



NOVEMBER 24, 2022 ADDIS ABEBA CITY ADMINISTRATION INVESTMENT COMMISSION A.A

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I. Executive summary

This project profile is prepared to assess the viability of running Tourism (Tour operator) service business, in Addis Abeba city administration. Hence Market, Technical, Organizational and Financial study was made to investigate the viability of the envisaged project.

This project profile on Tourism (Tour operator) service has been developed to support the decision –making process based on a cost benefit analysis of the actual project viability. This profile includes marketing study, service and financial analysis, which are utilized to assist the decision-makers when determining if the business concept is viable. Ethiopia has a private sector driven Tourism (Tour operator) service. According to the latest data sourced from Ethiopian investment commission there are more than 306 companies were registered to invest on Tourism (Tour operator) service business in Ethiopia and 104 companies are on operational stage whiles others are on implementation and pre-implementation stages.

The location of the company will be decided on the basis of access to get tourist, travelers, infrastructure namely power, water, transport and telecom to easy access to international market. This service sector investment opportunity brief highlights the investors or Promoters of the project for the establishment of this service delivery.

The total investment capital including establishing the factory is Birr 136.54 million. Out of the total investment capital, the owners will cover Birr 40.96 million (30 %) while the remaining balances amounting to Birr 95.58 million (70 %) will be secured from bank in the form of term loan.

As indicated in the financial study, the cash flow projection of the project shows surplus from the first year on. The net cash flows of the project range from Birr 23 Million in the first year to Birr

28.80 million at the end of the 10th year of operation. At the end of the 10th year of operation period the cumulative cash balance reaches Birr 316 million. The Benefit-cost ratio and Net present value (NPV) have been calculated at 17% discount factor (D.F) for 10 years of the project activity. Accordingly, the project has NPV of 154 million Birr at 17% D.F. and the benefit-cost ratio of 1.68 at 17% D.F.

Therefore, from the aforementioned overall market technical and financial analysis we can conclude that the Tour operator service deliver business is a viable and worthwhile.

1. BACKGROUND INFORMATION

1.1 Introduction

This document was undertaken to show tourism sector tour operator profile in Addis Ababa. In compiling the report, information from Addis Ababa investment commission, Ministry of culture and tourism, Ethiopian custom commission and published sources have been augmented.

Presently, in spite of high demand and its crucial importance, number of tour operators in the country is very low compared to number of tourists. This constrained the achievement of tourism related development goals and also impeded accelerated progress towards tourism service coverage.

Increase in number of tour operators is fundamental importance to Ethiopia's present and future demand. In Ethiopia, the demand for tour operator is expected to increase considerably in the next few decades as a result of increased tourist areas, number of tourist arrival, and increasing income levels. Therefore, in a country like Ethiopia, it is important to identify gaps and potential in the development tour operator companies.

1.2 Service Description and Application

Different groups having their own objectives are currently involving in the tourism industry. Of these actors the travel and tour agencies are found to be key player in the field. They took an intermediary place in the tourism production and distribution. There are three different types of intermediaries, i.e. outgoing travel agencies (retailers), tour operators (wholesalers) and incoming travel agencies based at destinations (handling). In particular, an outgoing travel agency serves as sales channel for tourist specific activities and wholesalers generally transport tickets, accommodations and packages from tour operators.

Tour operators buy individual tourist services (e.g. transport and accommodation) from their suppliers (e.g. carriers and hotels) and assemble them into holiday packages. Finally, incoming travel agencies plan tour packages on a destination level and act as intermediary between tour operator and specific tourist activities, but also sell to individual tourists that do not travel through a tour operator. To put in a nut shell the tour and travel agencies services include providing travel information, organizing tour packages, serving as middlemen for hotel bookings, issuing air tickets, and arranging car rental services for their customers. However, it seems that these agencies have faced difficult times in recent years because of increasing customer demands.

1.3 Project Location and Justification

1.3.1 Location of Addis Ababa

Addis Ababa is the seat of the Ethiopian federal government. It is located on the central highlands of Ethiopia in the middle of Oromia Region. The absolute location is around the intersection point of 901'48''N latitude and 38°44'24"E longitudes. This is very near to the geographical center of the country. It is, therefore, equidistant to the peripheral areas or is equally accessible to almost all parts of Ethiopia. Addis Ababa is located on a well-watered plateau surrounded by hills and mountains. The city is in the highlands on the edge of the Ethiopian rift valley or the eastern slopes of the Entoto Mountain ranges bordering the Great Rift Valley. The total area of Addis Ababa is about 540 km² of which 18.2 km² are rural. Addis Ababa's built-up urban area spans 474 km². It is also the largest city in the world located in a landlocked country.

1.3.2 Demography of Addis Ababa

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

1.3.3 Economic activity of Addis Ababa

The transformation of Addis Ababa has especially been rapid since 1991. According to the data from the city's Bureau of Finance and Economic Development (2006), per capital income of Addis Ababa has grown from USD 788.48 in 2010 to USD 1,359 in 2015. The city also achieved a decline in the poverty index from a high of 29.6 in 2012 to 22.0 in 2014. Moreover, the current poverty headcount index for Addis Ababa is estimated at 18.9 while the poverty severity account for 5 and 1.8 index points respectively. Even though, the poverty status of Addis Ababa has an improvement over previous years, there is still much work to be done to curb both the incidence and severity of poverty.

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

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

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

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

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

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

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

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

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

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

- Customs duty free privilege on capital goods and construction materials, and on spare parts whose value is not greater than 15% of the imported capital goods' total value.
- Investors have the right to redeem a refund of customs duty paid on inputs (raw materials and components) when buying capital goods or construction materials from local manufacturing industries.
- Income tax exemption of up to 6 years for manufacturing and agro-processing, and up to 9 years for agricultural investment.

- Additional 2-4 years income tax exemption for exporting investors located within industrial parks and 10-15 years exemption for industrial park developers.
- Loss Cary forward for half of the tax holiday period. Several export incentives, including Duty Draw-Back, Voucher, Bonded Factory, and Manufacturing Warehouse, and Export Credit Guarantee schemes.

1.4.1. The city benefit from the investment

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

• Employment opportunity

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

Improving growth of the economy

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

2. Marketing study

2.1 Market analysis summary

The current drive and emphasis by the government to expand tourist destination in the country requires adequate tour operators. Having undertaken a thorough and comprehensive research of the market we realized that there was a vast opportunity for tour operators. Aware of the fact operating in such a market is largely dependent on good networking; the promoter intends to establish networks and strategic relationships with various stakeholders to sustain the market. In so doing the owner intend to ensure that the service they provide are of good quality.

2.2 Number of tour operators in Ethiopia

Inbound operators are key players in generating exports, as they package and sell the tourism product in the markets. They are also in direct contact with visitors as they operate the tours when tourists arrive at the destination. This is a regulated activity in most countries and in Ethiopia there are over 467 incoming operators accredited by Ministry of Culture and Tourism which are allowed to operate countrywide in 2018. Some licenses are combined with travel agency and rent-a-car, and as it seems that Regional Tourism and Culture Bureaus are also entitled to issue business licenses for travel agents/regional operators, the status of many of those who serve visitors arriving by air to the regions is not clear.

According to Ethiopian tourist commission, arrivals of non-residence tourist increased from 148,000 in 2001 to 518,000 in 2020 growing at an average annual rate of 8%. Assuming this growth rate will continue in the future the base year (2022) tourist arrival was calculated; which is 604,195.

As a gateway of all international inbound, outbound and transit tourists/passengers, Addis Ababa have been taking the lion's share in the country's tourist arrivals hosting an estimated 95-99% of the total international tourist arrivals.

Based on the information from Ministry of Culture and Tourism, the average number of visitors per year per travel agent is 400.

In order to project tourist arrival in to Ethiopia, the past trend in tourist arrival is considered. As sated above, the total tourist arrival in the country has registered 8% average growth rate. Assuming that this growth rate will continue in the future and taking year 2022 figure (604,195) as a base, tourist arrival is forecasted. Moreover, in order to compute the unsatisfied demand, the total annual capacity of the tour operators in Addis Ababa, which is 400 visitors per year, is assumed to increase by 2.5% annually. In addition, it is assumed that the number of tour operators can grow by 5% every year, with the belief that the majority of those registered by the Ethiopian Investment Commission will start the business. Based on the above stated assumption, the capacity of the tour operators was projected for the years 2023 -2032 and the unsatisfied demand is shown in table 1.

Year	Projection	Projection of	Projected	Number of tourists	Unsatisfied
	of Tourist	tour operators	number of tour	that the tour	Demand
	Arrival	capacity	operators	operator can handle	
2023	652,531	410	596	244,360	408,171
2024	704,733	420	626	262,920	441,813
2025	761,112	431	657	283,167	477,945
2026	822,001	441	690	304,290	517,711
2027	887,761	452	724	327,248	560,513
2028	893,022	464	761	353,104	539,918
2029	964,464	475	799	379,525	584,939
2030	1,041,621	487	839	408,593	633,028
2031	1,124,950	499	881	439,619	685,331
2032	1,214,946	512	925	473,600	741,346

Table 1: Projected and unsatisfied demand

The demand projection executed in Table 1 reveals that the demand for tour operators will grow following increase in number of tourists. As shown Table 1, the project will have unsatisfied demand for the coming 10 year's period. The projected demand will continue to be positive until 2031. It can be clearly noted that there is a huge gap between supply and demand figures, which can really be taken as the apparent demand-supply gap for tour operators in Ethiopia.

3. Technology and engineering

3.1 Technology

Service process

Tour operators have a number of products and services that they sell, depending on their specific business model, business intentions and target market. A tour operator will typically package together two of more elements to form a packaged product such as package holidays, accommodation, transfers, excursions, information on destinations and representative service in resorts, which is then sold at an inclusive price.

Tour operator is responsible for putting the different elements of a holiday together into a commodified package. To do this, there are a number of different roles and responsibilities that tour operator staff will have. This includes:

- Data analysis- which destinations will sell best, how many holidays should they sell etc
- Assessing suitability of accommodation, transfer and transport options
- Liaising with stakeholders e.g. coach operators, airlines, hoteliers and resort representatives
- Negotiating contracts
- Confirming reservations with airlines/hotels
- Managing and responding to customer feedback
- Undertaking market research
- Production of marketing material
- Providing pricing information
- Handling bookings, invoicing and issuing of tickets

 Working with travel consultants from different travel agencies to put holiday packages together

3.1.1 Service capacity

In demining the company capacity to serve tourists, the future demands of the service and the economics of scale of the available technologies were taken into consideration. According to the data obtained from the market study, number of tourist uncovered and capacity of tour operators will reach 741,346 and 512 in 2031 respectively. Thus, the envisaged tour operator is intended to have a capacity to serve 500 tourists annually.

3.1.2 Service program

The project requires some years to penetrate into the market and capture a significant share. It will start providing service at 70% of its capacity and will grow by 10% each year considering the market penetration traits. The service program of the envisaged tour operator is given in table 2.

Table 2: Service	program
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Year of Production	1 st Year	2 nd Year	3 rd Year	4 th year
Capacity utilization (%)	70	80	90	100
Number of tourists	3,500	4,000	4,500	5000

3.2Engineering

3.2.1 Land, buildings and civil works

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

The cost of construction of building should be appropriate to the size and expected profitability of business, costs of building generally differs by the type of construction materials used, the type of foundation, wall height and location. The current building cost for simple storage and processing room is from 1,800.00 Birr per m² to 25,000 Birr per m². The total construction cost of buildings and civil works, at a rate of Birr 20,000 per m² is estimated at Birr 10.95 million. Therefore, the total cost of land lease and construction of buildings and civil works is estimated at Birr 14.84 million.

The proposed plant layout comprises the following buildings and structures.

Table 3 Building costs

S/No			Estimated cost per	Total estimated
	Descriptions	Total area	square meter	cost (in Birr)
		M^2	(in Birr)	
6	Office and toilet	200	20,000.00	4,000,000.00
7	Canteen	160	20,000.00	3,200,000.00
8	Guard house	6	20,000.00	120,000.00
9	parking	500	2,000	1,000,000.00
10	Green area	134	1,000	134,000.00
11	Fence			2,500,000.00
		1,000		
	TOTAL			10,954,000.00

Table 4 Land lease period in Addis Abeba

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

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

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

Table 5 Land lease floor price in Addis Abeba

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

3.2.1. Machinery and equipment

Table 6 Lists of Equipment Requirements

Description	Unit of measure	Quantity	Total Costs
land cruiser	PCS	10	80,000,000.00
Minibus	Pcs	10	30,000,000.00
Total			110,000,000.00

4. Organizational structure

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

4.1. Manpower Requirement and Estimated Annual manpower costs Table 7 Annual manpower costs

s/no	Description	Number of	Salary in birr		
		persons	monthly	annually	
1	General manager	1	45,000.00	540,000.00	
2	executive secretary	1	15,000.00	180,000.00	
3	Manager- admin. and finance	1	25,000.00	300,000.00	
6	cashier	1	10,000.00	120,000.00	
8	guards	5	3,000.00	180,000.00	
9	driver ii	20	10,000.00	2,400,000.00	
	total	29		3,720,000.00	

5. Financial Analysis

5.1. General

The financial analysis evaluation, under consideration has been carried out for Tour operator service cost estimates of the envisaged project are mainly consisted of capital investment as well as operating and maintenance costs. The capital investment costs include fixed investment costs (initial fixed investment and replacement costs) and working capital, while operating and maintenance costs comprise current expenses related to material inputs, labour, utility, repair and maintenance costs, spare parts, Overheads, Sales and distribution, interest and depreciation expenses.

The financial analysis and evaluation has been conducted taking assumptions:

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

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

- 4. It is assumed that the project will be start up production activity at 70 % capacity. During years 2 & year 3 the projects is anticipated to gradually increase capacity utilization to reach 100% in year 4. Therefore, starting from year 4 the project will be operational at full capacity.
- 5. For the project under reference promotional, sales and distribution expenses have been estimated at 3% of the sales revenue.
- 6. Maintenance and spare parts costs are 1.5% of the fixed investment costs.

5.2. Initial Fixed investment costs

Table 8 Initial Fixed investment costs

S/No	Fixed investment	Unit of	Quantity	Unit price	Total Amount	Remarks
	type	measurement				
1	Land	Square meter	1,000	3,885	3,885,000.00	The period of land
				$hirr/M^2$		lease will be 70
						years and 10% of
2	Buildings and civil	Square meter	1,000	lump sum	10,954,000.00	the total lease
	works					amount will be
						paid in the first
					14.030.000.00	year
	Sub total				14,839,000.00	
3	Cars	set	20	Lump sum	110,000,000.00	
4	Transformer	set	1	Lump sum	2,000,000.00	
7	Furniture and	Pcs			500,000.00	
	fixture					
	SUB TOTAL				112,500,000.00	
	Fixed capital				127,339,000.00	
	investment costs					
8	pre-operational				2,000,000.00	
	expenses					
	Working capital				7,205,000.00	
	TOTAL INVESTMENT COSTS				136,544,000.00	

5.3. Working capital

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

5.4. Project Financing

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

As stated earlier even though the company obtains loans under different terms and condition as well as from different sources, for the purpose of calculation of debt service scheduling the current development bank of Ethiopia credit terms and conditions have been used. Accordingly, it is assumed that the company will be able to obtain loan 70% of the total investment costs for construction of different buildings, for purchase of machineries, for purchase of truck and vehicles (and for purchase of office furniture and pre operation expense will be covered through bank loans that will have to be repaid back within 10 years, during which time interest will be paid on the loan. The remaining balance (30%) that of the total investment costs will be expected to be covered by equity contribution of the project promoter.

5.5. Production costs

As it is depicted in Annex Table 13 major categories of the total production costs are assembled into the following cost elements.

5.5.1. Utilities

In estimating costs of utility expenses for operation and maintenance of the project, Costs of fuel, oil and lubricant, electricity and water consumptions have been taken in to consideration, the rates of which have been estimated on the basis of the proposed capacity utilization program of the project and at the current official charging rates. At full capacity operation the project will have the following utility expense per annum which amounts to Birr 10 million.

Table 9 Utilities of the factory'000"Birr

TU:::: "0000"D:		Sta	art-up		Full
Utility//000//Birr		70.0/	80.0/	00.0/	
Project year		1	80 %	90 %	100 %
Item description	Unit of massurament	1	2	3	4
Encl	Unit of measurement		-		
r uei					
Gasoline for transport truck	(300km*300days* 47Birr/LIT*10km/Li)*20	5,922	6,768	7,614	8,460
Change of oil and lubricant	10% of the fuel consumption	592	677	761	846
Sub-Total		6,514	7,445	8,375	9,306
Electricity	300days*24 hr.*50kwh* 0.69Birr/kwh	248	248	248	248
Sub- Total		248	248	248	248
Water	365days*100m ³ /day*10 Birr/m ³	255.50	292.00	328.50	365.00
Sub -Total		255.50	292.00	328.50	365.00
Telecommunication					
Telephone	5 lines* 500Birr/month/line+18Birr/line/mon	31.08	31.08	31.08	31.08
Mobile	5 lines*500 Birr/month/line	30.00	30.00	30.00	30.00
Fax	2line*1,000Birr/month + 17 Birr/line/month	24.40	24.40	24.40	24.40
Internet	2,500 Birr/month	30.00	30.00	30.00	30.00
Sub-Total		115.48	115.48	115.48	115.48
TOTAL		7,133	8,101	9,067	10,035

5.5.2. Repair and maintenance

In the expenses under this title have been considered cost estimates required for annual repair and maintenance works including spare parts expenses. These costs include the annual repair expenses of structures and civil works as well as repair and maintenance expenses of machinery and equipment including accessory and general service facilities. The repair and maintenance and spare parts costs have been assumed to be (1.5% of fixed costs and spare part costs).

5.5.3. Salaries and wages

The costs of salaries have been calculated in accordance with the manning list proposed under the "organization and Management" section of this study. In the estimation of salaries and wages, the official minimum wage has been taken in to account. At full capacity operation the costs of salaries and wages will amount to Birr 3.72 Million.

5.5.4. Over heads

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

Table 10 Overhead costs

Direct Overhead"000"Birr		Year 1	Year 2	Year 3	Year 4
Annual land lease Payment		3,885	3,885	3,885	3,885
Insurance					
Building and Civil works	0.10%	11.00	11.00	11.00	11.00
Motor vehicle and Truck	1%	1,100	1,100	1,100	1,100
Vehicles annual inspection and	25,000 Birr per annum per vehicle				
registration		500.00	500.00	500.00	500.00
Work cloth	Two times per annum per workers				
	at1,500 Birr	30.00	30.00	30.00	30.00
Cleaning and sanitation	Lump sum	100.00	100.00	100.00	100.00
Sub Total		5,626	5,626	5,626	5,626
Administration Overhead "000' Birr					
Audit fee	40,000 Birr per annum	40.00	40.00	40.00	40.00
Office cleaning and sanitation	2,000 Birr per month	24.00	24.00	24.00	24.00
Stationery and office supplies	2,000 Birr per month	20.00	20.00	20.00	20.00
Printing and Copy	2,000 Birr per month	24.00	24.00	24.00	24.00
Sub Total		108.00	108.00	108.00	108.00
GRAND TOTAL		5,734	5,734	5,734	5,734

5.5.5. Financial costs

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

5.5.6. Depreciation

Depreciation charges should be taken in to account as part of the total production costs in order to calculate the total production costs, the net working capital and the gross or net-profit. For the given project under reference, the fixed assets and the pre-production capital expenditures have been depreciated and amortized respectively on "a straight line" depreciation method basis using the following rates of the original acquisition costs of the assets:

The rationale uses for the estimation of the depreciation and the amortization rates is based on the expected service life of the assets and repayment capacity of the project under consideration. Based on the above charging rates and consideration of the above facts, the total annual depreciation cost at full capacity operation have been estimated at Birr 22.87 million.

Period						
Capacity utilization			70 %	80 %	90 %	100 %
Project year			1	2	3	4
Item description	Original Value					
			5,477.00	5,477.00	5,477.00	5,477.00
Structure and civil works	10,954,000.00	5% of original value				
			300.00	300.00	300.00	300.00
Transformer	2,000,000.00	15 % of original value				
			16,500.00	16,500.00	16,500.00	16,500.00
Motor vehicles and trucks	100,000,000.00	15 % of original value				
			100.00	100.00	100.00	100.00
Office equipment and furniture	500,000.00	20% of original value				
			500.00	500.00	500.00	500.00
Pre-operation expense	2,000,000.00	25% of original value				
Total			22 877 00	22 877 00	22 877 00	22 877 00
Total			22,877.00	22,877.00	22,877.00	22,877.00

Table 11 Depreciation in Birr"000"

5.6. Break Even point and ROI

5.6.1. Break Even point (BEP)

Three kinds of break-even point

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

To determine BEP Annual Sales, multiply annual sales found in income statement by the

annual fixed cost, and divided by Annual sales less Annual variable cost.

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

Annual sales = 63,000,000 Birr

 $BEP \text{ (sales)} = = \frac{Annual \text{ sales x Annual fixed costs}}{Annual \text{ sales - Annual variables costs}} = = \frac{63,000,000 \text{ x } 43,322,000}{63,000,000-10,875,000}$

BEP (Sales) = <u>52,360,403 Birr</u>

B. BEP percentage = $\frac{\text{Annual fixed costs x 100\%}}{\text{Annual sales-Annual variables costs}}$

 $=\frac{43,322,000 \times 100\%}{63,000,000-10,875,000}$

= 83%

5.6.2. Return on investment

Return on investment = Net profit /Total capital requirement

= 22,260,000/136,544,000

= 16%

The return on owners' investment (ROOI) = Annual net profit /owners' investment = 22,260,000/40,963,200 = 54%

5.7. Project costs

Project capital investment costs are the sum of fixed capital investment (fixed investment plus preproduction capital expenses) and net working capital at full capacity, with fixed capital constituting the resources required for constructions and civil works, importation vacuum truck and general service facilities, whereas, the working capital corresponding to the resources needed for operation of the project totally and partially.

As it has been revealed in Annex Table 13 the total annual operating costs excluding depreciation and interest are estimated to range from 20.30 million Birr in year 1 to 24 million Birr in year 4 and then after remain constant for the rest of the project life.

The total annual production costs including depreciation and interest increase from 54 million Birr in year 1 to 55.75 million Birr in year 4 then starts declining until it reaches 31 million Birr in year 10.

5.8. Project benefits

For financial analysis and evaluation of the given project, the current service delivery price at the project gate has been taken as a basis. As it has been stated earlier the project is envisaged to reach full capacity operation four years after commencement of production activities which are assumed to begin with 70% of the estimated total capacity.

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

	Period			S	Start-up		Full Ca	pacity
	Capacity utilization			70%	80%	90%	100%	100%
	Project year			1	2	3	4	5
	Product type		Unit price					
1	Tourist	Number	15,000	63,000	72,000	81,000	90,000	90,000
	Total			63,000	72,000	81,000	90,000	90,000

Table 12 Source of revenue in Birr"000"

Thus, according to the computation in Annex Table 15 and Annex Table 17, the net income and cash flow statements analysis revealed that at full capacity operation the project will generate a total income (gross revenue) amounting to 90 million Birr per annum. The corresponding Annex Table 15 of "Net Income Statement" shows a steady growth of gross profit starting from 8.80 million Birr in year 1 reaching the peak of 58.77 million Birr in year 10. In its 10 years of manufacturing activities, the project is expected to generate a total net profit of 242.84 million Birr and contribute 130.76 million Birr to the government treasury in form of 35% income tax.

According to the current investment Law, machinery and equipment are anticipated to be imported duty- free. The liquidity position of the project is very strong. The corresponding Annex Table 17 of "Cash Flow Statement" shows the positive cumulative cash balance of Birr 316 million and the project will not face any cash shortage throughout its production life.

The computation of the pay-back period as depicted in Annex table 22 indicates that the project will be able to reimburse itself from its net cash-income within four years after commencement of production activities, the period which is considered to be very good for the project of this nature.

In Annex Table 23 of the Benefit-cost ratio and Net present value (NPV) have been calculated at 17% discount factor (D.F) for 10 years of the project activity. Accordingly, the project has NPV of 154million Birr at 17% D.F. and the benefit-cost ratio of 1.68 at 17% D.F. These results are most appreciable, especially, when related to the external capital borrowing interest rate which ranges from 8.50% to 18.5 % for newly establishing projects.

The project under study when implemented will have BEP at about 83% operation of the estimated full capacity. In addition to this, finally, summary of financial efficiency tests have been conducted in Annex table 21, Accordingly, all efficiency ratios indicated positive trends and consequently, it can be inferred that the project can operate in the frame work of free market mechanism on commercially and financially viable basis and is remunerative.

ANNEXES

CALCULATION OF ANNUAL PRODUCTION COSTS

Table 13 Annual total production costs"000"

Period	Start-up						Full capacity	1		
Capacity utilization	70 %	80 %	90 %	100 %	100 %					
Project Year	1	2	3	4	5	6	7	8	9	10
Cost category										
I. Material inputs including packing materials	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
II. Labor	3,720	3,720	3,720	3,720	3,720	3,720	3,720	3,720	3,720	3,720
III. Utility	7,133	8,101	9,067	10,035	10,035	10,035	10,035	10,035	10,035	10,035
IV. Repair and Maintenance and spare parts costs (1.5 % of fixed costs)	1,852	1,852	1,852	1,852	1,852	1,852	1,852	1,852	1,852	1,852
VI Direct overheads	5,626	5,626	5,626	5,626	5,626	5,626	5,626	5,626	5,626	5,626
A. Direct Production costs	18,331	19,299	20,265	21,233	21,233	21,233	21,233	21,233	21,233	21,233
VII. Administration over head	108	108	108	108	108	108	108	108	108	108
VIII. Marketing and Promotional expense 3 % of sales revenue	1,890	2,160	2,430	2,700	2,700	2,700	2,700	2,700	2,700	2,700
B. Operating costs	20,329	21,567	22,803	24,041	24,041	24,041	24,041	24,041	24,041	24,041
Interest	10,991	10,350	9,635	8,836	7,947	6,955	5,850	4,617	3,242	1,709
Depreciation	22,877	22,877	22,877	22,877	22,377	22,277	16,683	5,477	5,477	5,477
C. Total production costs	54,197	54,794	55,315	55,754	54,365	53,273	46,574	34,135	32,760	31,227

ANNEX IV CALCULATION OF WORKING CAPITAL REQUIREMENTS

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

ii. Working capital requirement

Table 14 Calculation of working capital

	Minimum	Coeff-	- Project year									
	Days of	icient	Start	up			Fu	all capacity				
Cost category	coverage	turnover	1	2	3	4	5	6	7	8	9	10
I. Current asset												
A. A/R	26	10	2,033	2,157	2,280	2,404	2,404	2,404	2,404	2,404	2,404	2,404
B. Inventory												
1. Material inputs	26	10	0	0	0	0	0	0	0	0	0	0
2. Spare parts	90	4	463	463	463	463	463	463	463	463	463	463
3. Service under process	2	130	141	148	156	163	163	163	163	163	163	163
4. servicet ready for delivery	8	32.5	672	702	732	761	761	761	761	761	761	761
C. Cash on hand	90	4	4,610	4,852	5,093	5,335	5,335	5,335	5,335	5,335	5,335	5,335
D. Current assets			7,919	8,322	8,724	9,127	9,127	9,127	9,127	9,127	9,127	9,127
II. Current liabilities A. A/p	26	10	713	810	907	1,004	1,004	1,004	1,004	1,004	1,004	1,004
III. Working capital												
A. Net working capital			7,205	7,512	7,817	8,124	8,124	8,124	8,124	8,124	8,124	8,124
B. Increasing in working capital			7,205	306	306	306	0	0	0	0	0	0

ANNEX VI

PROJECTED NET INCOME STATMENT

Table 15 Projected Net income statement "000"

Period	Star	t up		Full capacity						
Capacity utilization	70 %	80 %	90 %			100 %				
Project year	1	2	3	4	5	6	7	8	9	10
Item description										
Product sales revenue	63,000	72,000	81,000	90,000	90,000	90,000	90,000	90,000	90,000	90,000
Less total production costs	54,197	54,794	55,315	55,754	54,365	53,273	46,574	34,135	32,760	31,227
Gross profit	8,803	17,206	25,685	34,246	35,635	36,727	43,426	55,865	57,240	58,773
Tax	3,081	6,022	8,990	11,986	12,472	12,854	15,199	19,553	20,034	20,571
Net profit	5,722	11,184	16,695	22,260	23,163	23,873	28,227	36,312	37,206	38,202
Accumulated undistributed profit	5,722	16,906	33,601	55,861	79,024	102,896	131,123	167,435	204,641	242,844

CONSULTANT:- SHIBAG MANAGEMENT AND DEVELOPMENT & EIA CONSULTING FIRM

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

Table 16 Debt services schedule and computation

Item description			Project	year						
	1	2	3	4	5	6	7	8	9	10
A. Investment and working capital										
1. Investment										
2. Increment working capital										
Total										
B. Loan receipts and balances										
 Loan receipts 										
2. Outstanding balance at	95,581									
end of year	95,581	90,001	83,780	76,843	69,106	60,484	50,868	40,146	28,191	14,862
a. First year loan										
Total										
A. Debt service										
1. First year Loan										
a. Interest	10,991	10,350	9,635	8,836	7,947	6,955	5,850	4,617	3,242	1,709
b. Repayment of principal	5,580	6,221	6,937	7,734	8,624	9,616	10,722	11,955	13,329	14,862

ANNEX VIII

CASH-FLOW STATEMENT FOR FINANCIAL PLANING

Table 17 Projected Cash flow statement

Period		Start up			Full capacit	y				
Capacity utilization	70%	80%	90%	100%						
Project year	1	2	3	4	5	6	7	8	9	10
Item description										
A. Cash - inflow	200,257	72,403	81,403	90,403	90,000	90,000	90,000	90,000	90,000	90,000
1. Financial resource (total)	137,257	403	403	403						
2. Sales revenue	63,000	72,000	81,000	90,000	90,000	90,000	90,000	90,000	90,000	90,000
B. Cash – outflow	177,238	44,563	48,768	53,000	53,084	53 <i>,</i> 466	55,812	60,166	60,646	61,183
1. Total assets schedule including replacement	137,257	403	403	403						
2. Operating costs	20,329	21,567	22,803	24,041	24,041	24,041	24,041	24,041	24,041	24,041
3. Debt service (total)										
a. Interest	10,991	10,350	9,635	8,836	7,947	6,955	5,850	4,617	3,242	1,709
b. Repayment	5,580	6,221	6,937	7,734	8,624	9,616	10,722	11,955	13,329	14,862
4. Tax	3,081	6,022	8,990	11,986	12,472	12,854	15,199	19,553	20,034	20,571
C. Surplus (Deficit)	23,019	27,840	32,635	37,403	36,916	36,534	34,188	29,834	29,354	28,817
D. Cumulative cash balance	23,019	50,859	83,494	120,897	157,813	194,347	228,535	258,369	287,723	316,540

ANNEX XII TOTAL INVESTMENT COSTS

Table 18 Total investment costs"000"

Period		Start up]	Full capacity					
Project year	1	2	3	4	5	6	7	8	9	10	11	
Investment Category												
1. Fixed investment costs												
a. Initial fixed investment costs	127,339											
b. Replacement												
2. Pre-operational capital expenditure	2,000											
3. Working capital increase	7,205	306	306	306								
Total investment costs	136,544	306	306	306								

ANNEX XIII TOTAL ASSETS

Table 19 Total Assets

Period		Start up					Full capacit	у				
Project year	1	2	3	4	5	6	7	8	9	10	11	12
Investment Category												
1. Fixed investment costs												
c. Initial fixed investment costs	127,339											
 Cost of land 												
d. Replacement												
2. Pre-operational capital expenditure	2,000											
3. Current assets increase	7,919	403	402	403								
Total assets	137,258	403	402	403								

ANNEX XIV SOURCES OF FINANCE

Table 20 Sources of finance

Period		Start up			Full capacity						
Project year	1	2	3	4	5	6	7	8	9	10	Total
Sources of finance											
1. Equity capital	40,963	306	306	306							
2. Loan capital	95,581										
3. Current liabilities	713	97	97	97							
Total finance	137,257	403	403	403							

ANNEX XI SUMMARY OF FINANCIAL EFFECIENCY TESTS

Table 21 Summary of financial efficiency tests

	Project year									
Project year	1	2	3	4	5	6	7	8	9	10
Capacity utilization	70%	80%	90%	100%						
Financial ratio in %										
1. Gross profit : Revenue	14%	24%	32%	38%	40%	41%	48%	62%	64%	65%
2. Net profit : Revenue	9%	16%	21%	25%	26%	27%	31%	40%	41%	42%
3. Net profit : initial investment	6%	12%	17%	23%	24%	25%	29%	38%	39%	40%
4. Net profit : Equity	14%	27%	40%	53%	55%	57%	67%	87%	89%	91%
5. Gross profit : Initial investment	9%	18%	27%	35%	37%	38%	45%	58%	59%	61%
6. Operating costs : Revenue	32%	30%	28%	27%	27%	27%	27%	27%	27%	27%

ANNEX XV CALCULATIONS OF PAYBACK PERIOD

Table 22 Calculation of payback period"000"

	Amou	int Paid Back	Total			
Year	Net Profit	Depreciation	Total	investment	End of year	
	5,722	22,877	28,599	136,544	-107,945	
	11,184	22,877	34,061	306	-74,190	
	16,695	22,877	39,572	306	-34,924	
	22,260	22,877	45,137	306	+9,907	

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

Table 23 Calculation of NPV at 17% D.F."000"

Project	Gross		Present value	Project costs				
year	Revenue	1/(1+i) ⁿ At	at 17%	Total	Operating	Total	Present value	
		17%		investment	costs		at 17%	
1	63,000	0.854701	53,846	136,544	20,329	156,873	134,080	
2	72,000	0.730514	52,597	306	21,567	21,873	15,979	
3	81,000	0.624371	50,574	306	22,803	23,109	14,429	
4	90,000	0.53365	48,029	306	24,041	24,347	12,993	
5	90,000	0.456111	41,050		24,041	24,041	10,965	
6	90,000	0.389839	35,086		24,041	24,041	9,372	
7	90,000	0.333195	29,988		24,041	24,041	8,010	
8	90,000	0.284782	25,630		24,041	24,041	6,846	
9	90,000	0.243404	21,906		24,041	24,041	5,852	
10	90,000	0.208037	18,723		24,041	24,041	5,001	
Total			377,429				223,527	

A. Benefit- cost ratio at 17% D.F. = 1.68

B. NPV at 17% D.F. = 153,902,000 Birr