



Pre-feasibility Study

PRENATAL CENTRE

May 2021

“The figures and financial projections are approximate due to fluctuations in exchange rates, energy costs, and fuel prices etc. Users are advised to focus on understanding essential elements such as production processes and capacities, space, machinery, human resources, and raw material etc. requirements. Project investment, operating costs, and revenues can change daily. For accurate financial calculations, utilize financial calculators on SMEDA's website and consult financial experts to stay current with market conditions.”

Small and Medium Enterprises Development Authority
Ministry of Industries and Production
Government of Pakistan

Table of Contents

1. DISCLAIMER	3
2. EXECUTIVE SUMMARY	4
3. INTRODUCTION TO SMEDA	5
4. PURPOSE OF THE DOCUMENT	5
5. BRIEF DESCRIPTION OF PROJECT & Services	6
5.1. Benefits of Prenatal Care	6
5.2. Process Flow of Prenatal Centre	7
5.3. Concept of Quality in a Prenatal Centre	9
5.4. Installed and Service Capacities	10
6. CRITICAL FACTORS	12
7. GEOGRAPHICAL POTENTIAL FOR INVESTMENT.....	12
8. POTENTIAL TARGET MARKETS.....	12
9. PROJECT COST SUMMARY	14
9.1. Project Economics	14
9.1.1. Financial Feasibility Analysis	14
9.1.2. Financial Feasibility with 50% Debt Financing	14
9.2. Initial Project Cost	15
9.2.1. Land	15
9.2.2. Building.....	16
9.2.3. Machinery and Equipment Requirement	16
9.2.4. Furniture & Fixtures Requirement.....	17
9.2.5. Office Equipment Requirement	18
9.2.6. Office Vehicle Requirement.....	19
9.2.7. Pre-Operating Cost	19
9.2.8. Legal, Licensing, and Training costs	19
9.2.9. Security against Building Rent.....	20
9.3. Breakeven Analysis	20
9.4. Revenue Generation.....	20
9.5. Variable Cost Estimate	21
9.5.1. Direct Labor	21
9.5.2. Cost of Services-Consumables	21
9.6. Fixed Cost Estimate	23
9.7. Human Resource Requirement	24
10. CONTACT DETAILS	25
11. USEFUL LINKS	26
12. ANNEXURES	27

12.1. Income Statement	27
12.2. Balance Sheet.....	28
12.3. Cash Flow Statement	29
13. KEY ASSUMPTIONS.....	30
13.1. Operating Cost Assumptions.....	30
13.2. Revenue Assumptions.....	30
13.3. Financial Assumptions.....	31
13.4. Cash Flow Assumptions.....	31

1. DISCLAIMER

This information memorandum is to introduce the subject matter and provide a general idea and information on the said matter. Although, the material included in this document is based on data / information gathered from various reliable sources; however, it is based upon certain assumptions, which may differ from case to case. The information has been provided on, as is where is basis without any warranties or assertions as to the correctness or soundness thereof. Although, due care and diligence has been taken to compile this document, the contained information may vary due to any change in any of the concerned factors, and the actual results may differ substantially from the presented information. SMEDA, its employees or agents do not assume any liability for any financial or other loss resulting from this memorandum in consequence of undertaking this activity. The contained information does not preclude any further professional advice to be obtained by the user. The prospective user of this memorandum is encouraged to carry out additional diligence and gather any information which is necessary for making an informed decision, including taking professional advice from a qualified consultant / technical expert before taking any decision to act upon the information.

For more information on services offered by SMEDA, please contact our website:

www.smeda.org.pk

Document Control

Document No.	221
Revision	
Prepared by	SMEDA-Punjab
Revision Date	
For information	helpdesk.punjab@smeda.org.pk

2. EXECUTIVE SUMMARY

A Prenatal Centre provides preventive healthcare to pregnant women. Prenatal care is also sometimes known as antenatal care. Healthcare services offered at a Prenatal Centre include carrying out regular medical checkups to monitor the physiological changes going on in the body, suggesting appropriate medication and providing medical opinions on required precautions and lifestyle changes during the pregnancy period. During these check-ups, the patients are also informed about prenatal nutrition including administration of the required vitamins, which prevents the women from potential health problems and improves mother's and child's health throughout the course of the pregnancy. Increasing acceptability of routine prenatal care, including prenatal screening (like ultrasound) and diagnosis, has played a vital role in reducing the frequencies of maternal death, miscarriages, birth defects, low birth weight, neonatal infections (infections of the newborns during the first four weeks of life) and other preventable health problems.

This "Pre-feasibility Document" provides details for setting up Prenatal Care Centre. There is an overall lack of primary healthcare facilities for pregnant women for a large share of population in Pakistan. Increasing awareness about prenatal care to avoid pregnancy complications has led to an increasing demand for prenatal centres; which creates the primary rationale for this project. A prenatal centre may be established in areas of major cities such as Karachi, Lahore, Islamabad, Peshawar, Rawalpindi, Quetta, Faisalabad, Sialkot, Hyderabad, Gujranwala, Multan or any other major city with a large population. In addition to large cities, the project may also be established in smaller cities and towns all over the country where such healthcare facilities, in spite of being in demand, are not very easily available.

The proposed "Pre-Feasibility" has a total investment of PKR 5.08 million. This includes capital investment of PKR 4.47 million and working capital of PKR 0.61 million. This project is financed through 100% equity in which case the Net Present Value (NPV) is PKR 27.36 million with an Internal Rate of Return (IRR) of 77% and a Payback period of 1.90 years. Further, this project is expected to generate Gross Annual Revenues of PKR 11.55 million during first year, Gross Profit (GP) ratio ranging from 53% to 71% and Net Profit (NP) ratio ranging from 7% to 35% during the projection period of 10 years. The proposed project will achieve its estimated breakeven capacity of 36% (4,604 cases) with annual revenue of PKR 8.24 million.

The proposed project may also be established using leveraged financing. At 50% financing at a cost of KIBOR+3%, the proposed prenatal Centre provides Net Present Value (NPV) of PKR 30.63 million, Internal Rate of Return (IRR) of 77% and Payback period of 1.89 years. Further, this project is expected to generate Net Profit (NP) ratio ranging from 5% to 35% during the projection period of ten years. The proposed project will achieve its estimated breakeven point at capacity of 38% (4,935 cases) with annual revenue of PKR 8.83 million.

The proposed project will provide employment opportunities to around 10 people including the owner. The legal business status of this project is proposed as Sole

Proprietorship. This partnership may be established between a potential investor and medical professionals (doctors).

3. INTRODUCTION TO SMEDA

The Small and Medium Enterprises Development Authority (SMEDA) was established in October 1998 with the objective to provide fresh impetus to the economy through development of Small and Medium Enterprises (SMEs).

With a mission "to assist in employment generation and value addition to the national income, through development of the SME sector, by helping increase the number, scale and competitiveness of SMEs", SMEDA has carried out 'sectorial research' to identify policy, access to finance, business development services, strategic initiatives and institutional collaboration and networking initiatives.

Preparation and dissemination of prefeasibility studies in key areas of investment has been a successful hallmark of SME facilitation by SMEDA.

Concurrent to the prefeasibility studies, a broad spectrum of business development services is also offered to the SMEs by SMEDA. These services include identification of experts and consultants and delivery of need-based capacity building programs of different types in addition to business guidance through help desk services.

National Business Development Program for SMEs (NBDP) is a project of SMEDA, funded through Public Sector Development Program of Government of Pakistan.

The NBDP envisages provision of handholding support / business development services to SMEs to promote business startup, improvement of efficiencies in existing SME value chains to make them globally competitive and provide conducive business environment through evidence-based policy-assistance to the Government of Pakistan. The Project is objectively designed to support SMEDA's capacity of providing an effective handholding to SMEs. The proposed program aimed at facilitating around 314,000 SME beneficiaries over a period of five years.

4. PURPOSE OF THE DOCUMENT

The objective of the pre-feasibility study is primarily to facilitate potential entrepreneurs in project identification for investment. The project pre-feasibility may form the basis of an important investment decision and in order to serve this objective, the document/study covers various aspects of project concept development, start-up, and production, marketing, finance and business management.

The purpose of this document is to provide information to the potential investors about "Prenatal Centre" business. The document provides a general understanding

of the business to facilitate potential investors in crucial and effective investment decisions.

The need to come up with pre-feasibility reports for undocumented or minimally documented sectors attain greater imminence as the research that precedes such reports reveal certain thumb rules; best practices developed by existing enterprises by trial and error, and certain industrial norms that become a guiding source regarding various aspects of business set up and its successful management.

Apart from carefully studying the whole document one must consider critical aspects provided later on, which form basis of any investment decision.

Apart from carefully studying the whole document one must consider critical aspects provided later on, which form the basis of any investment decision.

5. BRIEF DESCRIPTION OF PROJECT & SERVICES

This document provides details for establishing a healthcare centre to provide prenatal services to the pregnant women. These services are essential to maintain the health of women and their expected children and to avoid any complications during the course of the pregnancy, till childbirth. Through this preventive healthcare treatment, skilled healthcare personnel educate women about healthy behavior and the necessary precautionary measures during pregnancy and childbirth. The women are also provided social, emotional and psychological support during that critical time in their lives. Through prenatal care, pregnant women are recommended micronutrient supplementation, treatment for hypertension to prevent eclampsia,¹ and immunization against tetanus.

This proposed Prenatal Centre will be run by two qualified gynecologists; each working in two shifts of eight hours. The required machinery and equipment includes one color doppler ultrasound machine, four blood pressure apparatuses, four stethoscopes, one weighing scale, four fetoscopes, six thermometers, two examination lights, two Cusco specula, one instrument sterilizer, four first aid kits, two glucometers and two oxygen cylinders. There will be ten employees in the proposed centre.

5.1. Benefits of Prenatal Care

The availability of routine prenatal care, including prenatal screening and diagnosis, serves the following benefits:

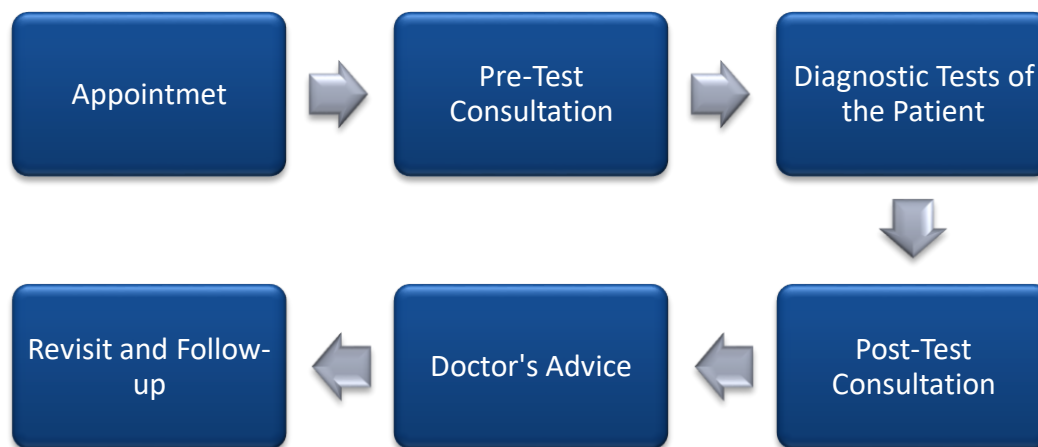
- Reduces the frequency of maternal deaths, miscarriages, etc.
- Reduces risk of complications and defects

¹ Eclampsia is a complication where high blood pressure results in disturbed brain activity.

- Provides accurate nutritional advice to the pregnant woman
- Keeps consistent track of baby's development and growth
- Ensures better health of the mother and baby

5.2. Process Flow of Prenatal Centre

Figure 1: Process Flow of Prenatal Centre



Appointment

In the first step, an appointment is sought by the patients through call or visit to the prenatal center. Patients are given a specific date and time at which they may come for consultation.

Pre-Test Consultation

In pre-test consultation, the consultant doctor/gynecologist meets with the patient and obtains her medical history. Analyzing the condition of the patient, the doctor may recommend any diagnostic tests that are necessary during the course of pregnancy. The patient will get the suggested tests done by a medical diagnostic laboratory.

Diagnostic Tests

Following are the common tests that may be recommended during the course of pregnancy:

- **Glucose:** A glucose screening test is a routine test during pregnancy that checks a pregnant woman's blood glucose (sugar) level. Gestational diabetes is high blood sugar (diabetes) that starts or is found during pregnancy.

- **Fetal Monitoring:** Using a handheld Doppler device to listen to the fetal heartbeat is the most basic type of fetal monitoring. This is often done during prenatal visits to count the fetal heart rate. Fetal monitoring may also help show problems in the baby during late pregnancy and labor.
- **Genetic Screening:** It is a type of medical test that identifies changes in chromosomes, genes, or proteins. The results of a genetic test can confirm or rule out a suspected genetic condition or help determine a person's chance of developing or passing on a genetic disorder.
- **First Trimester Screening:**² First trimester screening is a prenatal test that offers early information about a baby's risk of certain chromosomal conditions, specifically, down syndrome (trisomy 21) and extra sequences of chromosome 18 (trisomy 18). First trimester screening is done between weeks 11 and 14 of pregnancy.
- **Second Trimester Screening:** It is also known as maternal serum screening, or the multiple marker test. This test measures several substances in the blood of a pregnant woman. The results can be used to determine the baby's susceptibility to risk of a chromosome disorder or neural tube defect such as spina bifida.
- **Ultrasound:** Ultrasound (also called sonogram) is a prenatal test offered to most pregnant women. It uses sound waves to show a picture of baby in the uterus (womb). Ultrasound helps the healthcare provider to check on baby's health and development and identify any existing or potential problem.

Figure 2 Ultrasound



² A pregnancy is divided into trimesters. 1st trimester is from 1st till 12th week, 2nd trimester from 13 till 26th week and 3rd are from 27th till the end of pregnancy

Post-Test Consultation

After the conduction of the tests, the patient shows the test results to the consultant doctor/gynecologist in another meeting. The doctor communicates the implications of the test results to the patient in detail.

Doctor's Advice

The doctor forms an opinion on the basis of the patient's condition and the test results and provides advice to the patient; including her recommendations on food and supplements, necessary medication and physical activities to keep the expected mother physically fit and healthy.

Revisit and Follow-Up

After few weeks, the patients are scheduled to visit the Prenatal Centre again for follow-up. The consultant doctor/gynecologist checks for any complexities in the pregnancy. The doctor ensures that health of the mother and child is fine and the development of the baby is normal.

5.3. Concept of Quality in a Prenatal Centre

Quality of a healthcare centre is generally measured in terms of the following three parameters.

Technical Quality: This is associated with the clinical aspects of healthcare as reflected by service providers' qualification, skills, experience, processes, outcomes and shows how well the gynecologists/consultants dealt with the specific condition. Usage of modern machinery and latest equipment is a significant part of technical aspects of services.

Customer Active Participation: For better results of prenatal care and to avoid pregnancy complexities, the gynecologists/consultant's needs to ensure an active participation of the patient. For this purpose, gynecologists/consultant's educate patient on the importance of prenatal services for mother and the expected baby. The doctor has to communicate with the patient in a manner, that builds the patient's confidence on doctor's advice. Thus, using this comfort level the gynecologists/ briefs the patient about her medical conditions and guide her to enable her taking timely decisions. It will be up to doctor to convince the patient to take her medicines regularly and also to undergo regular tests as per the need.

Service Quality: The prenatal center needs to ensure consistent provision of quality services. The quality of services includes the following aspects:

- The patient can easily access the doctor, whenever they need any advice.
- Patient is able to communicate all her concerns to the doctor openly.
- Hygiene is a very important factor in delivery of quality prenatal services. Hygiene will directly impact the life of the patient and the expected baby. Any

shortcoming may result in causing diseases and infections in the patient. All the direct and indirect medical equipment and medical linens used in prenatal centers should be sterilized before and after use. Thus, maintaining hygiene should be the top priority of the prenatal center Regular feedback is obtained from the customer to ensure service quality.

- The behavior of support paramedic and administration staff is monitored to ensure that they remain helpful and friendly with the patients.

5.4. Installed and Service Capacities

The proposed center will have maximum capacity of serving 16,950 patients in a year. It is assumed to deal with 6,357 cases in the first year of operations. The operational capacity is assumed to increase at the rate of 10% per annum to reach a maximum of 90% in year 4. Table 1, Table 2 and Table 3 shows details of maximum annual capacity and operational capacity utilized during first year of operations.

Table 1: Service Capacity

Personnel	Status	No of doctors	No. of hours per doctor per day	Maximum Operational Hours Per Day (A)	Annual Working Days (B)	Maximum Operational Hours Per Year C=(A*B)
Doctor (Gynaecologist)	Full Time	2	8	16	280	4,480

Table 2: Service Capacity

Visitors	Ratio of cases	Annual Working Hours	Hours Available per annum	Minutes available per year	Time per Case (minutes)	Cases handled per year
Cases for Ultrasound & Check-up	40%	4,480	1,792	107,520	40	2,688
Cases for Check-up only	60%		2,688	161,280	20	8,064
Total						10,752

Table 3: Service Capacity

Description	Total Annual Case	Annual Visit @ 60% Capacity	% Of Cases for intravenous Drip	Total Annual Capacity
Intravenous drip	10,752	6,451	20%	1,290

6. CRITICAL FACTORS

Before making the decision to invest in Prenatal Clinic business, one should carefully analyze the associated risk factors. The important considerations in this regard include:

- Engagement of reputed gynecologists, consultants and nutritionists
- Employment of trained and professional paramedical staff
- Maintenance of high standards of patients' care
- Classification of patients into normal or high risk
- Compliance with the standards of hygiene
- Usage of modern, reliable medical equipment
- Arrangement of skillful operators of the machines
- Courteous administration staff for customer satisfaction
- Accurate maintenance of patients' records
- Regular feedback and follow ups of the patients
- Uninterrupted supply of electricity

7. GEOGRAPHICAL POTENTIAL FOR INVESTMENT

There is an overall lack of primary healthcare facilities for pregnant women for a large share of population in Pakistan. Increasing awareness about prenatal care to avoid pregnancy complications has led to an increasing demand for prenatal centres; which creates the primary rationale for this project. A prenatal centre may be established in major cities such as Karachi, Lahore, Islamabad, Peshawar, Rawalpindi, Quetta, Faisalabad, Sialkot, Hyderabad, Gujranwala, Multan or any other major city with a large population. In addition to large cities, the project may also be established in smaller cities and towns all over the country where such healthcare facilities, in spite of being in demand, are not very easily available.

It is worth mentioning here that government of Punjab provides interest free loan to the medical professionals to purchase medical equipment and machinery. The amount of loan ranges between 2.5 million to 5 million; depending upon the specific need of any applicant. The loan is payable in 8 years.³

8. POTENTIAL TARGET MARKETS

The potential target market includes pregnant women. The need for prenatal care starts from the first day pregnancy and lasts till the baby is delivered. Urban

³ https://phf.punjab.gov.pk/scheme_iii

educated women opt to get the services of prenatal center to have regular checkups and seek medical advice to avoid complexities in pregnancy.

According to macrotrends⁴ statistics, the current birth rate for Pakistan in 2021 is 27.034 births per 1,000 people.

According to UNICEF, the lowest levels of prenatal care are observed in South Asia where Pakistan is situated. Therefore, establishing more prenatal centers would benefit the potential investors since there is a demand-supply gap in the market.

According to Ministry of National Health Services, 37% of pregnant female women visit prenatal center four or more times during their pregnancy.

Figure 3 shows the current situation of pregnant women visiting parental center in different provinces.

Figure 3: Provincial Comparison of Number of Visits to Prenatal Centre

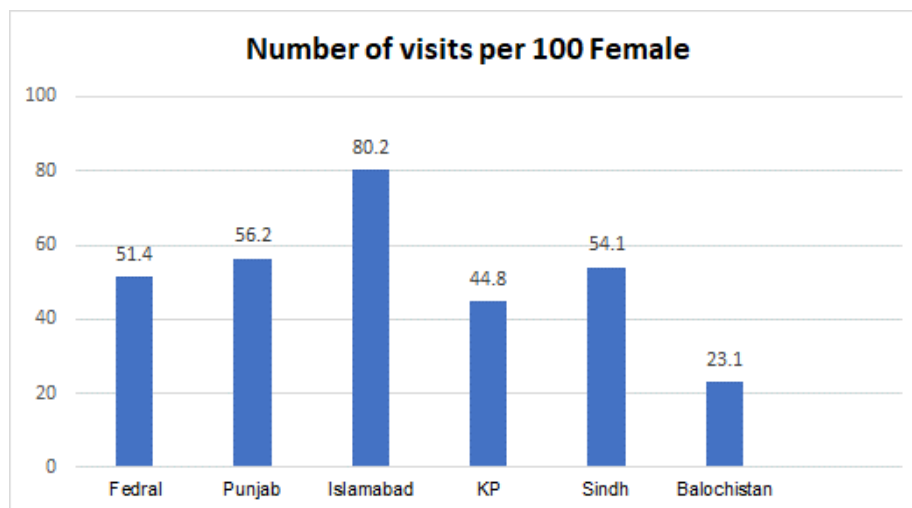
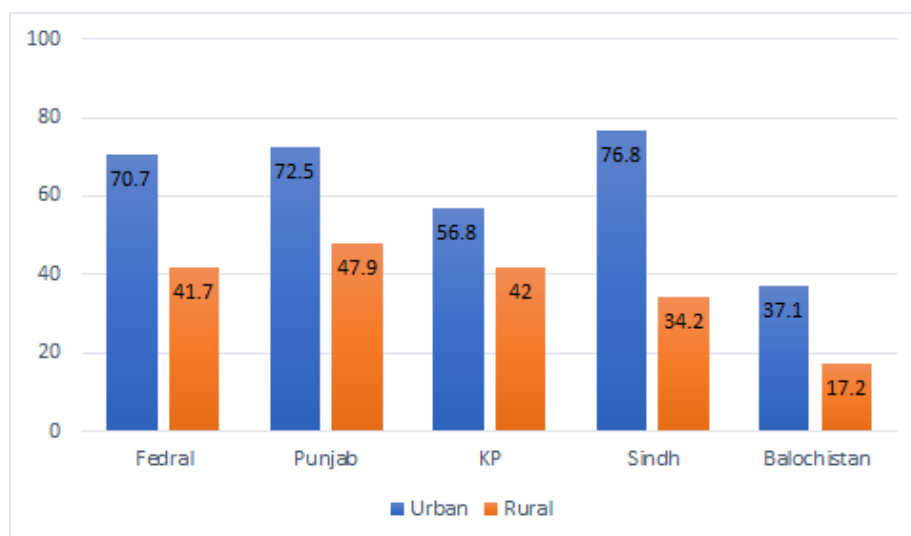


Figure 4: Urban/Rural Comparison of Visits to Prenatal Centre



⁴ <https://www.macrotrends.net/countries/PAK/pakistan/birth-rate>

Figure 4 shows the number of visits to parental center by pregnant women in urban and rural areas of Pakistan.

9. PROJECT COST SUMMARY

A detailed financial model has been developed to analyze the commercial viability of the Prenatal Centre. Various costs and revenue related assumptions along with results of the analysis are outlined in this section.

The projected Income Statement, Cash Flow Statement and Balance Sheet are attached as annexure of this document.

All the figures in this financial model have been calculated after carefully taking into account the relevant assumptions and target market.

9.1. Project Economics

9.1.1. Financial Feasibility Analysis

The financial feasibility analysis provides the information regarding projected Internal Rate of Return (IRR), Net Present Value (NPV) and Payback period of the study, which is shown in Table 4.

Table 4: Financial Feasibility Analysis

Description	Project
IRR	77%
NPV (PKR)	27,368,964
Payback Period (years)	1.90
Projection Years	10
Discount Rate used for NPV	15%

9.1.2. Financial Feasibility with 50% Debt Financing

The financial feasibility analysis provides the information regarding projected IRR, NPV and payback period of the study on the basis of Debt: Equity Model (50:50), which is shown in Table 5.

Table 5: Financial Feasibility Debt Financing

Description	Project
IRR	77%
NPV (PKR)	30,628,873
Payback Period (years)	1.89
Projection Years	10
Discount Rate used for NPV	13%

9.2. Initial Project Cost

Table 6 provides fixed and working capital requirements for establishment and operations of the Prenatal Centre business.

Table 6: Project Cost

Description of Costs	Amount (PKR)
Land	-
Building Renovation Costs	305,250
Machinery & Equipment	1,466,000
Furniture & Fixtures	799,000
Office Equipment	997,000
Office Vehicles	80,800
Pre-operating Costs	616,007
Legal, licensing and Training Cost	6,000
Advance Rent / Security	201,000
Total Capital Cost	4,471,057
Working Capital	
Equipment spare part inventory	12,217
Consumable material inventory	28,467
Upfront building rent	67,000
Cash	500,000
Working Capital Requirement	607,683
Total Project Cost	5,078,741

9.2.1. Land

The prenatal center will be established in a rented building to avoid the high cost of land. Suitable location for setting up a healthcare business like this can be easily found on rent. Therefore, no land cost has been added to the project cost. Total space requirement for the proposed center has been estimated as 1,125 sq. feet. The breakup of the space requirement is provided in Table 7.

Table 7: Breakup of Space Requirement

Area Description	Area (sq. ft.)	% Break-Up
Covered Area		
Doctor's Room	165	15%
Patients' ward	240	21%

Record room	80	7%
Reception	120	11%
Admin. & Finance	100	9%
Kitchen	80	7%
Waiting Area	240	21%
Washroom	100	9%
Total Area	1,125	100%

9.2.2. Building

There will be no cost of building construction since the center will be started in rented premises. However, there will be a renovation cost required to make the building usable for the business. The proposed project requires electricity load of 5-6 KW for which an electricity connection under the General Supply Tariff-Commercial single phase will be required. Building rent of PKR 67,000 per month has been included in the operating cost. Building renovation cost is shown in

Table 8.

Table 8: Building Renovation Cost

Cost Item	Unit of Measurement	Total Liter / Area / Number	Unit Cost/ sq. ft. (PKR)	Total Cost (PKR)
Paint Cost	Litre	113	500	56,250
Labour Cost	Feet	11,250	8	90,000
Wall Racks	Units	8	15,000	120,000
Curtains	Units	7	5,000	35,000
Blinds	Units	2	2,000	4,000
Total				305,250

9.2.3. Machinery and Equipment Requirement

Table 9 provides details of machinery and equipment required for establishing Prenatal Centre.

Table 9: Machinery and Equipment Requirement

Cost Item	Unit(s)	Unit Cost (PKR)	Total Cost (PKR)
Color Doppler Ultrasound Machine (19" LCD Monitor)	1	1,000,000	1,000,000

Blood Pressure Apparatus	4	20,000	80,000
Stethoscope	4	15,000	60,000
Weighing scale	1	30,000	30,000
Fetoscope	4	15,000	60,000
Thermometer	6	1,000	6,000
Examination light	2	3,000	6,000
Cusco Speculum	2	2,000	4,000
Instrument Sterilizer	1	25,000	25,000
First aid kits	4	15,000	60,000
Glucometers	2	5,000	10,000
Oxygen cylinders	2	20,000	40,000
Medical Oxygen Concentrator	1	85,000	85,000
Total Cost			1,466,000

9.2.4. Furniture & Fixtures Requirement

Table 10 provides details of the furniture and fixture requirement of the project.

Table 10: Furniture and Fixtures Requirement

Cost Item	No.	Unit Cost (PKR)	Total Cost (PKR)
Executive Tables	1	30,000	30,000
Executive Chairs	1	20,000	20,000
Staff Tables	2	25,000	50,000
Reception Counter	1	40,000	40,000
Staff Chairs	8	10,000	80,000
Sofa Sets	3	35,000	105,000
Table for Guests	2	15,000	30,000
Patient Bed	4	18,000	72,000
Bedside locker	2	7,500	15,000
Mattress	4	5,000	20,000
Stretcher trolley	2	15,000	30,000
IV Stand with plastic wheel	4	4,500	18,000
Over Bed Table with Spring KY-E2 China	4	8,000	32,000

Examination couch	2	7,000	14,000
Examination trolley	2	10,000	20,000
Waiting lobby bench 3-seater	4	15,000	60,000
Ward screen 4-Fold	4	5,000	20,000
Patient Stool Steel	2	3,500	7,000
Fixture for Record Room	3	30,000	90,000
Wheelchairs	2	15,000	30,000
Waste Bin	6	2,000	12,000
Bed Pan	4	1,000	4,000
Total			799,000

9.2.5. Office Equipment Requirement

Details of office equipment required for the project is provided in Table 11.

Table 11: Office Equipment Requirement

Cost Item	Units	Unit Cost (PKR)	Total Cost (PKR)
Air Conditioners	4	90,000	360,000
Laptop / Computer	4	80,000	320,000
Printer	2	40,000	80,000
Water Dispenser	2	20,000	40,000
LED / LCD 32"	2	40,000	80,000
Security Cameras/2 MP	4	2,000	8,000
Digital Video Recorder (DVR)	1	12,000	12,000
Fridge	1	60,000	60,000
Invertor (for UPS)	1	7,000	7,000
Batteries (for UPS)	2	15,000	30,000
Total Cost			997,000

9.2.6. Office Vehicle Requirement

Details of office vehicle required for the project is provided in Table 12.

Table 12: Office Vehicle Requirement

Cost Item	Unit(s)	Unit Cost (PKR)	Registration fee @ 1%	Total Cost (PKR)
Motorcycle	1	80,000	800	80,800
Total Cost				80,800

9.2.7. Pre-Operating Cost

Details of pre-operating cost for the project are provided in Table 13.

Table 13: Pre-Operating Cost

Cost Item	Total Cost (PKR)
Administrative expense	542,000
Utilities exp.	74,007
Total (PKR)	616,007

9.2.8. Legal, Licensing, and Training costs

Details of legal and licensing cost for the project are provided in Table 14.

Table 14: Legal and Licensing Cost

Cost Item	Useful Life	Total Cost (PKR)
Punjab Health Care commissions (Provincial Body)	5 Years	5,000
Pakistan Medical and Dental Council (Federal Body)	5 Years	1,000
Total (PKR)		6,000

For the purpose of this study, we are only taking licenses fee that is applicable in province of Punjab. The details of authorities for registering prenatal center of other provinces are as under

- Khyber Pakhtunkhwa Healthcare Commission (KP-HCC)
- Sindh Healthcare Commission (SHC)
- Balochistan Hospital/Clinics Regulatory Authority
- Health department Azad Jammu and Kashmir (AJ&K)

- Health department Gilgit-Baltistan (GB)

9.2.9. Security against Building Rent

Details of security against building rent for the project are provided in Table 15.

Table 15: Security against Building Rent

Cost Item	Months	Unit Cos/Month (PKR)	Total Cost (PKR)
Security against Building Rent	3	67,000	201,000

9.3. Breakeven Analysis

Breakeven analysis is provided in Table 16.

Table 16: Breakeven Analysis

Particulars	Amount First Year (PKR)	Ratios
Sales	11,547,600	100%
Variable Cost	5,885,145	51%
Contribution	5,662,455	49%
Fixed Cost	4,040,749	35%
Breakeven		
Breakeven (Cases)		4,604
Breakeven Revenue		8,240,410
Breakeven Capacity		36%

9.4. Revenue Generation

Table 17 provides details for revenue generation of the Prenatal Centre during the first year of operations, based on 60% capacity utilization.

Table 17: Revenue Generation

Services	Annual Capacity @ 100%	Current Operational Capacity per Year @60%	Charges per Patient (PKR)	Revenue per Year (PKR)
Check up & Ultrasound	2,688	1,613	2,500	4,032,000
Check up only	8,064	4,838	1,500	7,257,600
Intravenous drip	2,150	1,290	200	258,000

Total				11,547,600
--------------	--	--	--	-------------------

9.5. Variable Cost Estimate

Variable costs of the project have been provided in detail in Table 18.

Table 18: Variable Cost Estimate

Description of Costs	Total Cost (PKR)
Direct Labor	4,200,000
Cost of goods sold 1- Consumables	341,600
Utilities	791,825
Operating costs- Machinery Maintenance	146,600
Travelling expense	91,200
Communications expense (phone, mail, internet, etc.)	91,200
Office vehicles maintenance	40,320
Office expenses (stationery, entertainment etc.)	182,400
Total Variable Cost (PKR)	5,885,145

9.5.1. Direct Labor

Details of direct labor cost is provided in Table 19.

Table 19: Direct Labor

Post	No of personnel	Monthly Salary (PKR)	Annual Salary (PKR)
Gynecologists	2	85,000	2,040,000
Nurses	4	35,000	1,680,000
Doctor's Attendants	2	20,000	480,000
Total Direct Labor (PKR)			4,200,000

9.5.2. Cost of Services-Consumables

Cost of services will mainly include the cost of consumables. The details of consumables cost is provided in Table 20.

Table 20: Cost of Services-Consumables

Description of Costs	Amount (PKR)
Latex gloves (100 piece)	24,000

Polythene gloves (100 piece)	10,000
Ultrasonic Gel	12,000
Bed sheets	40,000
Test Kits	60,000
Tissue papers	15,000
Tissue rolls	15,000
Soaps	10,000
Detergents	10,000
Insecticides	5,000
Hygiene chemicals (phenyl)	15,000
Sanitizers	15,000
Air Freshners	5,000
Cotton Rolls	10,000
Bandages	15,000
Doctors Prescription Pads	30,000
Towels	15,000
Pillows	5,000
General Purpose Medicines	30,600
Total (PKR)	341,600

Operating costs of machinery maintenance is provided in Table 21. It has been assumed 10% of total machinery cost.

Table 21: Operating costs Machinery Maintenance

Cost Item	Machinery Cost	Rate	Total Cost (PKR)
Maintenance Cost	1,466,000	10%	146,600
Total (PKR)			146,600

Table 22: Variable cost Assumptions

Description of Costs	Rate	Rationale
Travelling expense	5%	of administration expense
Communications expense (phone, fax, mail, internet, etc.)	5%	of administration expense
Office vehicles maintenance	1%	of revenue
Office expenses (stationery, entertainment, janitorial services, etc.)	10%	of administration expense

9.6. Fixed Cost Estimate

Details of fixed cost for the project are provided in Table 23.

Table 23: Fixed Cost Estimate

Description of Costs	Amount (PKR)
Management Staff	1,824,000
Administration benefits expense	602,400
Building rental expense	804,000
Utilities	96,264
Promotional expense	57,738
Depreciation expense	531,945
Amortization of pre-operating costs	123,201
Amortization of legal, licensing, and training costs	1,200
Total Fixed Cost	4,040,749

9.7. Human Resource Requirement

For the 1st year of operations, the human resource requirements are projected in Table 24.

Table 24: Human Resource Requirement

Post	No.of Employees	Monthly Salary (PKR)	Annual Salary (PKR)
Gynecologist	2	85,000	2,040,000
Nurses	4	35,000	1,680,000
Receptionist	1	22,000	264,000
Accounts and Admin Officer	1	30,000	360,000
Office Boy	1	20,000	240,000
Security Staff	2	20,000	480,000
Doctor's Attendant	1	20,000	480,000
Janitorial staff	2	20,000	480,000
Total			6,024,000

10. CONTACT DETAILS

Details of suppliers of Machinery and Equipment are provided in Table 25.

Table 25: Contact Details

Name of Supplier/Manufacturer	Address	Contacts
STRONGMAN	95, Sharah-e-Quaideen Service Rd, G Block 2 Block 2 PECHS, Karachi	021-34541432
Megmedius - Medical Products & Equipment Karachi	Khayaban-e-Iqbal Flyover, Block 8 Frere Town, Karachi	0332-3516401
Al Ghani Medical and Surgical	Plot No 3, behind Pakistan Mint, Mushtaq Colony Pakistan Mint Colony, Lahore	0321-6557789
Zelin Medical Systems Global Health Care	Midway Commercial Plaza No.20 Back Side Prism Arcade 2 Bahria Town, Phase 7 Rawalpindi, Islamabad Capital Territory	051-5172354
BIOMAX International	Green View Rd, adjacent Hotel Prime view, Akbarabad, Faisalabad	0321-7576600
Noorani Surgical	Noorani Mansion, Bank Square, Nila Gumbad, Lahore	042-37234000
Noorani Surgical	Rafiq Plaza, Lucky Star, Saddar Karachi	021-35643461-2

11. USEFUL LINKS

Table 26: Useful Links

Name of Organization	E-mail Address
Small and Medium Enterprises Development Authority (SMEDA)	www.smeda.org.pk
National Business Development Program (NBDP)	www.nbdp.org.pk
Ministry of National Health Services Regulations and Coordination	www.nhsrsc.gov.pk
Mid City Hospital	www.midcityhospital.com
Specialized Healthcare & Medical Education Department	health.punjab.gov.pk/
Health Department Khyber Pakhtunkhwa	www.healthkp.gov.pk/
Health Department Government of Sindh	www.sindhhealth.gov.pk/
Health Department Government of Balochistan	www.balochistan.gov.pk/
Health Department AJ&K	www.health.ajk.gov.pk/
Punjab Healthcare Commission (PHC)	https://www.phc.org.pk/
Khyber Pakhtunkhwa Healthcare Commission (KP-HCC)	http://hcc.kp.gov.pk/
Sindh Healthcare Commission (SHC)	http://shcc.org.pk/
Pakistan Institute of Medical Sciences	www.pims.gov.pk
Pakistan Medical Commission	www.pmc.gov.pk
Society of Obstetricians and Gynaecologists of Pakistan	www.sogp.org
Pakistan Demographic & Health (PDHS) Survey	www.nhsrsc.pk
Pakistan Bureau of Statistics	www.pbs.gov.pk/

12. ANNEXURES

12.1. Income Statement

Income Statement										
	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Revenue	11,547,600	14,590,393	18,058,737	22,002,314	23,828,506	25,806,272	27,948,193	30,267,893	32,780,128	35,500,879
<i>Cost of sales</i>										
Cost of goods sold 1- Consumables	341,600	431,612	534,212	650,870	704,893	763,399	826,761	895,382	969,699	1,050,184
Utilities	791,825	797,485	803,643	810,344	817,633	825,565	834,194	843,583	853,797	864,911
Direct Labor	4,200,000	4,506,600	4,835,582	5,188,579	5,567,346	5,973,762	6,409,846	6,877,765	7,379,842	7,918,571
Operating costs- Machinery Maintenance	146,600	185,229	229,261	279,326	302,510	327,618	354,810	384,259	416,153	450,694
Total cost of sales	5,480,025	5,920,926	6,402,698	6,929,119	7,392,381	7,890,343	8,425,611	9,000,989	9,619,491	10,284,359
Gross Profit	6,067,575	8,669,467	11,656,040	15,073,195	16,436,125	17,915,929	19,522,582	21,266,904	23,160,637	25,216,520
<i>General administration & selling expenses</i>										
Management Staff	1,824,000	1,957,152	2,100,024	2,253,326	2,417,819	2,594,319	2,783,705	2,986,915	3,204,960	3,438,922
Administration benefits expense	602,400	646,375	693,561	744,191	798,516	856,808	919,355	986,468	1,058,480	1,135,749
Building rental expense	804,000	884,400	972,840	1,070,124	1,177,136	1,294,850	1,424,335	1,566,769	1,723,445	1,895,790
Pre-operating expense	616,007									
Utilities	96,264	96,952	97,701	98,515	99,402	100,366	101,415	102,556	103,798	105,149
Travelling expense	91,200	97,858	105,001	112,666	120,891	129,716	139,185	149,346	160,248	171,946
Communications expense (phone, fax, mail, internet, etc.)	91,200	97,858	105,001	112,666	120,891	129,716	139,185	149,346	160,248	171,946
Office vehicles running expense	40,320	43,667	47,291	51,216	55,467	60,071	65,057	70,684	76,456	82,356
Office expenses (stationery, entertainment, etc.)	182,400	195,715	210,002	225,333	241,782	259,432	278,370	298,692	320,496	343,892
Promotional expense	57,738	72,952	90,294	110,012	119,143	129,031	139,741	151,339	163,901	177,504
Depreciation expense	531,945	531,945	531,945	531,945	531,945	531,945	364,805	881,767	881,767	881,767
Amortization of pre-operating costs	123,201	123,201	123,201	123,201	123,201	-	-	-	-	-
Amortization of legal, licensing, and training costs	1,200	1,200	1,200	1,200	1,200	1,763	1,763	1,763	1,763	1,763
Subtotal	5,061,876	4,749,275	5,078,061	5,434,395	5,807,393	6,088,018	6,356,917	7,380,645	7,893,563	8,448,386
Operating Income	1,005,699	3,920,192	6,577,978	9,638,800	10,628,732	11,827,912	13,165,665	13,886,258	15,267,074	16,768,134
Gain / (loss) on sale of machinery & equipment	-	-	-	-	-	-	366,500	-	-	-
Gain / (loss) on sale of office equipment	-	-	-	-	-	-	249,250	-	-	-
Gain / (loss) on sale of office vehicles	-	-	-	-	-	-	20,200	-	-	-
Earnings Before Interest & Taxes	1,005,699	3,920,192	6,577,978	9,638,800	10,628,732	11,827,912	13,801,615	13,886,258	15,267,074	16,768,134
Subtotal	-	-	-	-	-	-	-	-	-	-
Earnings Before Tax	1,005,699	3,920,192	6,577,978	9,638,800	10,628,732	11,827,912	13,801,615	13,886,258	15,267,074	16,768,134
Tax	144,345	600,048	1,422,292	2,493,579	2,840,056	3,259,768	3,950,565	3,980,190	4,463,475	4,988,846
NET PROFIT/(LOSS) AFTER TAX	861,354	3,320,144	5,155,686	7,145,221	7,788,677	8,568,143	9,851,050	9,906,069	10,803,599	11,779,288

12.2. Balance Sheet

Calculations	SMEDA										
Balance Sheet											
	Year 0	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Assets											
<i>Current assets</i>											
Cash & Bank	500,000	1,601,976	3,681,008	5,950,501	8,401,094	10,251,029	11,758,205	16,265,291	27,013,798	38,653,449	51,723,416
Equipment spare part inventory	12,217	16,671	22,284	29,322	34,297	40,115	46,920	54,879	64,189	75,078	-
Consumable material inventory	28,467	38,953	52,214	68,897	80,808	94,779	111,165	130,385	152,927	179,366	-
Pre-paid building rent	67,000	73,700	81,070	89,177	98,095	107,904	118,695	130,564	143,620	157,982	-
Total Current Assets	607,683	1,731,300	3,836,577	6,137,897	8,614,294	10,493,827	12,034,985	16,581,119	27,374,535	39,065,876	51,723,416
<i>Fixed assets</i>											
Building/Infrastructure	305,250	274,725	244,200	213,675	183,150	152,625	122,100	91,575	61,050	30,525	-
Machinery & equipment	1,466,000	1,246,100	1,026,200	806,300	586,400	366,500	146,600	2,512,466	2,135,596	1,758,726	1,381,857
Furniture & fixtures	799,000	679,150	559,300	439,450	319,600	199,750	79,900	1,289,192	1,095,813	902,434	709,055
Office vehicles	80,800	68,680	56,560	44,440	32,320	20,200	8,080	164,606	139,915	115,224	90,533
Office equipment	997,000	847,450	697,900	548,350	398,800	249,250	99,700	1,708,683	1,452,380	1,196,078	939,776
Security against building	201,000	201,000	201,000	201,000	201,000	201,000	201,000	201,000	201,000	201,000	201,000
Total Fixed Assets	3,849,050	3,317,105	2,785,160	2,253,215	1,721,270	1,189,325	657,380	5,967,522	5,085,755	4,203,988	3,322,221
<i>Intangible assets</i>											
Pre-operation costs	616,007	492,806	369,604	246,403	123,201	-	-	-	-	-	-
Legal, licensing, & training costs	6,000	4,800	3,600	2,400	1,200	8,816	7,053	5,290	3,526	1,763	1,763
Total Intangible Assets	622,007	497,606	373,204	248,803	124,401	8,816	7,053	5,290	3,526	1,763	1,763
TOTAL ASSETS	5,078,741	5,546,011	6,994,941	8,639,915	10,459,965	11,691,968	12,699,418	22,553,930	32,463,816	43,271,627	55,047,400
Liabilities & Shareholders' Equity											
<i>Current liabilities</i>											
Accounts payable	-	36,593	40,790	45,626	50,840	53,697	56,840	60,302	64,119	68,331	64,816
Total Current Liabilities	-	36,593	40,790	45,626	50,840	53,697	56,840	60,302	64,119	68,331	64,816
<i>Other liabilities</i>											
Total Long Term Liabilities	-	-	-	-	-	-	-	-	-	-	-
<i>Shareholders' equity</i>											
Paid-up capital	5,078,741	5,078,741	5,078,741	5,078,741	5,078,741	5,078,741	5,078,741	5,078,741	5,078,741	5,078,741	5,078,741
Retained earnings	-	430,677	1,875,411	3,515,548	5,330,385	6,559,531	7,563,837	17,414,887	27,320,956	38,124,555	49,903,843
Total Equity	5,078,741	5,509,418	6,954,151	8,594,289	10,409,125	11,638,271	12,642,578	22,493,628	32,399,697	43,203,296	54,982,583
TOTAL CAPITAL AND LIABILITIES	5,078,741	5,546,011	6,994,941	8,639,915	10,459,965	11,691,968	12,699,418	22,553,930	32,463,816	43,271,627	55,047,400

12.3. Cash Flow Statement

Calculations	SMEDA										
Cash Flow Statement											
	Year 0	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
<i>Operating activities</i>											
Net profit		861,354	3,320,144	5,155,686	7,145,221	7,788,677	8,568,143	9,851,050	9,906,069	10,803,599	11,779,288
Add: depreciation expense		531,945	531,945	531,945	531,945	531,945	531,945	364,805	881,767	881,767	881,767
amortization of pre-operating costs		123,201	123,201	123,201	123,201	123,201	-	-	-	-	-
amortization of training costs		1,200	1,200	1,200	1,200	1,200	1,763	1,763	1,763	1,763	1,763
Equipment inventory	(12,217)	(4,454)	(5,614)	(7,038)	(4,974)	(5,818)	(6,805)	(7,959)	(9,310)	(10,889)	75,078
Raw material inventory	(28,467)	(10,486)	(13,261)	(16,682)	(11,911)	(13,971)	(16,386)	(19,219)	(22,542)	(26,439)	178,220
Pre-paid building rent	(67,000)	(6,700)	(7,370)	(8,107)	(8,918)	(9,809)	(10,790)	(11,869)	(13,056)	(14,362)	157,982
Accounts payable		36,593	4,197	4,836	5,214	2,857	3,143	3,462	3,817	4,212	(3,515)
Other liabilities		-	-	-	-	-	-	-	-	-	-
Cash provided by operations	(107,683)	1,532,653	3,954,442	5,785,041	7,780,978	8,418,282	9,071,013	10,182,032	10,748,507	11,639,651	13,070,583
<i>Financing activities</i>											
Issuance of shares	5,078,741	-	-	-	-	-	-	-	-	-	-
Purchase of (treasury) shares											
Cash provided by / (used for) financing activities	5,078,741	-	-	-	-	-	-	-	-	-	-
<i>Investing activities</i>											
Capital expenditure	(4,471,057)	-	-	-	-	(8,816)	-	(5,674,947)	-	-	-
Acquisitions											
Cash (used for) / provided by investing activities	(4,471,057)	-	-	-	-	(8,816)	-	(5,674,947)	-	-	-
NET CASH	500,000	1,532,653	3,954,442	5,785,041	7,780,978	8,409,466	9,071,013	4,507,086	10,748,507	11,639,651	13,070,583

13. KEY ASSUMPTIONS

13.1. Operating Cost Assumptions

Table 27: Economic Rates

Economic Rates	2020	2019	2018	Average
Inflation rate	11.2%	8.1%	5.6%	8.3%
Electricity growth rate	7.1%	14.3%	4.9%	8.8%
Water price growth rate	7.1%	14.3%	4.9%	8.8%
Gas price growth rate	7.1%	14.3%	4.9%	8.8%
Wage growth rate	11.2%	7.0%	3.8%	7.3%
Office equipment price growth rate	13.9%	6.7%	3.4%	8.0%
Office vehicles price growth rate	13.6%	8.1%	10.3%	10.7%

Source: Economic Survey of Pakistan

Table 28: Operating Cost Assumptions

Description	Details
Building rent growth rate	10%
Furniture and fixture depreciation	15%
Vehicle depreciation	15%
Office equipment depreciation	15%
Inflation rate	8.3%
Wage growth rate	7.3%
Electricity price growth rate	8.8%
Office equipment price growth rate	8.0%
Office vehicle price growth rate	10.7%

13.2. Revenue Assumptions

Table 29: Revenue Assumptions

Description	Details
Sale price growth rate	8.3%
Initial capacity utilization	60%
Capacity growth rate	10%
Maximum capacity utilization	90%

13.3. Financial Assumptions**Table 30: Financial Assumptions**

Description	Details
Project life (Years)	10
Debt: Equity	0:100
Discount Rate used for NPV (100% Equity)	15%
Discount Rate used for NPV(50:50 Debt: Equity)	13%

13.4. Cash Flow Assumptions**Table 31: Cash Flow Assumptions**

Description	Details
Accounts receivable cycle (in days)	-
Accounts payable cycle (in days)	10

Small and Medium Enterprises Development Authority

HEAD OFFICE

4th Floor, Building No. 3, Aiwan-e-Iqbal Complex, Egerton Road, Lahore
Tel: (92 42) 111 111 456, Fax: (92 42) 36304926-7

www.smeda.org.pk, helpdesk@smeda.org.pk

REGIONAL OFFICE PUNJAB	REGIONAL OFFICE SINDH	REGIONAL OFFICE KPK	REGIONAL OFFICE BALOCHISTAN
3 rd Floor, Building No. 3, Aiwan-e-Iqbal Complex, Egerton Road Lahore, Tel: (042) 111-111-456 Fax: (042) 36304926-7 helpdesk.punjab@smeda.org.pk	5 TH Floor, Bahria Complex II, M.T. Khan Road, Karachi. Tel: (021) 111-111-456 Fax: (021) 5610572 helpdesk-khi@smeda.org.pk	Ground Floor State Life Building The Mall, Peshawar. Tel: (091) 9213046-47 Fax: (091) 286908 helpdesk-pew@smeda.org.pk	Bungalow No. 15-A Chaman Housing Scheme Airport Road, Quetta. Tel: (081) 831623, 831702 Fax: (081) 831922 helpdesk-qta@smeda.org.pk