Table 3.3.

Table 3.3

PROJECTED DEMAND OF LEATHER GOODS

	Unsatisfied Local Demand				Export Demand			
Year	**Belts ('000 Pcs)**	**Bags ('000 Pcs)**	**Cases And Containers (Pcs)**	**Jewelry Boxes. ('000 Kg)**	**Belts ('000 Pcs)**	**Bags ('000 Pcs)**	**Cases And Containers (Pcs)**	**Jewelry Boxes. (Kg)**
2013	2342.6	520.8	2946	20.0	1,258	2,745	89	28
2014	2459.7	546.8	3094	20.9	1,447	3,157	102	32
2015	2582.7	574.2	3248	22.0	1,664	3,630	117	37
2016	2711.8	602.9	3411	23.1	1,913	4,175	135	42
2017	2847.4	633.0	3581	24.2	2,200	4,801	155	48
2018	2989.8	664.7	3760	25.5	2,530	5,521	178	56
2019	3139.2	697.9	3948	26.7	2,910	6,349	205	64
2010	3296.2	732.8	4146	28.1	3,347	7,302	236	73
2021	3461.0	769.5	4353	29.5	3,849	8,397	271	84
2022	3634.1	807.9	4571	30.9	4,426	9,657	312	97

It can be observed from the Table 3.1 that unsatisfied domestic demand of belts will increase from 2,342.6 thousands in the year 2013 to 3,634.1 thousands in the year 2022. During the same period the demand for bags will increase from 520.8 thousands to 807.9 thousands, cases and containers from 2,946 to 4,571 pieces and jewelry from 20,000 kg to 30,900 kg.

With regard to export, belts, etc. will increase from 1,258 in the year 2013 to 4,426 pieces by the year 2022. During the same period bags will increase from 2,745 pieces to 9,657 pieces, cases and containers from 89 pieces to 312 pieces and that of jewelry from 28 kg to 97 kg.

3. Pricing and distribution

The prices for imported and domestically produced leather goods vary based on the quality of the product. The retail prices of belts, bandoliers and other articles range from Birr 50-150, bags from Birr 300-400, cases and containers from Birr 350-550 and jewelry and beauty boxes from Birr 100-200. Assuming 30% profit margin to wholesalers and retailers, the recommended factory gate prices are as shown below.

- Belts and thereof ----------Birr 96,
- Bags ---------- Birr 269 ,
- Cases & containers ----------Birr 346,and
- Jewelry & beauty box----------Birr 115 .

The leather articles to be produced are consumer items which are mainly demanded by the middle and higher income of the urban residents. Thus, the product has to reach the final end users using wholesaler and retailers.

B. PLANT CAPACITY AND PRODUCTION PROGRAM

1. Plant Capacity

Based on the market study and taking the minimum economic scale of production into account, the envisaged plant would be designed to produce 300,000 pieces of assorted leather goods per annum. This capacity is proposed on a basis of a single shift of 8 hours per day and 300 working days per annum. Production can be raised by increasing the number of shifts per day.

The envisaged plant can produce various types of leather goods. However, for the purpose of this study the leather goods such as belts, bags (including school bags), wallets, and purses are selected mainly for production while other leather articles can be produced upon requirement based on market demand.

2. Production Program

With an assumption that enough time may be required for the project during the initial stage for market penetration and production skill development, the plant will start operation at 75% of the installed capacity, which will grow to 85% in the second year. Full capacity production will be achieved in the third year and onwards. Details of production program are shown in Table 3.3.

Table 3.3

ANNUAL PRODUCTION PROGRAM

Sr. No.	Description	Unit of Measure	Production Year		
			1st	2nd	3rd – 10th
1	Leather belt and bandolier	pc	182,250	206,550	243,000
2	Hand bag, school bag	pc	40,500	45,900	54,000
3	Leather case, container	pc	1,575	1,785	2,100
4	Pocket bag	pc	675	765	900
Total		**pc**	**225,000**	**255,000**	**300,000**
5	Capacity utilization rate	%	75	85	100

IV. MATERIALS AND INPUTS

A. RAW MATERIALS

The raw and auxiliary materials required to produce leather goods include upper leather (finished leather from goat or sheep skin), lining fabrics, lining paper, cardboard, locks, zippers, buckles, glue-cement, thread and other materials. All these materials are found locally. The annual requirement for raw and auxiliary materials at full production capacity of the envisaged plant and the estimated costs are given in Table 4.1.

Table 4.1

ANNUAL RAW MATERIALS REQUIREMENT AT FULL CAPACITY AND COST

Sr. No.	Description	Unit of Measure	Required Qty	Unit Price, Birr/Unit	Cost ('000 Birr)		
					F.C.	L.C.	Total
1	Upper leather	m^2	55,000	282.62		15,544.10	15,544.10
2	Lining fabric	m^2	60,000	9.64		578.40	578.40
3	Cardboard	m^2	20,000	7.05		141.00	141.00
4	Lining paper	m^2	36,000	3.55		127.80	127.80
5	Lock	pc	9,000	67.37		606.33	606.33
6	Zipper	pc	95,000	1.15		109.25	109.25
7	Buckle	pc	155,000	1.31		203.05	203.05
8	Glue, cement	kg	2,000	24.94		49.88	49.88
9	Thread	km	2,000	17.32		34.64	34.64
Total						**17,394.45**	**17,394.45**

B. UTILITIES

The only required utilities for leather goods producing plant are electric power and water. Electricity is required to run production equipment and for lighting. Water is required for general purposes. The total annual requirement for utilities at full capacity production of the plant and the estimated costs are shown in Table 4.2.

Table 4.2

ANNUAL UTILITIES REQUIREMENT AT FULL CAPACITY AND COST

Sr. No.	Description	Unit of Measure	Required Qty	Unit Price, Birr/Unit	Total Cost (000 Birr)
1	Electric power	kWh	60,000	0.5778	34.66
2	Water	m^3	1,000	10.000	10.00
Total					**44.66**

V. TECHNOLOGY AND ENGINEERING

A. TECHNOLOGY

1. Production Process

The major operations involved in the production of leather articles are cutting, skiving and folding, stitching, splitting, gluing /cementing, testing and packing.

Cutting of the upper leather can be carried out either by knife and template, or by using clicking machine. This is an important operation in order to obtain consistent production and satisfactory final appearance of the product. The same is applied in cutting for wallets and belts with a cutter and cardboard reinforcements with a guillotine cutter.

Skiving and folding is done to secure straight and even edges. Stitching, which is done on sewing machines of different types, must take into consideration the materials to be sewn together, thread, needle, stitch length, etc. In some cases considerable skill is required to obtain satisfactory result.

Splitting is required to reduce the thickness of the leather or other sheet materials to be used. The application of glue or cement and the subsequent joining of the parts in the cementing

operation have to be done carefully to obtain a satisfactory bond as well as a clean look. The final products thus finished are tested and packed.

2. Environmental Impact

The envisaged plant does not have any pollutant emission to the environment. Thus, the project is environment friendly.

B. ENGINEERING

1. Machinery and Equipment

For the manufacture of the leather goods intended to be produced in the envisaged plant, similar production equipment will be used for most of the operations. There can be only little equipment required for individual operations attached to specific product. The complete list of machinery and equipment required for the envisaged plant and the estimated costs are presented in Table 5.1.

Table 5.1

MACHINERY AND EQUIPMENT AND ESTIMATED COST

Sr. No.	Description	Unit of Measure	Required Qty	Cost ('000 Birr)		
				F.C.	L.C.	Total
1	Hydraulic clicking machine	set	2	388.46	97.11	485.57
2	Guillotine cutter	set	1	126.64	31.66	158.30
3	Strap cutter	set	2	219.62	54.90	274.52
4	Splitting machine	set	2	287.13	71.78	358.91
5	Skiving machine	set	2	94.58	23.65	118.23
6	Folding machine	set	2	81.07	20.27	101.34
7	Sewing/stitching machine	set	10	422.24	105.56	527.80
8	Hand tools	set	1	16.88	4.22	21.11
Grand Total				**1,636.62**	**409.16**	**2,045.78**

2. Land, Buildings and Civil Works

The total area of land required for the envisaged plant is 800 m^2, out of which 600 m^2 will be a built – up area. The construction cost of buildings and civil works at a rate of Birr 4,500 is estimated at Birr 2.7 million.

According to the Federal Legislation on the Lease Holding of Urban Land (Proclamation No. 721/2004) in principle, urban land permit by lease is on auction or negotiation basis, however, the time and condition of applying the proclamation shall be determined by the concerned regional or city government depending on the level of development.

The legislation has also set the maximum on lease period and the payment of lease prices. The lease period ranges from 99 years for education, cultural research health, sport, NGO , religious and residential area to 80 years for industry and 70 years for trade while the lease payment period ranges from 10 years to 60 years based on the towns grade and type of investment.

Moreover, advance payment of lease based on the type of investment ranges from 5% to 10%.The lease price is payable after the grace period annually. For those that pay the entire amount of the lease will receive 0.5% discount from the total lease value and those that pay in installments will be charged interest based on the prevailing interest rate of banks. Moreover, based on the type of investment, two to seven years grace period shall also be provided.

However, the Federal Legislation on the Lease Holding of Urban Land apart from setting the maximum has conferred on regional and city governments the power to issue regulations on the exact terms based on the development level of each region.

In Addis Ababa, the City's Land Administration and Development Authority is directly responsible in dealing with matters concerning land. However, regarding the manufacturing sector, industrial zone preparation is one of the strategic intervention measures adopted by the City Administration for the promotion of the sector and all manufacturing projects are assumed to be located in the developed industrial zones.

Regarding land allocation of industrial zones if the land requirement of the project is below 5,000 m^2, the land lease request is evaluated and decided upon by the Industrial Zone Development and Coordination Committee of the City's Investment Authority. However, if the

land request is above 5,000 m^2, the request is evaluated by the City's Investment Authority and passed with recommendation to the Land Development and Administration Authority for decision, while the lease price is the same for both cases.

Moreover, the Addis Ababa City Administration has recently adopted a new land lease floor price for plots in the city. The new prices will be used as a benchmark for plots that are going to be auctioned by the city government or transferred under the new "Urban Lands Lease Holding Proclamation."

The new regulation classified the city into three zones. The first Zone is Central Market District Zone, which is classified in five levels and the floor land lease price ranges from Birr 1,686 to Birr 894 per m^2. The rate for Central Market District Zone will be applicable in most areas of the city that are considered to be main business areas that entertain high level of business activities.

The second zone, Transitional Zone, will also have five levels and the floor land lease price ranges from Birr 1,035 to Birr 555 per m^2 .This zone includes places that are surrounding the city and are occupied by mainly residential units and industries.

The last and the third zone, Expansion Zone, is classified into four levels and covers areas that are considered to be in the outskirts of the city, where the city is expected to expand in the future. The floor land lease price in the Expansion Zone ranges from Birr 355 to Birr 191 per m^2 (see Table 5.2).

Table 5.2

NEW LAND LEASE FLOOR PRICE FOR PLOTS IN ADDIS ABABA

Zone	Level	Floor Price/m^2
Central Market District	1st	1686
	2nd	1535
	3rd	1323
	4th	1085
	5th	894
Transitional zone	1st	1035
	2nd	935
	3rd	809
	4th	685
	5th	555
Expansion zone	1st	355
	2nd	299
	3rd	217
	4th	191

Accordingly, in order to estimate the land lease cost of the project profiles it is assumed that all new manufacturing projects will be located in industrial zones located in expansion zones. Therefore, for the profile a land lease rate of Birr 266 per m^2 which is equivalent to the average floor price of plots located in expansion zone is adopted.

On the other hand, some of the investment incentives arranged by the Addis Ababa City Administration on lease payment for industrial projects are granting longer grace period and extending the lease payment period. The criterions are creation of job opportunity, foreign exchange saving, investment capital and land utilization tendency etc. Accordingly, Table 5.3 shows incentives for lease payment.

Table 5.3

INCENTIVES FOR LEASE PAYMENT OF INDUSTRIAL PROJECTS

Scored Point	Grace Period	Payment Completion Period	Down Payment
Above 75%	5 Years	30 Years	10%
From 50 - 75%	5 Years	28 Years	10%
From 25 - 49%	4 Years	25 Years	10%

For the purpose of this project profile, the average i.e. five years grace period, 28 years payment completion period and 10% down payment is used. The land lease period for industry is 60 years.

Accordingly, the total land lease cost at a rate of Birr 266 per m^2 is estimated at Birr 212,800 of which 10% or Birr 21,280 will be paid in advance. The remaining Birr 191,520 will be paid in equal installments with in 28 years i.e. Birr 6,840 annually.

VI. HUMAN RESOURCE AND TRAINING REQUIREMENT

A. HUMAN RESOURCE REQUIREMENT

The leather goods manufacturing plant requires well trained and experienced labor in design, cutting and stitching operations. The total human resource required for the envisaged plant is 32 persons. The total human resource requirement is 32. For details see Table 6.1.

Table 6.1

HUMAN RESOURCE REQUIREMENT AND ESTIMATED LABOR COST

Sr. No.	Job Title	Required No. of Persons	Salary (in Birr)	
			Monthly	Annual
1	Plant manager	1	4,500	54,000
2	Secretary	1	850	10,200
3	Personnel officer	1	900	10,800
4	Salesman	1	850	10,200
5	Store keeper	1	850	10,200
6	Accountant - clerk	2	900	10,800
7	Cashier	1	850	10,200
8	Mechanic	1	900	10,800
9	Production supervisor	1	1,500	18,000
10	Skilled worker	14	8,400	100,800
11	Design expert	1	1,400	16,800
12	Semi-skilled worker	4	2,000	24,000
13	Driver	1	800	9,600
14	Guard	2	800	9,600
Sub - total		**32**	**25,500**	**306,000**
Employees benefit, 20% of basic salary			**5,100**	**61,200**
Total			**30,600**	**367,200**

B. TRAINING REQUIREMENT

The design expert, 14 skilled workers and the mechanic should be given one month training on design, cutting, stitching, and maintenance operations in one of the existing local leather goods manufacturing factories. The training cost is estimated at Birr 150,000.

VII. FINANCIAL ANALYSIS

The financial analysis of the leather goods 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	10%
Discount cash flow	10%
Accounts receivable	30 days
Raw material local	30 days
Raw material imported	120 days
Work in progress	1 day
Finished products	30 days
Cash in hand	5 days
Accounts payable	30 days
Repair and maintenance	5% of machinery cost

A. TOTAL INITIAL INVESTMENT COST

The total investment cost of the project including working capital is estimated at Birr 11.24 million (see Table 7.1). From the total investment cost, the highest share (Birr 5.96 million or 53.06%) is accounted by fixed investment cost followed by initial working capital (Birr 4.13 million or 36.74%) and pre operation cost (Birr 1.14 million or 10.20%). From the total investment cost Birr 1.64 million or 14.55% is required in foreign currency.

Table 7.1

INITIAL INVESTMENT COST ('000 Birr)

Sr. No.	Cost Items	Local Cost	Foreign Cost	Total Cost	% Share
1	**Fixed investment**				
1.1	Land Lease	21.28		21.28	0.19
1.2	Building and civil work	2,700.00		2,700.00	24.01
1.3	Machinery and equipment	409.16	1,636.62	2,045.78	18.19
1.4	Vehicles	900.00		900.00	8.00
1.5	Office furniture and equipment	300.00		300.00	2.67
	Sub- total	**4,330.44**	**1,636.62**	**5,967.06**	**53.06**
2	**Pre operating cost ***				
2.1	Pre operating cost	411.37		411.37	3.66
2.2	Interest during construction	735.67		735.67	6.54
	Sub- total	**1,147.04**		**1,147.04**	**10.20**
3	**Working capital**	**4,131.13**		**4,131.13**	**36.74**
	Grand Total	**9,608.61**	**1,636.62**	**11,245.23**	**100**

* *N.B Pre operating cost include project implementation cost such as installation, startup, commissioning, project engineering, project management etc and capitalized interest during construction.*

** *The total working capital required at full capacity operation is Birr 5.88 million. However, only the initial working capital of Birr 4.13 million during the first year of production is assumed to be funded through external sources. During the remaining years the working capital requirement will be financed by funds to be generated internally (for detail working capital requirement see Appendix 7.A.1).*

B. PRODUCTION COST

The annual production cost at full operation capacity is estimated at Birr 20.18 million (see Table 7.2). The cost of raw material account for 86.17% of the production cost. The other major components of the production cost are depreciation, financial cost and labor, which account for 4.01%, 3.51% and 1.52%, respectively. The remaining 4.79 % is the share of utility, repair and

maintenance, labor overhead and administration cost. For detail production cost see Appendix 7.A.2.

Table 7.2

ANNUAL PRODUCTION COST AT FULL CAPACITY (YEAR THREE)

Items	Cost (000 Birr)	%
Raw Material and Inputs	17,394.45	86.17
Utilities	44.66	0.22
Maintenance and repair	61.37	0.30
Labor direct	306.00	1.52
Labor overheads	61.20	0.30
Administration Costs	300.00	1.49
Land lease cost	-	-
Cost of marketing and distribution	500.00	2.48
Total Operating Costs	**18,667.68**	**92.48**
Depreciation	809.43	4.01
Cost of Finance	708.08	3.51
Total Production Cost	**20,185.19**	**100**

C. FINANCIAL EVALUATION

1. Profitability

Based on the projected profit and loss statement, the project will generate a profit through out its operation life. Annual net profit after tax will grow from Birr 1.78 million to Birr 2.66 million during the life of the project. Moreover, at the end of the project life the accumulated net cash flow amounts to Birr 28.64 million. For profit and loss statement and cash flow projection see Appendix 7.A.3 and 7.A.4, respectively.

2. Ratios

In financial analysis financial ratios and efficiency ratios are used as an index or yardstick for evaluating the financial position of a firm. It is also an indicator for the strength and weakness of

the firm or a project. Using the year-end balance sheet figures and other relevant data, the most important ratios such as return on sales which is computed by dividing net income by revenue, return on assets (operating income divided by assets), return on equity (net profit divided by equity) and return on total investment (net profit plus interest divided by total investment) has been carried out over the period of the project life and all the results are found to be satisfactory.

3. Break-even Analysis

The break-even analysis establishes a relationship between operation costs and revenues. It indicates the level at which costs and revenue are in equilibrium. To this end, the break-even point for capacity utilization and sales value estimated by using income statement projection are computed as followed.

$$\text{Break- Even Sales Value} = \frac{\text{Fixed Cost + Financial Cost}}{\text{Variable Margin ratio (\%)}} = \text{Birr } 6{,}688{,}802$$

$$\text{Break -Even Capacity utilization} = \frac{\text{Break-even Sales Value}}{\text{Sales revenue}} \times 100 = 30\%$$

4. Pay-back Period

The pay- back period, also called pay – off period is defined as the period required for recovering the original investment outlay through the accumulated net cash flows earned by the project. Accordingly, based on the projected cash flow it is estimated that the project's initial investment will be fully recovered within 3 years.

5. Internal Rate of Return

The internal rate of return (IRR) is the annualized effective compounded return rate that can be earned on the invested capital, i.e., the yield on the investment. Put another way, the internal rate of return for an investment is the discount rate that makes the net present value of the investment's income stream total to zero. It is an indicator of the efficiency or quality of an investment. A project is a good investment proposition if its IRR is greater than the rate of return that could be earned by alternate investments or putting the money in a bank account.

Accordingly, the IRR of this project is computed to be 30.09% indicating the viability of the project.

6. Net Present Value

Net present value (NPV) is defined as the total present (discounted) value of a time series of cash flows. NPV aggregates cash flows that occur during different periods of time during the life of a project in to a common measuring unit i.e. present value. It is a standard method for using the time value of money to appraise long-term projects. NPV is an indicator of how much value an investment or project adds to the capital invested. In principle, a project is accepted if the NPV is non-negative.

Accordingly, the net present value of the project at 10% discount rate is found to be Birr 12.67 million which is acceptable. For detail discounted cash flow see Appendix 7.A.5.

D. ECONOMIC AND SOCIAL BENEFITS

The project can create employment for 32 persons. The project will generate Birr 5.36 million in terms of tax revenue. The establishment of such factory will have a foreign exchange saving and earning effect to the country by substituting the current imports and exporting its products to the international market. The project will also create backward linkage with the leather processing and textile sectors and also generates income for the Government in terms of payroll tax.

Appendix 7.A

FINANCIAL ANALYSES SUPPORTING TABLES

Appendix 7.A.1

NET WORKING CAPITAL (in 000 Birr)

Items	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Year 11
Total inventory	3,044.03	3,478.89	4,348.61	4,348.61	4,348.61	4,348.61	4,348.61	4,348.61	4,348.61	4,348.61
Accounts receivable	1,101.45	1,252.85	1,555.64	1,555.64	1,556.21	1,556.21	1,556.21	1,556.21	1,556.21	1,556.21
Cash-in-hand	7.08	8.10	10.12	10.12	10.21	10.21	10.21	10.21	10.21	10.21
CURRENT ASSETS	**4,152.56**	**4,739.83**	**5,914.37**	**5,914.37**	**5,915.04**	**5,915.04**	**5,915.04**	**5,915.04**	**5,915.04**	**5,915.04**
Accounts payable	21.43	24.49	30.61	30.61	30.61	30.61	30.61	30.61	30.61	30.61
CURRENT LIABILITIES	**21.43**	**24.49**	**30.61**	**30.61**	**30.61**	**30.61**	**30.61**	**30.61**	**30.61**	**30.61**
TOTAL WORKING CAPITAL	**4,131.13**	**4,715.34**	**5,883.76**	**5,883.76**	**5,884.42**	**5,884.42**	**5,884.42**	**5,884.42**	**5,884.42**	**5,884.42**

Appendix 7.A.2

PRODUCTION COST (in 000 Birr)

Item	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Year 11
Raw Material and Inputs	12,176	13,916	17,394	17,394	17,394	17,394	17,394	17,394	17,394	17,394
Utilities	31	36	45	45	45	45	45	45	45	45
Maintenance and repair	43	49	61	61	61	61	61	61	61	61
Labor direct	214	245	306	306	306	306	306	306	306	306
Labor overheads	43	49	61	61	61	61	61	61	61	61
Administration Costs	210	240	300	300	300	300	300	300	300	300
Land lease cost	0	0	0	0	7	7	7	7	7	7
Cost of marketing and distribution	500	500	500	500	500	500	500	500	500	500
Total Operating Costs	**13,217**	**15,034**	**18,668**	**18,668**	**18,675**	**18,675**	**18,675**	**18,675**	**18,675**	**18,675**
Depreciation	809	809	809	809	809	138	138	138	138	138
Cost of Finance	0	809	708	607	506	405	303	202	101	0
Total Production Cost	**14,027**	**16,653**	**20,185**	**20,084**	**19,990**	**19,217**	**19,116**	**19,015**	**18,914**	**18,813**

Appendix 7.A.3
INCOME STATEMENT (in 000 Birr)

Item	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Year 11
Sales revenue	15,813	20,331	22,590	22,590	22,590	22,590	22,590	22,590	22,590	22,590
Less variable costs	12,717	14,534	18,168	18,168	18,168	18,168	18,168	18,168	18,168	18,168
VARIABLE MARGIN	**3,096**	**5,797**	**4,422**	**4,422**	**4,422**	**4,422**	**4,422**	**4,422**	**4,422**	**4,422**
in % of sales revenue	19.58	28.51	19.58	19.58	19.58	19.58	19.58	19.58	19.58	19.58
Less fixed costs	1,309	1,309	1,309	1,309	1,316	645	645	645	645	645
OPERATIONAL MARGIN	**1,786**	**4,487**	**3,113**	**3,113**	**3,106**	**3,777**	**3,777**	**3,777**	**3,777**	**3,777**
in % of sales revenue	11.30	22.07	13.78	13.78	13.75	16.72	16.72	16.72	16.72	16.72
Financial costs		809	708	607	506	405	303	202	101	0
GROSS PROFIT	**1,786**	**3,678**	**2,405**	**2,506**	**2,600**	**3,373**	**3,474**	**3,575**	**3,676**	**3,777**
in % of sales revenue	11.30	18.09	10.65	11.09	11.51	14.93	15.38	15.83	16.27	16.72
Income (corporate) tax	0	0	0	0	0	1,012	1,042	1,073	1,103	1,133
NET PROFIT	**1,786**	**3,678**	**2,405**	**2,506**	**2,600**	**2,361**	**2,432**	**2,503**	**2,573**	**2,644**
in % of sales revenue	11.30	18.09	10.65	11.09	11.51	10.45	10.76	11.08	11.39	11.71

Appendix 7.A.4

CASH FLOW FOR FINANCIAL MANAGEMENT (in 000 Birr)

Item	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Year 11	Scrap
TOTAL CASH INFLOW	**6,378**	**20,701**	**20,334**	**22,596**	**22,590**	**22,590**	**22,590**	**22,590**	**22,590**	**22,590**	**22,590**	**8,261**
Inflow funds	6,378	4,888	3	6	0	0	0	0	0	0	0	0
Inflow operation	0	15,813	20,331	22,590	22,590	22,590	22,590	22,590	22,590	22,590	22,590	0
Other income	0	0	0	0	0	0	0	0	0	0	0	8,261
TOTAL CASH OUTFLOW	**6,378**	**18,106**	**17,442**	**21,562**	**20,286**	**20,193**	**21,103**	**21,032**	**20,961**	**20,890**	**19,808**	**0**
Increase in fixed assets	6,378	0	0	0	0	0	0	0	0	0	0	0
Increase in current assets	0	4,153	587	1,175	0	1	0	0	0	0	0	0
Operating costs	0	12,717	14,534	18,168	18,168	18,175	18,175	18,175	18,175	18,175	18,175	0
Marketing and Distribution cost	0	500	500	500	500	500	500	500	500	500	500	0
Income tax	0	0	0	0	0	0	1,012	1,042	1,073	1,103	1,133	0
Financial costs	0	736	809	708	607	506	405	303	202	101	0	0
Loan repayment	0	0	1,012	1,012	1,012	1,012	1,012	1,012	1,012	1,012	0	0
SURPLUS (DEFICIT)	**0**	**2,596**	**2,892**	**1,034**	**2,304**	**2,397**	**1,487**	**1,558**	**1,629**	**1,700**	**2,782**	**8,261**
CUMULATIVE CASH BALANCE	**0**	**2,596**	**5,487**	**6,522**	**8,826**	**11,223**	**12,711**	**14,269**	**15,898**	**17,598**	**20,380**	**28,641**

Appendix 7.A.5
DISCOUNTED CASH FLOW (in 000 Birr)

Item	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Year 11	Scrap
TOTAL CASH INFLOW	**0**	**15,813**	**20,331**	**22,590**	**22,590**	**22,590**	**22,590**	**22,590**	**22,590**	**22,590**	**22,590**	**8,261**
Inflow operation	0	15,813	20,331	22,590	22,590	22,590	22,590	22,590	22,590	22,590	22,590	0
Other income	0	0	0	0	0	0	0	0	0	0	0	8,261
TOTAL CASH OUTFLOW	**10,510**	**13,802**	**16,203**	**18,668**	**18,668**	**18,675**	**19,686**	**19,717**	**19,747**	**19,777**	**19,808**	**0**
Increase in fixed assets	6,378	0	0	0	0	0	0	0	0	0	0	0
Increase in net working capital	4,131	584	1,168	0	1	0	0	0	0	0	0	0
Operating costs	0	12,717	14,534	18,168	18,168	18,175	18,175	18,175	18,175	18,175	18,175	0
Marketing and Distribution cost	0	500	500	500	500	500	500	500	500	500	500	0
Income (corporate) tax		0	0	0	0	0	1,012	1,042	1,073	1,103	1,133	0
NET CASH FLOW	**-10,510**	**2,011**	**4,128**	**3,922**	**3,922**	**3,915**	**2,904**	**2,873**	**2,843**	**2,813**	**2,782**	**8,261**
CUMULATIVE NET CASH FLOW	**-10,510**	**-8,498**	**-4,370**	**-447**	**3,474**	**7,390**	**10,293**	**13,167**	**16,010**	**18,822**	**21,604**	**29,866**
Net present value	-10,510	1,829	3,412	2,947	2,679	2,431	1,639	1,474	1,326	1,193	1,073	3,185
Cumulative net present value	-10,510	-8,681	-5,269	-2,322	356	2,788	4,427	5,901	7,227	8,420	9,493	12,678

NET PRESENT VALUE	12,678
INTERNAL RATE OF RETURN	30.09%
NORMAL PAYBACK	3 years