

Investment Office ANRS

**PROJECT PROFILE ON THE FABRICATION OF
HOUSEHOLD HAND KNITTING MACHINE**

Development Studies Associates (DSA)

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1. Executive Summary

This project profile deals with the fabrication of household hand knitting machine in Amhara National Regional State. The following presents the main findings of the study

Demand projection divulges that there is substantial demand for hand knitting machines and it is increasing with time. Accordingly, the planned plant is set to produce 650 units annually. The total investment cost of the project including working capital is estimated at Birr 986.6 thousand and creates 16 job opportunity and Birr 207.36 thousand of income

The financial result indicates that the project will generate profit beginning from the first year of operation. Moreover, the project will break even at 22.7% of capacity utilization and it will payback fully the initial investment less working capital in one year and 10 months. The result further show that the calculated IRR of the project is 35.3% and NPV discounted at 18% of Birr 554,079.55

In addition to this, the proposed project possesses wide range of economic and social benefits such as increasing the level of investment, tax revenue, employment creation and import substitution

Generally' the project is technically feasible, financially and commercially viable as well as socially and economically acceptable. Hence the project is worth implementing.

2. Product Description and Application

Hand knitting machine is used to produce knit fabrics on a fixed bed of hooked needles. Knitting machines can be hand powered or motor assisted. At the same time, pattern stitches can be selected by hand manipulation of the needles, or with mechanical punch cards and other methods. In general this machine is used for knitting all kinds of cotton, man-made and woolen yarns to produce different kinds of knit wear. Currently there are different types of models, with either flat or circular beds that produce rectangular or tubular fabrics. Double bed machines have two flat beds facing each other, in order to produce purl and plain rib fabrics plus a variety of multi patterns. Ribbing attachments can be added to single bed machines to achieve a similar result.

Hand knitting machine has got many advantages. The fabric produced using a knitting machine is of a more even texture than hand-knitted fabric, which is particularly noticeable on large areas of plain stocking stitch. Moreover, it saves a considerable amount of time and need little skill to produce a good fabric as the machine tension does the job for them.

3. Market Study, Plant Capacity and Production Program

3.1 *Market Study*

3.1.1 Present Demand and Supply

At present, hand knitting machines are used in some urban areas to a very limited extent although there is no information that shows the exact number functional machines. Similarly, the import data obtained from Customs Authority aggregates different types of sewing and knitting machines together so that exact number of hand knitting machines imported into the country each year could not be identified.

However, hand knitting machines do have the potential to produce items that can substitute many of imported clothing such as sweater socks and thread made gloves. Accordingly, if the handmade knitting machines are produced at affordable price, they can attract sizable demand. In 2007 alone about 671 thousand sweaters have been imported into the country. If we conservatively assume that 25 percent of the import can be produced domestically if hand knitting machines were available at affordable price, about 168 thousand sweaters could have been produced in the country. In this regard, if we consider that a hand knitting machine produces one finished sweater within two days, the number of machineries required to produce the aforementioned quantity would reach to 1,220.

In general with short term training, women in urban areas can operate this machine and help them earn additional income by selling knitwear products which they can produce at home. In this connection if we conservatively assume that only 1 percent of urban households of the country can purchase hand knitting machines, the total demand would be 21,148. This figure can be fairly taken as the present demand to the product.

Therefore, with proper marketing (that includes training) and affordable price setting of the machine, it is possible to attract considerable demand to the envisaged product. At the same time it suggests the relevance of establishing a hand knitting machine making plant.

3.1.2 Projected Demand

The above analysis points out the presence of ample demand for the fabrication of hand knitting machine. This demand is expected to further grow in the future for two main reasons. First and foremost, income of families is expected to grow in the future as a result of the ongoing economic growth being registered in the country. This in turn creates more families that can afford to buy the proposed machines. In addition to this, an increase in population in the coming years raises demand for clothing whereby a portion of it will be produced by hand knitting machines. Therefore, for the envisaged small scale plant there is adequate and sustainable demand in the future.

3.1.3 Pricing and Distribution

Based on the market research result and the capacity of the envisaged plant, the selling price is set to be Birr 2,500 per unit. In distributing the fabricated machines the envisaged plant shall make use of the available sales network.

3.2 *Plant Capacity*

In consideration of the expected demand for hand knitting machines as presented earlier, and the planned technology, the envisaged plant is set to produce 650 machines annually.

3.3 *Production Program*

The program is scheduled based on the consideration that the envisaged plant will work 300 days in a year in 1 shift, where the remaining days will be holidays and for maintenance. During the first year of operation the plant will operate at 60 percent capacity and then it grows to 80 percent in the 2nd year. The capacity will grow to 100 percent starting from the 3rd year. This consideration is developed based on the assumption that there is ample demand for the product so that the proposed plant would overcome market and logistics barriers within the first two years of operation.

4. Raw Materials and Utilities

4.1 Availability and Source of Raw Materials

The main raw materials include metal sheet, latch hook needle, cam box and punch card. While metal sheet can be purchased from local suppliers, the other components are imported from abroad.

4.2 Annual Requirement and Cost of Raw Materials and Utilities

The annual raw material and utility requirement and the associated cost for the envisaged plant is listed in table 1 here under

Table 1 Material and Utility Requirement

Material and Input	Quantity	Total Cost	
		L.C.	F.C.
Metal Sheet	3 ton	180,000	
Latch Hook Needles	130,000 pcs		245,780
Cam Box	650		275,000
Punch Card			82,500
Total Material Cost		180,000	603,280
Utility			
Electricity	215,000 kwh	118,250	
Water	1,500m ³	3,975	
Total Utility Cost		122,225	

According to the above table, the total cost of material and utility is estimated to be Birr 905,506 per year.

5 Location and Site

The appropriate locations for the envisaged project in view of the availability of infrastructure as well as market are major towns of the region mainly Bahir Dar and Combolcha.

6 Technology and Engineering

6.1 Production Process

The Main process in the manufacturing of this product is carried on by power press. This is a sheet metal work where the metal is cut and bend to form the appropriate shape required. In the manufacturing of hand knitting machines, it is assumed that latch hook needles as well as cum box will be imported and then assembled in the factory. At the same time accessories like punch card shall be imported so that the machine can produce different types of designs and combination of threads.

The alternative technology involves the production of all items by the plant. This, however, requires highly skilled labor and additional machineries to operate. Such alternative approach may be adopted in the long run once skill and finance barriers are eliminated.

6.2 Machinery and Equipment

The machineries and equipment required for fabricating hand knitting machines is detailed in table 2 below

Table 2: Machinery and Equipment

Machinery and Equipment	Quantity
Capstan Lathe	1
Pillar Type Drilling Machine	1
Power Press	1
Air Compressor	1
Double Ended Bench Grinder	1

The, total cost of machinery and equipment including freight insurance and bank cost is estimated to be about Birr 150,000

The following are some of the machineries suppliers' address for the envisaged project

Batliboi Engineers Pvt. Ltd.

99/2, 99/3 N.R. Road, Bangalore,
West Bengal, India

A. P. G. Needles Private Limited

Address: 212-213 M. I. E. Bahadurgarh,
Rohtak - 124 507, India

Phone: +(91)-(1276)-325444

Fax: +(91)-(1276)-267304

6.3 Civil Engineering Cost

The total site area for the envisaged plant is estimated to be 200m² where 150m² is allocated to the production place and the remaining space is left for stores (30m²), office buildings and facilities (20m²).

7 Human Resource and Training Requirement

7.1 Human Resource

The list of required manpower for the envisaged plant is stated in table 3 below

Table 3: Human Resource Requirement

Position	No. Required	Monthly Salary	Total Annual Salary
Manager/Technician	1	4000	48000
Accountant/Cashier	1	1200	14400
Store Keeper	1	800	9600
Inspector	1	1200	14400
Operators	6	800	57600
Daily Laborers	3	400	14400
Cleaners	1	400	4800
Guards	2	400	9600
Benefit (20%)			34560
Total	16		207360

The envisaged plant creates 16 job opportunity and about Birr 207.36 thousand of income. The professionals and support staffs for the envisaged plant shall be recruited from Amhara region

7.2 Training Requirement

Training of key personnel shall be conducted in collaboration with the suppliers of the plant machineries. The training should primarily focuses on the production technology and machinery maintenance and trouble shooting. To handle this, Birr 15,000 will be allocated as training expense.

8 Financial Analysis

8.1 Underlying Assumption

The financial analysis of hand knitting fabrication plant is based on the data provided in the preceding chapters and the following assumptions.

A. Construction and Finance

Construction period	2 year
Source of finance	40% equity and 60% loan
Tax holidays	2 years
Bank interest rate	12%
Discount for cash flow	18%
Value of land	Based on lease rate of ANRS
Spare Parts, Repair & Maintenance	1% of fixed investment

B. Depreciation

Building	5%
Machinery and equipment	10%
Office furniture	10%
Vehicles	20%
Pre-production (amortization)	20%

C. Working Capital (Minimum Days of Coverage)

Raw Material-Local	30
Raw Material-Foreign	120
Factory Supplies in Stock	30
Spare Parts in Stock and Maintenance	30
Work in Progress	10
Finished Products	15
Accounts Receivable	30
Cash in Hand	30
Accounts Payable	30

8.2 Investment

The total investment cost of the project including working capital is estimated at Birr 986.6 thousand as shown in table 4 below. The Owner shall contribute 40% of the finance in the form of equity while the remaining 60% is to be financed by bank loan.

Table 4: Total initial investment

Items	L.C	F.C	Total
Land	600		600
Building and civil works	400,000		400,000
Office equipment	25,000		25,000
Vehicles	0		0
Plant machinery & equipment	100,000	50,000	150,000
<i>Total fixed investment cost</i>	<i>525,600</i>	<i>50,000</i>	<i>575,600</i>
Pre production capital expenditure*	28,780		28,780
<i>Total initial investment</i>	<i>554,380</i>	<i>50,000</i>	<i>604,380</i>
Working capital at full capacity	140,988	241,312	382,300
Total	695,368	291,312	986,680

*Pre-production capital expenditure includes - all expenses for pre-investment studies, consultancy fee during construction and expenses for company's establishment, project administration expenses, commission expenses, preproduction marketing and interest expenses during construction.

The foreign component of the project accounts for 29.5% of the total investment cost.

8.3 Production Costs

The total production cost at full capacity operation is estimated at Birr 1.22 million as detailed in table 5 below.

Table 5: Production Cost

Items	Cost
1. Raw materials	783,280
2. Utilities	122,225
3. Wages and Salaries	207,360
4. Spares and Maintenance	5,756
<i>Factory costs</i>	<i>1,118,621</i>
5. Depreciation	43,256
6. Financial costs	59,201
Total Production Cost	1,221,078

8.4 Financial Evaluation

I. Profitability

According to the projected income statement attached in the annex part (see annex 4) the project will generate profit beginning from the first year of operation. Ratios such as the percentage of net profit to total sales, return on equity and return on total investment are 10%, 25% and 30% in the first year and are gradually rising. Furthermore, the income statement and other profitability indicators show that the project is viable.

II. Breakeven Analysis

The breakeven point of the project is estimated by using income statement projection. Accordingly, the project will break even at 22.7% of capacity utilization.

III. Payback Period

Investment cost and income statement projection are used in estimating the project payback period. The projects will payback fully the initial investment less working capital in 1 year and 10 months.

IV. Simple Rate of Return

For the envisaged plant the simple rate of return equals to 33.1%

V. Internal Rate of Return and Net Present Value

Based on cash flow statement described in the annex part, the calculated IRR of the project is 35.3% and the net present value at 18 % discount is Birr 554,079.55

VI. Sensitivity Analysis

The envisaged plant is profitable even with considerable cost increment. That is the plant maintains to be profitable starting from the first year when 10 % cost increment takes place in the sector. This result is accompanied with payback period of 2 years and 3 months.

9 Economic and Social Benefit and Justification

The envisaged project possesses wide range of benefits that promotes the socio-economic goals and objectives stated in the strategic plan of the Amhara National Regional State. It also plays positive role in diversifying the economic activity by enhancing the industrial sector of the region. The other major benefits are listed as follows:

A. Profit Generation

The project is found to be financially viable and earns a profit of Birr 2.8 million within the project life. Such result induces the project promoters to reinvest the profit which, therefore, increases the investment magnitude in the region.

B. Tax Revenue

In the project life under consideration, the region will collect about Birr 1.04 million from corporate tax payment alone (i.e. excluding income tax, sales tax and VAT). Such result create additional fund for the regional government that will be used in expanding social and other basic services in the region.

C. Import Substitution and Foreign Exchange Saving

Based on the projected figure we learn that in the project life an estimated amount of US Dollar 1.52 million will be saved as a result of the proposed project. This will create room for the saved hard currency to be allocated on other vital and strategic sectors.

D. Employment and Income Generation

The proposed project is expected to create employment opportunity to several citizens of the region. That is, it will provide permanent employment to 16 professionals as well as support stuffs. Consequently the project creates income of Birr 207.36 thousands per year. This would be one of the commendable accomplishments of the project.

E. Pro Environment Project

The proposed production process is environment friendly.

ANNEXES

Annex 1: Total Net Working Capital Requirements (in Birr)

	CONSTRUCTION		PRODUCTION			
	Year 1	Year 2	1	2	3	4
Capacity Utilization (%)	0.00	0.00	60%	80%	100%	100%
1. Total Inventory	0.00	0.00	365192.07	486922.76	608653.45	608653.45
Raw Materials in Stock- Total	0.00	0.00	155587.20	207449.60	259312.00	259312.00
Raw Material-Local	0.00	0.00	10800.00	14400.00	18000.00	18000.00
Raw Material-Foreign	0.00	0.00	144787.20	193049.60	241312.00	241312.00
Factory Supplies in Stock	0.00	0.00	697.13	929.50	1161.88	1161.88
Spare Parts in Stock and Maintenance	0.00	0.00	1036.08	1381.44	1726.80	1726.80
Work in Progress	0.00	0.00	17428.16	23237.54	29046.93	29046.93
Finished Products	0.00	0.00	34856.31	46475.08	58093.85	58093.85
2. Accounts Receivable	0.00	0.00	97500.00	130000.00	162500.00	162500.00
3. Cash in Hand	0.00	0.00	19775.10	26366.80	32958.50	32958.50
CURRENT ASSETS	0.00	0.00	326879.97	435839.96	544799.95	544799.95
4. Current Liabilities	0.00	0.00	97500.00	130000.00	162500.00	162500.00
Accounts Payable	0.00	0.00	97500.00	130000.00	162500.00	162500.00
TOTAL NET WORKING CAPITAL REQUIRMENTS	0.00	0.00	229379.97	305839.96	382299.95	382299.95
INCREASE IN NET WORKING CAPITAL	0.00	0.00	229379.97	76459.99	76459.99	0.00

Annex 1: Total Net Working Capital Requirements (in Birr) (continued)

	PRODUCTION					
	5	6	7	8	9	10
Capacity Utilization (%)	100%	100%	100%	100%	100%	100%
1. Total Inventory	608653.45	608653.45	608653.45	608653.45	608653.45	608653.45
Raw Materials in Stock-Total	259312.00	259312.00	259312.00	259312.00	259312.00	259312.00
Raw Material-Local	18000.00	18000.00	18000.00	18000.00	18000.00	18000.00
Raw Material-Foreign	241312.00	241312.00	241312.00	241312.00	241312.00	241312.00
Factory Supplies in Stock	1161.88	1161.88	1161.88	1161.88	1161.88	1161.88
Spare Parts in Stock and Maintenance	1726.80	1726.80	1726.80	1726.80	1726.80	1726.80
Work in Progress	29046.93	29046.93	29046.93	29046.93	29046.93	29046.93
Finished Products	58093.85	58093.85	58093.85	58093.85	58093.85	58093.85
2. Accounts Receivable	162500.00	162500.00	162500.00	162500.00	162500.00	162500.00
3. Cash in Hand	32958.50	32958.50	32958.50	32958.50	32958.50	32958.50
CURRENT ASSETS	544799.95	544799.95	544799.95	544799.95	544799.95	544799.95
4. Current Liabilities	162500.00	162500.00	162500.00	162500.00	162500.00	162500.00
Accounts Payable	162500.00	162500.00	162500.00	162500.00	162500.00	162500.00
TOTAL NET WORKING CAPITAL REQUIRMENTS	382299.95	382299.95	382299.95	382299.95	382299.95	382299.95
INCREASE IN NET WORKING CAPITAL	0.00	0.00	0.00	0.00	0.00	0.00

Annex 2: Cash Flow Statement (in Birr)						
	CONSTRUCTION		PRODUCTION			
	Year 1	Year 2	1	2	3	4
TOTAL CASH INFLOW	302190.00	684489.95	1072500.00	1332500.00	1657500.00	1625000.00
1. Inflow Funds	302190.00	684489.95	97500.00	32500.00	32500.00	0.00
Total Equity	120876.00	273795.98	0.00	0.00	0.00	0.00
Total Long Term Loan	181314.00	410693.97	0.00	0.00	0.00	0.00
Total Short Term Finances	0.00	0.00	97500.00	32500.00	32500.00	0.00
2. Inflow Operation	0.00	0.00	975000.00	1300000.00	1625000.00	1625000.00
Sales Revenue	0.00	0.00	975000.00	1300000.00	1625000.00	1625000.00
Interest on Securities	0.00	0.00	0.00	0.00	0.00	0.00
3. Other Income	0.00	0.00	0.00	0.00	0.00	0.00
TOTAL CASH OUTFLOW	302190.00	302190.00	1158017.38	1184296.96	1514959.08	1397710.98
4. Increase In Fixed Assets	302190.00	302190.00	0.00	0.00	0.00	0.00
Fixed Investments	287800.00	287800.00	0.00	0.00	0.00	0.00
Pre-production Expenditures	14390.00	14390.00	0.00	0.00	0.00	0.00
5. Increase in Current Assets	0.00	0.00	326879.97	108959.99	108959.99	0.00
6. Operating Costs	0.00	0.00	680731.26	905628.02	1130524.77	1130524.77
7. Corporate Tax Paid	0.00	0.00	0.00	0.00	117605.53	121157.58
8. Interest Paid	0.00	0.00	150406.15	71040.96	59200.80	47360.64
9.Loan Repayments	0.00	0.00	0.00	98668.00	98668.00	98668.00
10.Dividends Paid	0.00	0.00	0.00	0.00	0.00	0.00
Surplus(Deficit)	0.00	382299.95	-85517.38	148203.04	142540.92	227289.02
Cumulative Cash Balance	0.00	382299.95	296782.57	444985.61	587526.53	814815.55

Annex 2: Cash Flow Statement (in Birr): Continued						
	PRODUCTION					
	5	6	7	8	9	10
TOTAL CASH INFLOW	1625000.00	1625000.00	1625000.00	1625000.00	1625000.00	1625000.00
1. Inflow Funds	0.00	0.00	0.00	0.00	0.00	0.00
Total Equity	0.00	0.00	0.00	0.00	0.00	0.00
Total Long Term Loan	0.00	0.00	0.00	0.00	0.00	0.00
Total Short Term Finances	0.00	0.00	0.00	0.00	0.00	0.00
2. Inflow Operation	1625000.00	1625000.00	1625000.00	1625000.00	1625000.00	1625000.00
Sales Revenue	1625000.00	1625000.00	1625000.00	1625000.00	1625000.00	1625000.00
Interest on Securities	0.00	0.00	0.00	0.00	0.00	0.00
3. Other Income	0.00	0.00	0.00	0.00	0.00	0.00
TOTAL CASH OUTFLOW	1389422.87	1382861.56	1374573.45	1267617.34	1267617.34	1267617.34
4. Increase In Fixed Assets	0.00	0.00	0.00	0.00	0.00	0.00
Fixed Investments	0.00	0.00	0.00	0.00	0.00	0.00
Pre-production Expenditures	0.00	0.00	0.00	0.00	0.00	0.00
5. Increase in Current Assets	0.00	0.00	0.00	0.00	0.00	0.00
6. Operating Costs	1130524.77	1130524.77	1130524.77	1130524.77	1130524.77	1130524.77
7. Corporate Tax Paid	124709.63	129988.47	133540.52	137092.57	137092.57	137092.57
8. Interest Paid	35520.48	23680.32	11840.16	0.00	0.00	0.00
9. Loan Repayments	98668.00	98668.00	98668.00	0.00	0.00	0.00
10. Dividends Paid	0.00	0.00	0.00	0.00	0.00	0.00
Surplus(Deficit)	235577.13	242138.44	250426.55	357382.66	357382.66	357382.66
Cumulative Cash Balance	1050392.68	1292531.13	1542957.68	1900340.34	2257723.00	2615105.66

Annex 3: DISCOUNTED CASH FLOW-TOTAL CAPITAL INVESTED						
	CONSTRUCTION		PRODUCTION			
	Year 1	Year 2	1	2	3	4
TOTAL CASH INFLOW	0.00	0.00	975000.00	1300000.00	1625000.00	1625000.00
1. Inflow Operation	0.00	0.00	975000.00	1300000.00	1625000.00	1625000.00
Sales Revenue	0.00	0.00	975000.00	1300000.00	1625000.00	1625000.00
Interest on Securities	0.00	0.00	0.00	0.00	0.00	0.00
2. Other Income	0.00	0.00	0.00	0.00	0.00	0.00
TOTAL CASH OUTFLOW	302190.00	302190.00	910111.23	982088.01	1324590.29	1251682.35
3. Increase in Fixed Assets	302190.00	302190.00	0.00	0.00	0.00	0.00
Fixed Investments	287800.00	287800.00	0.00	0.00	0.00	0.00
Pre-production Expenditures	14390.00	14390.00	0.00	0.00	0.00	0.00
4. Increase in Net Working Capital	0.00	0.00	229379.97	76459.99	76459.99	0.00
5. Operating Costs	0.00	0.00	680731.26	905628.02	1130524.77	1130524.77
6. Corporate Tax Paid	0.00	0.00	0.00	0.00	117605.53	121157.58
NET CASH FLOW	-302190.00	-302190.00	64888.77	317911.99	300409.71	373317.65
CUMMULATIVE NET CASH FLOW	-302190.00	-604380.00	-539491.23	-221579.24	78830.47	452148.12
Net Present Value (at 18%)	-302190.00	-256093.22	46602.10	193491.05	154947.99	163180.59
Cumulative Net present Value	-302190.00	-558283.22	-511681.12	-318190.06	-163242.08	-61.49

Annex 3: DISCOUNTED CASH FLOW-TOTAL CAPITAL INVESTED (Continued)						
	PRODUCTION					
	5	6	7	8	9	10
TOTAL CASH INFLOW	1625000.00	1625000.00	1625000.00	1625000.00	1625000.00	1625000.00
1. Inflow Operation	1625000.00	1625000.00	1625000.00	1625000.00	1625000.00	1625000.00
Sales Revenue	1625000.00	1625000.00	1625000.00	1625000.00	1625000.00	1625000.00
Interest on Securities	0.00	0.00	0.00	0.00	0.00	0.00
2. Other Income	0.00	0.00	0.00	0.00	0.00	0.00
TOTAL CASH OUTFLOW	1255234.40	1260513.24	1264065.29	1267617.34	1267617.34	1267617.34
3. Increase in Fixed Assets	0.00	0.00	0.00	0.00	0.00	0.00
Fixed Investments	0.00	0.00	0.00	0.00	0.00	0.00
Pre-production Expenditures	0.00	0.00	0.00	0.00	0.00	0.00
4. Increase in Net Working Capital	0.00	0.00	0.00	0.00	0.00	0.00
5. Operating Costs	1130524.77	1130524.77	1130524.77	1130524.77	1130524.77	1130524.77
6. Corporate Tax Paid	124709.63	129988.47	133540.52	137092.57	137092.57	137092.57
NET CASH FLOW	369765.60	364486.76	360934.71	357382.66	357382.66	357382.66
CUMMULATIVE NET CASH FLOW	821913.73	1186400.48	1547335.19	1904717.85	2262100.51	2619483.18
Net Present Value (at 18%)	136972.84	114421.52	96022.41	80574.09	68283.13	57867.06
Cumulative Net present Value	136911.35	251332.87	347355.27	427929.37	496212.49	554079.55
Net Present Value (at 18%)	554,079.55					
Internal Rate of Return	35.3%					

Annex 4: NET INCOME STATEMENT (in Birr)					
	PRODUCTION				
	1	2	3	4	5
Capacity Utilization (%)	60%	80%	100%	100%	100%
1. Total Income	975000.00	1300000.00	1625000.00	1625000.00	1625000.00
Sales Revenue	975000.00	1300000.00	1625000.00	1625000.00	1625000.00
Other Income	0.00	0.00	0.00	0.00	0.00
2. Less Variable Cost	624923.86	833231.82	1041539.77	1041539.77	1041539.77
VARIABLE MARGIN	350076.14	466768.18	583460.23	583460.23	583460.23
(In % of Total Income)	35.91	35.91	35.91	35.91	35.91
3. Less Fixed Costs	99063.40	115652.20	132241.00	132241.00	132241.00
OPERATIONAL MARGIN	251012.74	351115.98	451219.23	451219.23	451219.23
(In % of Total Income)	26	27	28	28	28
4. Less Cost of Finance	150406.15	71040.96	59200.80	47360.64	35520.48
5. GROSS PROFIT	100606.59	280075.03	392018.43	403858.59	415698.75
6. Income (Corporate) Tax	0.00	0.00	117605.53	121157.58	124709.63
7. NET PROFIT	100606.59	280075.03	274412.90	282701.01	290989.13
RATIOS (%)					
Gross Profit/Sales	10%	22%	24%	25%	26%
Net Profit After Tax/Sales	10%	22%	17%	17%	18%
Return on Investment	30%	39%	34%	33%	33%
Return on Equity	25%	71%	70%	72%	74%

Annex 4: NET INCOME STATEMENT (in Birr):Continued					
	PRODUCTION				
	6	7	8	9	10
Capacity Utilization (%)	100%	100%	100%	100%	100%
1. Total Income	1625000.00	1625000.00	1625000.00	1625000.00	1625000.00
Sales Revenue	1625000.00	1625000.00	1625000.00	1625000.00	1625000.00
Other Income	0.00	0.00	0.00	0.00	0.00
2. Less Variable Cost	1041539.77	1041539.77	1041539.77	1041539.77	1041539.77
VARIABLE MARGIN	583460.23	583460.23	583460.23	583460.23	583460.23
(In % of Total Income)	36	36	36	36	36
3. Less Fixed Costs	126485.00	126485.00	126485.00	126485.00	126485.00
OPERATIONAL MARGIN	456975.23	456975.23	456975.23	456975.23	456975.23
(In % of Total Income)	28	28	28	28	28
4. Less Cost of Finance	23680.32	11840.16	0.00	0.00	0.00
5. GROSS PROFIT	433294.91	445135.07	456975.23	456975.23	456975.23
6. Income (Corporate) Tax	129988.47	133540.52	137092.57	137092.57	137092.57
7. NET PROFIT	303306.44	311594.55	319882.66	319882.66	319882.66
RATIOS (%)					
Gross Profit/Sales	27%	27%	28%	28%	28%
Net Profit After Tax/Sales	19%	19%	20%	20%	20%
Return on Investment	33%	33%	32%	32%	32%
Return on Equity	77%	79%	81%	81%	81%

Annex 5: Projected Balance Sheet (in Birr)

	CONSTRUCTION		PRODUCTION			
	Year 1	Year 2	1	2	3	4
TOTAL ASSETS	302190.00	986679.95	1184786.54	1398693.58	1606938.48	1790971.50
1. Total Current Assets	0.00	382299.95	623662.54	880825.58	1132326.48	1359615.50
Inventory on Materials and Supplies	0.00	0.00	157320.41	209760.54	262200.68	262200.68
Work in Progress	0.00	0.00	17428.16	23237.54	29046.93	29046.93
Finished Products in Stock	0.00	0.00	34856.31	46475.08	58093.85	58093.85
Accounts Receivable	0.00	0.00	97500.00	130000.00	162500.00	162500.00
Cash in Hand	0.00	0.00	19775.10	26366.80	32958.50	32958.50
Cash Surplus, Finance Available	0.00	382299.95	296782.57	444985.61	587526.53	814815.55
Securities	0.00	0.00	0.00	0.00	0.00	0.00
2. Total Fixed Assets, Net of Depreciation	302190.00	604380.00	561124.00	517868.00	474612.00	431356.00
Fixed Investment	0.00	287800.00	575600.00	575600.00	575600.00	575600.00
Construction in Progress	287800.00	287800.00	0.00	0.00	0.00	0.00
Pre-Production Expenditure	14390.00	28780.00	28780.00	28780.00	28780.00	28780.00
Less Accumulated Depreciation	0.00	0.00	43256.00	86512.00	129768.00	173024.00
3. Accumulated Losses Brought Forward	0.00	0.00	0.00	0.00	0.00	0.00
4. Loss in Current Year	0.00	0.00	0.00	0.00	0.00	0.00
TOTAL LIABILITIES	302190.00	986679.95	1184786.54	1398693.58	1606938.48	1790971.50
5. Total Current Liabilities	0.00	0.00	97500.00	130000.00	162500.00	162500.00
Accounts Payable	0.00	0.00	97500.00	130000.00	162500.00	162500.00
Bank Overdraft	0.00	0.00	0.00	0.00	0.00	0.00
6. Total Long-term Debt	181314.00	592007.97	592007.97	493339.98	394671.98	296003.99
Loan A	181314.00	592007.97	592007.97	493339.98	394671.98	296003.99
Loan B	0.00	0.00	0.00	0.00	0.00	0.00
7. Total Equity Capital	120876.00	394671.98	394671.98	394671.98	394671.98	394671.98
Ordinary Capital	120876.00	394671.98	394671.98	394671.98	394671.98	394671.98
Preference Capital	0.00	0.00	0.00	0.00	0.00	0.00
Subsidies	0.00	0.00	0.00	0.00	0.00	0.00
8. Reserves, Retained Profits Brought Forward	0.00	0.00	0.00	100606.59	380681.62	655094.52
9. Net Profit After Tax	0.00	0.00	100606.59	280075.03	274412.90	282701.01
Dividends Payable	0.00	0.00	0.00	0.00	0.00	0.00
Retained Profits	0.00	0.00	100606.59	280075.03	274412.90	282701.01

Annex 5: Projected Balance Sheet (in Birr): Continued

	PRODUCTION					
	5	6	7	8	9	10
TOTAL ASSETS	1983292.63	2187931.08	2400857.63	2720740.29	3040622.95	3360505.61
1. Total Current Assets	1595192.63	1837331.08	2087757.63	2445140.29	2802522.95	3159905.61
Inventory on Materials and Supplies	262200.68	262200.68	262200.68	262200.68	262200.68	262200.68
Work in Progress	29046.93	29046.93	29046.93	29046.93	29046.93	29046.93
Finished Products in Stock	58093.85	58093.85	58093.85	58093.85	58093.85	58093.85
Accounts Receivable	162500.00	162500.00	162500.00	162500.00	162500.00	162500.00
Cash in Hand	32958.50	32958.50	32958.50	32958.50	32958.50	32958.50
Cash Surplus, Finance Available	1050392.68	1292531.13	1542957.68	1900340.34	2257723.00	2615105.66
Securities	0.00	0.00	0.00	0.00	0.00	0.00
2. Total Fixed Assets, Net of Depreciation	388100.00	350600.00	313100.00	275600.00	238100.00	200600.00
Fixed Investment	575600.00	575600.00	575600.00	575600.00	575600.00	575600.00
Construction in Progress	0.00	0.00	0.00	0.00	0.00	0.00
Pre-Production Expenditure	28780.00	28780.00	28780.00	28780.00	28780.00	28780.00
Less Accumulated Depreciation	216280.00	253780.00	291280.00	328780.00	366280.00	403780.00
3. Accumulated Losses Brought Forward	0.00	0.00	0.00	0.00	0.00	0.00
4. Loss in Current Year	0.00	0.00	0.00	0.00	0.00	0.00
TOTAL LIABILITIES	1983292.63	2187931.08	2400857.63	2720740.29	3040622.95	3360505.61
5. Total Current Liabilities	162500.00	162500.00	162500.00	162500.00	162500.00	162500.00
Accounts Payable	162500.00	162500.00	162500.00	162500.00	162500.00	162500.00
Bank Overdraft	0.00	0.00	0.00	0.00	0.00	0.00
6. Total Long-term Debt	197335.99	98668.00	0.00	0.00	0.00	0.00
Loan A	197335.99	98668.00	0.00	0.00	0.00	0.00
Loan B	0.00	0.00	0.00	0.00	0.00	0.00
7. Total Equity Capital	394671.98	394671.98	394671.98	394671.98	394671.98	394671.98
Ordinary Capital	394671.98	394671.98	394671.98	394671.98	394671.98	394671.98
Preference Capital	0.00	0.00	0.00	0.00	0.00	0.00
Subsidies	0.00	0.00	0.00	0.00	0.00	0.00
8. Reserves, Retained Profits Brought Forward	937795.54	1228784.66	1532091.10	1843685.65	2163568.31	2483450.97
9. Net Profit After Tax	290989.13	303306.44	311594.55	319882.66	319882.66	319882.66
Dividends Payable	0.00	0.00	0.00	0.00	0.00	0.00
Retained Profits	290989.13	303306.44	311594.55	319882.66	319882.66	319882.66