

# **PROFILE ON LEATHER GARMENT PRODUCTION**

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<b>I. SUMMARY</b>	

This profile envisages the establishment of a plant for the production of leather garment with a capacity of 1,000 pieces per annum. Leather garments considered in this profile are jackets and coats, although trousers and over-coats can be manufactured as the market allows.

The major raw material is finished leather with required colors which can be obtained locally.

The products are highly demanded by the middle and higher income of the population. Moreover, the quality leather garments have a good export potential. The present demand for the proposed products is estimated at 5,712 pieces per annum. The demand is expected to reach at 16,297 pieces by the year 2018.

The total investment requirement is estimated at Birr 3 million, out of which Birr 290.90 thousand is required for plant and machinery. The plant will create employment opportunities for 17 persons.

The project is financially viable with an internal rate of return (IRR) of 15.41% and a net present value (NPV) of Birr 764.03 thousand, discounted at 8.5 %.

The project has a backward linkage with tanneries and has the potential to export its products to the world market.

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

Leather garments include jackets, coats, trousers, over-coats and other garments in different sizes and colors. The products are highly demanded by the middle and higher income of the population. Moreover, the quality leather garments have a good export potential. Finished leather of different colors is required to produce leather garments.

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

## A. MARKET STUDY

### 1. Past Supply and Present Demand

A large proportion of the country's requirement for leather garment has been met through domestic production while some amount of the product is imported. Table 3.1 shows the supply of the product from domestic production and imports during 1997-2006. During the period under reference, domestic production has shown a very high growth. The average domestic production during 1997-1998 was about 31,285. This has increased to an average of about 70 thousand during 1999-2001. A huge increase is observed during the recent four years i.e. 2002-2005. By the year 2002 domestic production was registered at 111,167 pieces and increased to 158,429 by the year 2003. During the following two consecutive years i.e. 2004 and 2005 production is registered at 213,619 pcs and 225,357 pcs, respectively. Generally, in the past nine years domestic production has increased by more than 9 fold compared to the year 1997.

**Table 3.1**  
**SUPPLY OF LEATHER GARMENT (PIECES)**

<b>Year</b>	<b>Domestic Production</b>	<b>Import</b>	<b>Total Supply</b>
1997	24214	450	24,664
1998	38357	1,552	39,909
1999	92619	262	92,881
2000	93286	370	93,656
2001	22857	43	22,900
2002	111167	182	111,349
2003	158429	326	158,755
2004	213619	3,138	216,757
2005	225357	608	225,965
2006	N.A	2,020	2,020

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

*CSA, Statistical Abstract, 1997-2005.*

With regard to import the data is highly erratic without any trend. For instance, during the period 1997-2001 the imported quantity ranged from the highest 1,552 pieces (year

1998) to the lowest 43 pieces (year 2001). Similarly, during the period 2002-2005 the quantity imported ranged from the highest 3,138 pieces (year 2004) to the lowest 182 pieces (year 2002). Despite the fluctuation the 2004-2005 average is about 1,873 pieces.

Assuming supply was driven by demand, the average annual supply of leather garment for the recent two years (2004-2005), which constitutes domestic production and imports, is considered as the effective domestic demand for the product for the year 2007. Accordingly the demand for the year 2007 is estimated at 221,361. Since the consumption of leather garment is mainly associated with the urban population, the demand for the product is assumed to grow by 4% that corresponds to the annual growth rate of the urban population. The present domestic demand for leather garment (i.e. for 2008) is thus estimated at 230,215 pieces.

Although much of the domestic production is used for domestic consumption, the country also exports leather garment. The amount of leather garment exported during 1997-2006 is depicted in Table 3.2. Varying from a minimum of 42 pieces in 2000 to a maximum of 1,573 pieces in 2003, exports highly fluctuated during the period under reference. On the average, the Country exported 776 pieces of leather garment during the recent four years, i.e., 2003-2004.

**Table 3.2**  
**EXPORTS OF LEATHER GARMENT (PIECES)**

<b>Year</b>	<b>Export</b>
1997	240
1998	43
1999	108
2000	42
2001	71
2002	151
2003	1,573
2004	685
2005	413
2006	438

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

Given the considerable fluctuations in the volume of exports of the product, the average annual export during the period 2003-2006 is considered as the effective export demand for leather garment for the year 2007. Taking into account the extensive support being given to the leather industry and the remarkable growth in exports, a rate of growth of 10% is adopted in estimating the export demand for the product. The present export demand for the product (i.e., for 2008) is therefore estimated at 854 pieces. Hence, the total current demand for leather garment is estimated at 231,069 pieces. Assuming the production level of year 2005 is maintained the current supply gap is estimated at 5,712 pieces.

## **2. Projected Demand**

Demand for leather garment is mainly associated with urban population growth, income rise and the efforts to be made for penetrating the export market. Urban population growth rate is on the average 4% while GDP is projected to grow by more the 7% for the coming few years. On the other hand, the government is exerting various efforts to export leather products. According to the PASDEP document it is planned to increase from about US \$ 64 million to US \$ 500 million during the 2004/05 – 2009/10. Taking the

above situation in to consideration the unsatisfied demand is projected to grow by 10% per annum (see Table 3.3).

**Table 3.3**

**PROJECTED UNSATISFIED DEMAND FOR LEATHER GARMENT FOR THE  
ENVISAGED PLANT(PIECES)**

<b>Year</b>	<b>Projected Unsatisfied Demand</b>
2008	5,712
2009	6,283
2010	6,912
2011	7,603
2011	8,363
2012	9,200
2013	10,119
2014	11,131
2015	12,244
2016	13,468
2017	14,815
2018	16,297

**3. Pricing and Distribution**

Currently a domestically produced leather garment is, on the average, retailed at Birr 900 per piece. Allowing margin for wholesalers and retailers, the envisaged plant is expected to sell its product at Birr 800 per pieces.

In the domestic market, the product can get its market outlet through the existing retail network and the factory's own shop. For the export market, the factory will have to directly contact foreign buyers.

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

### **1. Plant Capacity**

Based on the outcomes of demand projections indicated in the market study, and considering other new entrants and the limitations of economy of scale for leather garment manufacturing enterprises in general, the envisaged plant will have production capacity of 1,000 pieces of leather garments. The garments will consist of jackets and coats. The plant is intended to operate single shift of eight hours for 300 days a year.

### **2. Production Programme**

A gradual capacity build-up is proposed for the plant so as to allow skill development. The plant hence will commence production at 60% of capacity in the first year of operation. It will then raise production to 70% and 85% in the consecutive years. Full capacity production will be attained in the fourth year, and is planned to continue in the forth coming years. Table 3.4 below presents the details of the production programme.

**Table 3.4**  
**PRODUCTION PROGRAMME**

<b>Year</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4 -10</b>
Capacity utilization %	60	70	85	100
Product (pcs)				
1. Jackets	300	350	425	500
2. Coats	300	350	425	500
<b>Total</b>	<b>600</b>	<b>700</b>	<b>850</b>	<b>1,000</b>



#### IV. MATERIALS AND INPUTS

##### A. RAW AND AUXILIARY MATERIALS

The major raw materials required to produce leather garments are suede leather and lining fabric (nylon). These raw materials can be procured from local sources.

Auxiliary materials required for leather garment production include zippers, button, and sewing thread. Annual requirement of raw and auxiliary materials, including annual expenditure is given in Table 4.1 below.

**Table 4.1**  
**ANNUAL REQUIREMENT OF RAW AND AUXILIARY MATERIALS**

Sr. No.	Description	Qty	Unit Price (Birr)	Cost (('000 Birr)		
				LC	FC	TC
	<b>A. Raw Materials</b>					
1	Suede leather (M <sup>2</sup> )	2,800	130	364.00	-	364.00
2	Lining Fabrics (Nylon) (M <sup>2</sup> )	3,730	5.50	20.625	-	20.625
	<b>Sub-total</b>			<b>384.625</b>		<b>384.625</b>
	<b>B. Auxiliary Materials</b>					
1	Zippers (pcs)	500	1.25	0.625	-	0.625
2	Button (pcs)	4,000	0.10	0.40	-	0.40
3	Thread (km)	160	10.0	1.60	-	1.60
4	Shoulder pads (pair)	1,000	3.50	3.50	-	3.50
5	Elastic Band (M)	300	1.00	0.30	-	0.30
	<b>Sub-total</b>	-	-	<b>6.4</b>	-	<b>6.4</b>
	<b>Total</b>	-	-	<b>391.0</b>	-	<b>391.0</b>

##### B. UTILITIES

The envisaged plant requires electricity and water as input in the production process. Annual requirements of electricity and water along with their cost is indicated in Table 4.2.

**Table 4.2**  
**UTILITIES REQUIREMENT & COST**

Sr. No.	Description	Unit of Measure	Qty	Unit Price [Birr]
1	Electricity	kWh	15,000	0.4736
2	Water	m <sup>3</sup>	100	3.25
	<b>Grand Total</b>			

## V. TECHNOLOGY AND ENGINEERING

### A. TECHNOLOGY

#### 1. Production Process

The process of leather garment production does not involve complex unit operations. The machinery and equipment required are simple, and the process required for such operations as preparation of designs and cutting to required sizes, sewing, pasting, button hole making, button fixing and other necessary operations. The specifications of leather garments to the export market are mainly related to the colour of the leather and its colour fastness, softness and resistance to moisture and cold. Other specifications like design and pattern for leather garment to be exported are, in most instances, provided by the buyer.

The pieces of leather that remain as by-products are highly needed by other industries as useful inputs. Bricks factories make use of the by-product as sources of energy for fired-furnaces. The by-products can also be used as inputs to micro and small scale industries. Thus, production of leather garments does not have negative impact on environment.

## **2. Source of Technology**

Leather garment production involves technology that is simple to operate and maintain. Such technology can be supplied by companies in India, Korea, China and those in European countries. The address of one such supplier is given below.

CRAB INDUSTIRAL CO. LTD

Address: 750 Yunghua Rd., sec. 2, Tainan City, Taiwan

Phone: 886-4-2532-4177

E-mail: Crab. Yds@msa. hinet. Net

Fax. 886-4-2532-4166.

## **B. ENGINEERING**

### **1. Machinery and Equipment**

Table 5.1 below gives the list of machinery and equipment required by the leather garment enterprise with their respective quantity and cost.

**Table 5.1****MACHINERY AND EQUIPMENT REQUIREMENT AND COST**

Sr. No.	Description	Qty	Unit price (Birr)	Cost ('000 Birr)		
				LC	FC	TC
1	Flat bed sewing machine	5	15,500	-	77.50	77.50
2	Cylinder bed sewing machine	1	15,500	-	15.50	15.50
3	Over lock machine	1	10,250	-	10.25	10.25
4	Blind stitching machine	1	9,000	-	9.0	9.00
5	Button sewing machine	1	16,700	-	16.7	16.70
6	Button hole making machine	1	8,500	-	8.50	8.50
7	Leather skiving machine	1	12,500	-	12.50	12.50
8	Cutting machine-straight bed (7 ft. high)	1	10,900	-	10.90	10.90
9	Spare parts	Reqd	-	-	15.00	15.00
10	Flexible dummies (Ladies and gents)	Reqd	-	-	10.00	10.00
11	Miscellaneous tools and equipment	Reqd	-	-	25.00	25.00
	FOB price	-	-	-	210.90	210.90
	Freight, insurance bank charges, materials handling cost, land transport cost.	-	-	80.0	-	80.0
	<b>Total Cost</b>			<b>80.0</b>	<b>210.90</b>	<b>290.90</b>

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

Total land requirement of the leather garment processing plant is expressed in terms of land for factory building, warehouses for raw materials and finished products, non-factory buildings (such as administrative building, cafeterias, medical facilities and recreation areas, and general purpose buildings (guard houses, water treatment plant, power houses, compressor houses, etc). For the purpose of this plant, buildings for production(150 m<sup>2</sup>), store houses(80 m<sup>2</sup>), administrative houses(70 m<sup>2</sup>). Therefore, including open space of 200 m<sup>2</sup> the total land area required by the project is 500 m<sup>2</sup>.

At a unit building cost of Birr 2,300, the cost of building will be Birr 690,000. This cost includes expenditures on site preparation and development.

According to the Federal Legislation on the Lease Holding of Urban Land (Proclamation No 272/2002) 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 5000 m<sup>2</sup> 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<sup>2</sup> 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.

The land lease price in the industrial zones varies from one place to the other. For example, a land was allocated with a lease price of Birr 284 /m<sup>2</sup> in Akakai-Kalti and Birr 341/ m<sup>2</sup> in Lebu and recently the city's Investment Agency has proposed a lease price of Birr 346 per m<sup>2</sup> for all industrial zones.

Accordingly, in order to estimate the land lease cost of the project profiles it is assumed that all manufacturing projects will be located in the industrial zones. Therefore, for this profile since it is a manufacturing project a land lease rate of Birr 346 per m<sup>2</sup> 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 criteria are creation of job opportunity, foreign exchange saving, investment capital and land utilization tendency etc. Accordingly, Table 5.2 shows incentives for lease payment.

**Table 5.2**

**INCENTIVES FOR LEASE PAYMENT OF INDUSTRIAL PROJECTS**

<b>Scored Point</b>	<b>Grace Period</b>	<b>Payment Completion Period</b>	<b>Down Payment</b>
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 period of lease for industry is 60 years.

Accordingly, the total lease cost, for a period of 60 years with cost of Birr 346 per m<sup>2</sup>, is estimated at Birr 10.38 million of which 10% or Birr 1,038,000 will be paid in advance. The remaining Birr 9.34 million will be paid in equal installments with in 28 years i.e. Birr 333,643 annually.

## VI. MANPOWER AND TRAINING REQUIREMENT

### A. MANPOWER REQUIREMENT

The plant requires manpower both for production and administration. The details of manpower and related annual expenditure are given in Table 6.1 below.

**Table 6.1**  
**MANPOWER REQUIREMENT AND LABOUR COST**

Sr. No.	Description	Req. No.	Salary (Birr)	
			Monthly Salary	Annual Expenditure
	<b>A. Administration</b>			
1	Plant manager	1	2,000	24,000
2	Secretary	1	500	6,000
3	Accountant	1	700	8,400
4	Sales/purchase man	1	1200	14,400
5	General service	3	1050	12,600
	<b>Sub-total</b>	<b>7</b>	<b>-</b>	<b>65,400</b>
	<b>B. Production</b>			
1	Production supervisor	1	1,000	12,000
2	Designer	1	1,000	12,000
3	Skilled labor	4	2,400	28,800
4	Unskilled labor	3	1050	12,600
5	Mechanic	1	600	7,200
	<b>Sub-total</b>	<b>10</b>		<b>72,600</b>
	Employees' benefit (25% of BS)			34,500
	<b>Total Cost</b>	<b>17</b>		<b>172,500</b>

## **B. TRAINING REQUIREMENT**

Leather garment production has been a developed experience for some time in the past. Therefore, it is anticipated that some trained labor is available in the country. However, it is proposed that tailors and designer will be given appropriate training for two weeks. A total of Birr 20,000 is allotted to cover the training cost.

## **VII. FINANCIAL ANALYSIS**

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

Construction period	1 year
Source of finance	30 % equity
	70 % loan
Tax holidays	3 years
Bank interest	8.5%
Discount cash flow	8.5%
Accounts receivable	30 days
Raw material local	30 days
Raw material foreign	90 days
Work in progress	1 days
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 3 million, of which 7 per cent will be required in foreign currency.



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

**Table 7.1**  
**INITIAL INVESTMENT COST ( ‘000 Birr)**

<b>Sr. No.</b>	<b>Cost Items</b>	<b>Local Cost</b>	<b>Foreign Cost</b>	<b>Total Cost</b>
1	Land lease value	1,038.00	-	1,038.00
2	Building and Civil Work	690.00	-	690.00
3	Plant Machinery and Equipment	80.00	210.90	290.90
4	Office Furniture and Equipment	125.00	-	125.00
5	Vehicle	450.00	-	450.00
6	Pre-production Expenditure*	316.53	-	316.53
7	Working Capital	97.48	-	97.48
	<b>Total Investment cost</b>	<b>2,797.01</b>	<b>210.90</b>	<b>3,007.91</b>

\* *N.B Pre-production expenditure includes interest during construction ( Birr 196.53 thousand), training ( Birr 20,000) and Birr 100 thousand costs of registration, licensing and formation of the company including legal fees, commissioning expenses, etc.*

## **B. PRODUCTION COST**

The annual production cost at full operation capacity is estimated at Birr 903.53 thousand (see Table 7.2). The raw material cost accounts for 43.27 per cent of the production cost. The other major components of the production cost are depreciation , financial cost and direct labour which account for 21.70 %, 14.70% and 7.24 % respectively. The remaining 13.08 % is the share of repair and maintenance, labour overhead, financial cost and other administration cost.

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

<b>Items</b>	<b>Cost</b>	<b>%</b>
Raw Material and Inputs	391.00	43.27
Utilities	7.43	0.82
Maintenance and repair	14.55	1.61
Labour direct	65.40	7.24
Labour overheads	34.50	3.82
Administration Costs	61.71	6.83
Land lease cost	-	-
<b>Total Operating Costs</b>	<b>574.59</b>	<b>63.59</b>
Depreciation	196.09	21.70
Cost of Finance	132.85	14.70
<b>Total Production Cost</b>	<b>903.53</b>	<b>100</b>

**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 25.49 thousand to Birr 411.91 thousand during the life of the project. Moreover, at the end of the project life the accumulated cash flow amounts to Birr 3.54 million.

**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 of the project including cost of finance when it starts to operate at full capacity ( year 4) is estimated by using income statement projection.

$$\text{BE} = \frac{\text{Fixed Cost}}{\text{Sales} - \text{Variable Cost}} = 30 \%$$

### **4. Payback Period**

The pay back period, also called pay – off period is defined as the period required to recover 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 6 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 15.41 % 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 into 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 8.5% discount rate is found to be Birr 764.03 thousand which is acceptable.

## **D. ECONOMIC BENEFITS**

The project can create employment for 17 persons. In addition to supply of the domestic needs, the project will generate Birr 523.76 thousand 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 export. The project has also a backward linkage effect with the leather tanneries and other auxiliary materials supplying industries.