



Pre-feasibility Study

DAIRY SHOP

September 2023

“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 | 5 |
| 2 | EXECUTIVE SUMMARY | 6 |
| 3 | INTRODUCTION TO SMEDA | 8 |
| 4 | PURPOSE OF THE DOCUMENT | 8 |
| 5 | BRIEF DESCRIPTION OF PROJECT & PRODUCT | 9 |
| 5.1 | Production Process Flow | 9 |
| 5.2 | Hot Milk | 13 |
| 5.3 | Rabri Milk | 13 |
| 5.4 | Khoya | 14 |
| 5.5 | Installed and Operational Capacities | 14 |
| 6 | CRITICAL FACTORS | 17 |
| 7 | GEOGRAPHICAL POTENTIAL FOR INVESTMENT | 17 |
| 8 | POTENTIAL TARGET CUSTOMERS / MARKETS | 18 |
| 9 | PROJECT COST SUMMARY | 19 |
| 9.1 | Initial Project Cost Estimates | 19 |
| 9.1.1 | Land | 20 |
| 9.1.2 | Building | 20 |
| 9.1.3 | Machinery and Equipment Requirement | 21 |
| 9.1.4 | Shop Equipment Requirement | 21 |
| 9.1.5 | Furniture and Fixture Requirement | 23 |
| 9.1.6 | Vehicle Requirement | 23 |
| 9.1.7 | Pre-Operating Cost Requirement | 23 |
| 9.1.8 | Advance for Milk | 24 |
| 9.1.9 | Security against Building Rent | 24 |
| 9.1.10 | Licenses, Permits | 24 |
| 9.1.11 | Working Capital Requirement | 25 |
| 9.2 | Breakeven Analysis | 25 |
| 9.3 | Revenue Generation | 25 |
| 9.4 | Variable Cost Estimate | 26 |
| 9.5 | Fixed Cost Estimate | 29 |
| 9.6 | Financial Feasibility Analysis | 30 |
| 9.7 | Financial Feasibility Analysis with 50% Debt | 31 |
| 9.8 | Human Resource Requirement | 31 |
| 10 | CONTACT DETAILS | 32 |
| 11 | USEFUL WEB LINKS | 33 |

| | |
|--------------------------------------|-----------|
| 12 ANNEXURES | 34 |
| 12.1 Income Statement | 34 |
| 12.2 Balance Sheet | 35 |
| 12.3 Cash Flow Statement | 36 |
| 13 KEY ASSUMPTIONS | 37 |
| 13.1 Operating Cost Assumptions..... | 37 |
| 13.2 Revenue Assumptions | 37 |
| Financial Assumptions | 37 |

Table of Tables

| | |
|---|-----------|
| Table 1 Installed and Operational Capacity | 16 |
| Table 2 Proposed product and Respective Milk Consumption | 16 |
| Table 3: Pakistan's Urban/Rural Population | 17 |
| Table 4:Initial Project Cost..... | 20 |
| Table 5 Land Area Breakup..... | 20 |
| Table 6 Renovation Cost Details | 21 |
| Table 7 Machinery and Equipment Requirement..... | 21 |
| Table 8 Shop Equipment Requirement | 21 |
| Table 9 Serving and Other Utensils | 22 |
| Table 10 Furniture and Fixtures Requirement..... | 23 |
| Table 11 Vehicle Requirement..... | 23 |
| Table 12 Pre-Operating Cost Requirement | 23 |
| Table 13 Advance for Milk | 24 |
| Table 14 Advance against Building Rent | 24 |
| Table 15 Licenses, Permits | 24 |
| Table 16 Working Capital Requirement..... | 25 |
| Table 17 Break-Even Analysis | 25 |
| Table 18 Revenue Generation | 25 |
| Table 19 Variable Cost Estimate | 26 |
| Table 20 Material Cost Estimate..... | 26 |
| Table 21 Yogurt Cost Estimate | 27 |
| Table 22 Yogurt Lassi Cost Estimate..... | 27 |
| Table 23 Hot/Cold Milk Cost Estimate | 27 |
| Table 24 Rabri Milk Cost Estimate | 27 |
| Table 25 Khoya Cost Estimate | 28 |
| Table 26 Operation Costs – Direct Labor..... | 28 |
| Table 27 Operation Costs – Gas Cost..... | 28 |
| Table 28 Operation Costs – Water Cost | 29 |
| Table 29 Office Vehicle Running Expense | 29 |
| Table 30 Variable Cost Assumptions..... | 29 |
| Table 31 Fixed Cost Estimate | 29 |
| Table 32 Fixed Cost - Management Staff Salary | 30 |
| Table 33 Fixed Cost Assumptions..... | 30 |
| Table 34 Financial Feasibility Analysis | 30 |
| Table 35 Financial Feasibility Analysis with 50% Debt | 31 |
| Table 36 Human Resource Requirement..... | 31 |
| Table 37 Suppliers of Machinery and Equipment | 32 |
| Table 38 Useful Web Links..... | 33 |
| Table 39 Operating Cost Assumptions..... | 37 |
| Table 40 Revenue Assumptions..... | 37 |
| Table 41 Financial Assumptions..... | 37 |

Table of Figures

| | |
|--|-----------|
| Figure 1 Diary Milk Shop Process Flow..... | 9 |
| Figure 2 Milk Procurement..... | 10 |
| Figure 3-Milk Chillers and Conventional Milk Containers | 11 |
| Figure 4 Proposed Product List | 11 |
| Figure 5 Milk Processing..... | 12 |
| Figure 6 Electric Madhani | 13 |
| Figure 7 Hot Milk | 13 |
| Figure 8 Rabri Milk..... | 14 |
| Figure 9 Khoya..... | 14 |
| Figure 10 Milk Production and Consumption Statistics (Year 2021-22)..... | 18 |
| Figure 11 Province Wise Milk Production | 19 |

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. | 292 |
| Revision | 1 |
| Prepared by | SMEDA-Punjab |
| Preparation Date | May 2021 |
| Revision Date | September 2023 |
| For information | helpdesk.punjab@smeda.org.pk |

2 EXECUTIVE SUMMARY

Pakistan is the fourth largest producer of milk in the world with 65.7 million tons of milk produced annually according to various estimates in the year 2021/22.¹ Buffalo and cows are the main milk-producing animals in Pakistan. Being a highly perishable commodity and produced primarily in the heart of the rural environment, milk reaches the consumer not only with difficulty but also at a high cost.

The potential of dairy is huge but the sector operates mostly in the informal economy and needs a consistent effort to formalize and be able to contribute better to the national economy. Of the total milk production, 97% is marketed through the informal sector² which includes the loose milk consumed in the villages and or sold in the cities through "Gawallas" (local milk sellers). In Pakistan, dairy-related businesses has the potential to offer good returns provided business gets the personal attention of the entrepreneur and all the critical factors are incorporated in business operations.

This "Pre-feasibility Document" provides details for setting up "Dairy Shop" business. The shop is proposed to be ideally located in any urban areas around major cities such as Karachi, Lahore, Faisalabad, Hyderabad, Quetta, Peshawar, Okara, Mardan, Jhelum, Gujrat, Sahiwal, Jhang, Multan, Bahawalpur, etc. across the country. As milk and other dairy products constitute the basic need of the people, dairy shop can be located in any city of Pakistan

The proposed shop is assumed to have a capacity to sell a maximum of 360,000 liters of milk in a year. During the first year of operations, it is assumed that the project will operate at 70% of its total capacity, which is 216,000 liters. The capacity is assumed to increase at a rate of 5% per annum with a cap at 95% of total capacity. High return on investment and steady growth of business is expected with the entrepreneur having some prior experience in the related field of business.

The proposed project will be set up in a rented shop having an area of 400 sq. ft. (1.5 Marla). The project requires a total investment of PKR 6.06 million. This includes capital investment of PKR 6.03 million and working capital of PKR 0.58 million. The project will be established using 100% equity financing. The Net Present Value (NPV) of project is PKR 35.24 million with an Internal Rate of Return (IRR) of 63% and a Payback period of 2.35 years. Further, the proposed project is expected to generate Gross Annual Revenues of PKR 49.41 million in 1st year, Gross Profit (GP) ratio ranging from 14% to 31% and Net Profit (NP) ratio ranging from 3% to 16% during the projection period of ten years. The proposed project will achieve its estimated breakeven point at capacity of 43% (137,091 Liters) with gross revenue of PKR 49.42 million in a year.

The proposed project may also be established using leveraged financing. At 50% financing at a cost of KIBOR+3%, the proposed project provides Net Present Value

¹ Source: <https://pide.org.pk/blog/milk-production-in-pakistan>

² Source: <https://pide.org.pk/blog>

(NPV) of PKR 22.24 million, Internal Rate of Return (IRR) of 60% and Payback period of 2.51 years. Further, this project is expected to generate Net Profit (NP) ratio ranging from 3% to 16% during the projection period of ten years.

The project will generate direct employment opportunity for 7 to 11 people. As evident from the above financial figures, the proposed project for Dairy Shop shows reasonable profitability and is economically and financially viable. The legal form of this project is proposed as “Sole Proprietorship”.

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 this 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 facilitate potential investors in establishing a Dairy Shop by providing a general understanding of the business with the intention of supporting them in investment decisions.

The need to come up with pre-feasibility reports for undocumented or minimally documented sectors attains 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 setup and its successful management.

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 & PRODUCT

Dairy sector is an important contributor to Pakistan's economy. The value of milk alone exceeds the combined value of wheat, rice, maize and sugarcane in the country.

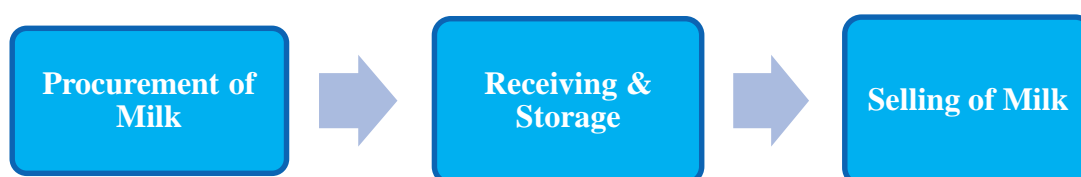
A dairy shop sells milk and the products made from milk, which include yogurt, butter, cream, cheese, khoya, Lassi and other products.

The unit is proposed to be started in a rented shop having covered area of 400 sq. ft. The proposed project shall operate at 70% of the total selling capacity during the first year of operations. The proposed business will create employment opportunities for 7 to 11 persons. The main cost of the proposed project includes PKR 2.03 million for buying the required machinery and equipment and PKR 2.94 million as advance for purchasing milk.

5.1 Production Process Flow

Dairy shop process flow is shown in Figure 1.

Figure 1 Dairy Milk Shop Process Flow



Brief description of process flow is as follows:

Procurement of Milk

Buffalo milk nutritional value is higher than cow milk, therefore buffalo milk is the preferred choice of the local consumer. In Pakistan, 100% of milk sold commercially is sold as buffalo milk. However, as per industry practice, 40% cow milk is mixed in buffalo milk. Cow milk is less costly compared to buffalo milk. Milk can be procured directly from small farmers in surrounding villages, dairy farms and milk can also be purchased from middle man (commonly known as Dhodi). Purchasing milk from middle man will be costly compared to purchasing it directly from small farmers and dairy farms. The dairy farms directly deliver the milk at the dairy shop in their chilling vehicles, which maintains the quality of milk. In case of purchase of milk from middle man or small farmer, the dairy shopkeeper will have to go to the location of middle man early in the morning. For the proposed project, milk supply from dairy farms is recommended.

The supply of milk is secured by paying advance for the milk supply of one month to the milk supplier. The quality of milk can be ensured by purchasing milk only from dairy farms, rather than the middle man.

Figure 2 Milk Procurement



Milk Receiving and Storing Steps

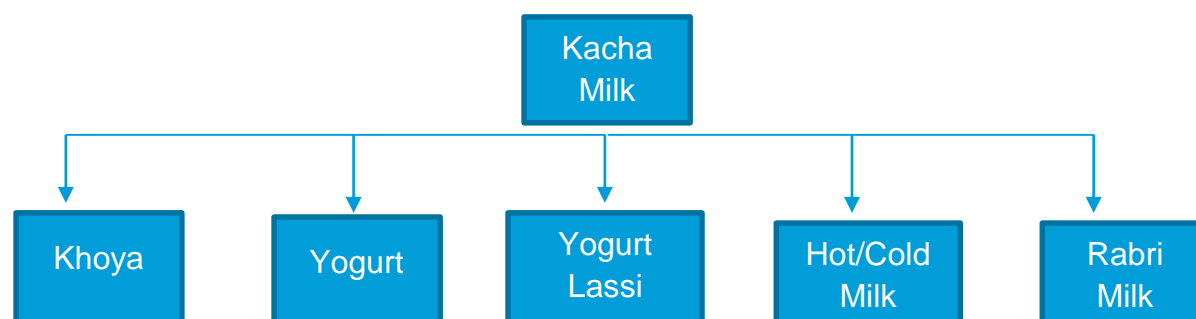
The dairy shop owner should purchase milk from suppliers, who transport milk through chilled milk tankers. These chilled tankers help in preserving the milk nutritional content and milk quality. In case milk is purchased from sellers who use milk containers filled with ice, the quality of milk received is compromised. This happens because of the water quality of ice and mixing of melted ice water in the milk impacts the natural composition of milk. The quality of milk received can be tested by using “Milk Slip Test”. In this test, a drop of milk is placed on a polished vertical surface. If the drop of milk stops or flows slowly, leaving a white trail behind, it is pure milk. Milk mixed with water or other agents will flow down immediately without a trace.

Milk delivered by chilled tanks is directly transferred to milk chiller (Figure 3) tankers kept in the dairy shop through pipes or through traditional milk containers. The milk received is primarily measured by the gauge or measurement meter placed on the delivery vehicle of the supplier. The milk chillers kept in the dairy shop are already equipped with measuring scale, this scale is used by the shop owners to measure the quantity of milk received. Additionally, dairy shopkeepers have conventional (Figure 3) milk tanks in their shops. The measuring capacity of these tanks is already known by the dairy shopkeepers. These tanks are also used by dairy shopkeepers for measuring the quantity of milk received.

Milk is received in the morning; however, based on the demand, milk is also delivered during day times and sometimes also in evening (especially in Ramadan),

Figure 3-Milk Chillers and Conventional Milk Containers**Selling of Milk Products**

Figure 4 represents the milks products of the proposed project.

Figure 4 Proposed Product List

A brief description of milk products is given as under:

Kacha Milk

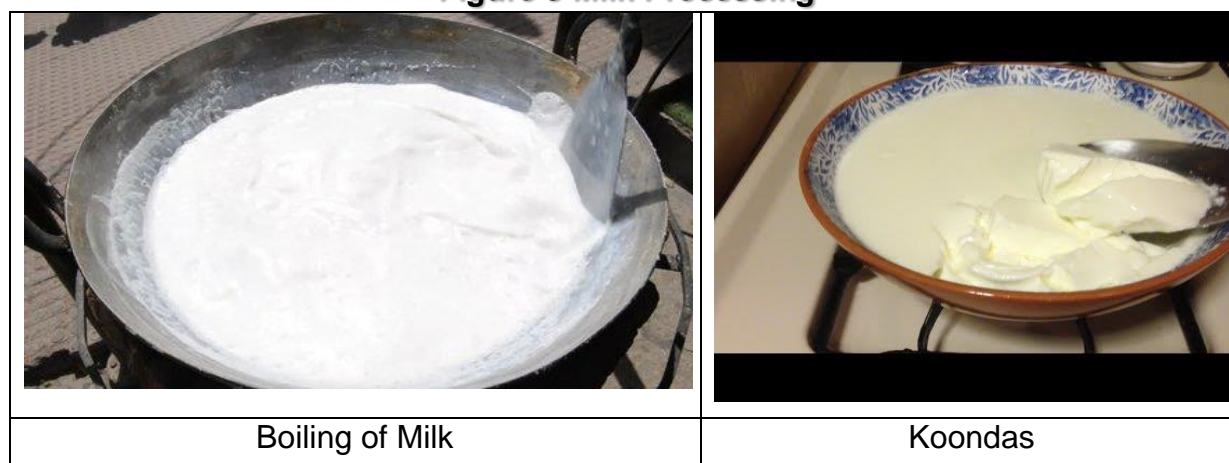
Based on our business model, majority (47%) of our daily milk procurement will be sold as kacha milk (milk directly received from sellers and stored in milk chillers). The customer will approach the shop counter and request the shopkeeper to provide him the required quantity of milk. The shopkeeper will put the required quantity of milk in the polythene bags from the milk chillers, and give the bag of milk to the customer and receive payment from the customer.

Yogurt

The milk required for yogurt, needs to be boiled. This milk is boiled at 180°F for 30 minutes. Based on his personal experience, the dairy shopkeeper assesses that the milk is boiled and has been boiled at the required temperature. Heated milk is then poured into different Koonadas (local name of the utensils used to make yogurt) and let it cool till it reaches 46°C. When the milk cools down to 46°C, it's time to add yogurt starter. It is stirred until yogurt is fully mixed with the milk. After around eight to ten hours, yogurt reaches the desired consistency and is ready for selling. Normally, the dairy shop owners do not use any temperature measuring instrument to measure the temperature. Therefore, all the assessment of temperature as mentioned above is based on the personal judgment of the dairy shopkeeper.

The yogurt Koondas are placed into the freezers for cooling and for making further thick and sweeter. The yogurt is also sold in polythene bags.

Figure 5 Milk Processing



Yogurt-Lassi

Yogurt-Lassi (whey) is another popular product made from milk. Lassi is a blend of yogurt and water. It is mostly consumed in summer season. The process of lassi making includes following steps:

The quantity of milk and yogurt is set for making yogurt lassi.

To make lassi 50% milk and 50% yogurt and sugar (as per taste) are added in the required quantity in a tank or any utensil that will be put on the electric madhani.

After 10 to 15 minutes of churning the ingredients in the electric madhani, the yogurt lassi is ready to be served. After churning, the churning spindle is detached and washed in hot water. Lassi is put in glasses for serving to the customers.

Figure 6 Electric Madhani

5.2 Hot Milk

Hot milk is served in the winter season. Hot milk helps in better sleep as it contains amino acids which helps in inducing better sleep. It also cures common cold.

Figure 7 Hot Milk

5.3 Rabri Milk

Rabri is thickened sweetened milk having layers of malai or cream in it. It is flavored with cardamoms (Ilaichi), saffron (Zaafraan) and dry fruits like almonds and pistachios are added into it. Rabri milk is a rich source of calcium, essential minerals and vitamins.

Rabri is prepared from milk by simmering the whole milk for a prolonged period and adding sugar after achieving the desired concentration. The milk is kept in hot condition (near to boiling temperature) in a shallow karahi (name of utensil) with deep bottom to avoid spillage. The formation of a thin skin (malai) on the hot milk and air interface repeatedly takes place in this undisturbed condition. When a

customer comes to buy milk, the milk seller removes malai (cream) from the surface with a ladle to the cooler side of the karahi and sell the bottom portion of milk. This practice is continued for a long time (several hours). When the amount of milk is considerably reduced, it is boiled and concentrated to about 3-4 folds. Then sugar is added and finally the malai, which was collected on cooler side of the karahi is remixed with concentrated sweetened milk. This product is called rabri milk.

Figure 8 Rabri Milk



5.4 Khoya

Khoa, khoya, or mawa is a dairy food is widely used in the cuisines of the Indian subcontinent. It is made of either dried whole milk or milk thickened by heating in an open iron pan. In Pakistan, Khoya recipe is made by heating milk or by drying milk. It is serves as an ingredient to be used in Pakistani sweets like Halwa, Barfi and especially in Gulab Jamun. It can be stored for 2-3 days at room temperature and for a week in refrigerator.

Figure 9 Khoya



5.5 Installed and Operational Capacities

The total selling capacity of the proposed Dairy Shop is 360,000 liters annually. However, during the first year of operations, the shop is expected to sell milk only up to 70% of its total capacity. The shop would operate in a double shift of 16 hours per

day. Based on 360 working days in a year, the shop shall consume 241,373 liters of milk during initial year at 70% capacity for producing different dairy products.

Table 1 shows the installed and consumption of milk at 70% capacity of dairy shop and Table 2 shows milk consumption for the proposed products.

Table 1 Installed and Operational Capacity

| Machinery | Unit of Measurement | Daily Storage Capacity | Annual Working Days | Maximum Annual Capacity | Capacity @ 70% |
|--------------------|---------------------|------------------------|---------------------|-------------------------|----------------|
| Chiller (D Shaped) | Liters | 1,000 | 360 | 360,000 | 252,000 |

Table 2 Proposed product and Respective Milk Consumption

| Product | Unit | Milk Consumption @ 70% (A) | Milk Consumption Ratio (B) | Product wise Milk Consumption (C=A*B) | Milk Consumption per Liter/KG of Product (D) | Production (KG/Liter) (E=C*B) |
|----------------------|--------|----------------------------|----------------------------|---------------------------------------|--|-------------------------------|
| Fresh Milk | Liters | 252,000 | 47% | 118,440 | 1 | 118,440 |
| Yogurt | KG | | 20% | 50,400 | 1.10 | 45,818 |
| Yogurt Lassi | Liters | | 11% | 27,720 | 0.95 | 29,143 |
| Hot Milk / Cold Milk | Liters | | 15% | 37,800 | 1.10 | 34,364 |
| Rabri Milk | Liters | | 5% | 12,600 | 1.0 | 12,600 |
| Khoya | KG | | 2% | 5,040 | 5.0 | 1,008 |
| Total | | | | | | 241,373 |

6 CRITICAL FACTORS

The following factors should be taken into account while making the investment decision:

- Availability of uninterrupted milk supply
- Availability of milk at minimum price
- Ensuring milk purity
- Ensuring hygiene of milk products and overall shop environment
- Consistent marketing of shop
- Reliable storage facility for milk and related products
- Uninterrupted power supply

7 GEOGRAPHICAL POTENTIAL FOR INVESTMENT

Pakistan is the 4th largest milk producing country in the world. According to Economic Survey of Pakistan 2018-19, milk is the largest single commodity within the livestock sector.

Target customers for the proposed Dairy shop will be the end consumers i.e., mainly household shoppers (families with children) residing in the urban areas of Pakistan such as Karachi, Lahore, Faisalabad, Hyderabad, Quetta, Peshawar, Okara, Mardan, Jhelum, Gujrat, Sahiwal, Jhang, Multan, Bahawalpur, etc. 32% of total population of Pakistan lives in urban areas. The province wise distribution of urban population (Census of 1998) is given in Table 3³. The cities mentioned earlier for establishing the dairy business is due to higher milk demand in these cities, mainly due to their large populations. Therefore, the said project offers good investment opportunities for potential investment in all provinces of country.

The areas around major cities with road infrastructure, water and electricity supply represent a better choice for establishment of shop.

Table 3: Pakistan's Urban/Rural Population

| Particulars | % | |
|-------------|-------|-------|
| | Urban | Rural |
| Pakistan | 32.5 | 67.5 |
| KPK | 19.6 | 180.4 |
| Punjab | 31.3 | 68.7 |
| Sindh | 48.8 | 51.2 |
| Balochistan | 23.9 | 76.1 |
| Islamabad | 65.7 | 34.3 |

³ Source: www.pbs.gov.pk/

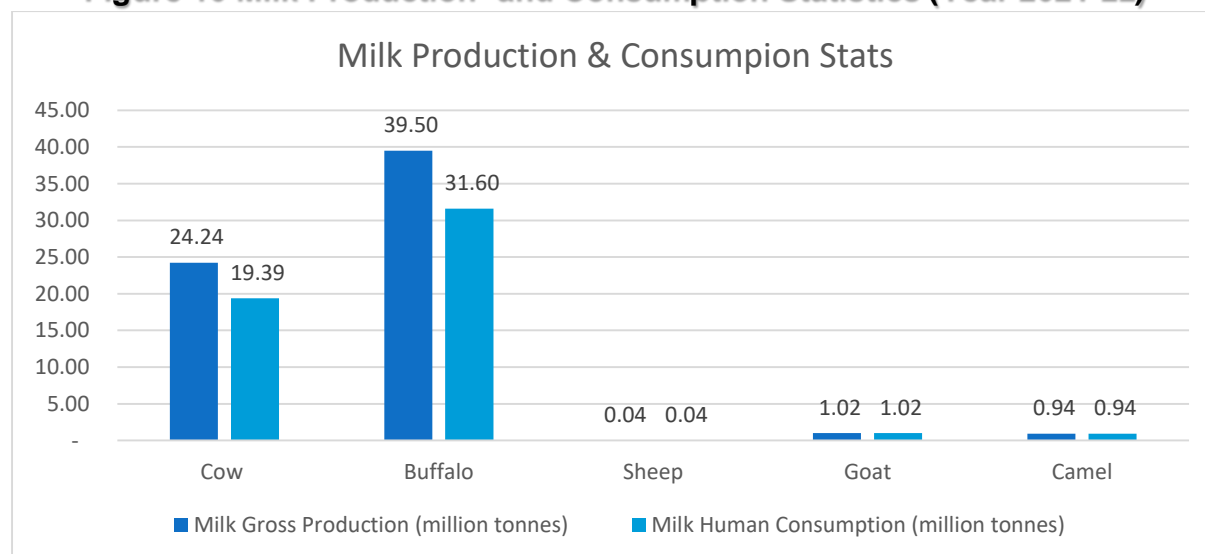
8 POTENTIAL TARGET CUSTOMERS / MARKETS

The milk and milk related products sold by the proposed shop shall be bought by the families living in urban areas and by other local shopkeepers and small hotels. Usually, demand for milk and yogurt increases during summer months due to increased consumption of whey (Lassi). There is also an increase in demand of milk and related products during the holy month of Ramadan.

Urban usage of milk is only 30% with the formal milk processing industry handling only 2-3% (around 42 million tons) of total milk production of the country. For the other 97%, a multilayered distribution system of middlemen has evolved for milk supply. With population of around 200 million, the per capita milk consumption in Pakistan reached 231 liters (231 Kg) in 2019⁴. It grew at an average rate of 3.2% a year in the last decade from 2009 to 2019⁵ and almost doubled from 119 liters per person in 2011. Milk production in Pakistan is the second highest in Asia and the third highest in the world

The size of the opportunity for selling dairy products in Pakistan has attracted significant investments from European giants like Nestle, Fries Land Campina and Unilever and Commercial dairy farms like JK Dairy.

Figure 10 Milk Production⁶ and Consumption Statistics (Year 2021-22)



The data presented in Figure 10 Milk Production and Consumption Statistics highlights those 65.745 million tons of milk production out of which 52.996 million tons of milk is annually available for local consumption in Pakistan.

⁴ Research Report: Asia – Whole Fresh Milk – Market Analysis, Forecast, Size, Trends and Insights

⁵ South Asia Investor Review

⁶ Source: Economic Survey of Pakistan

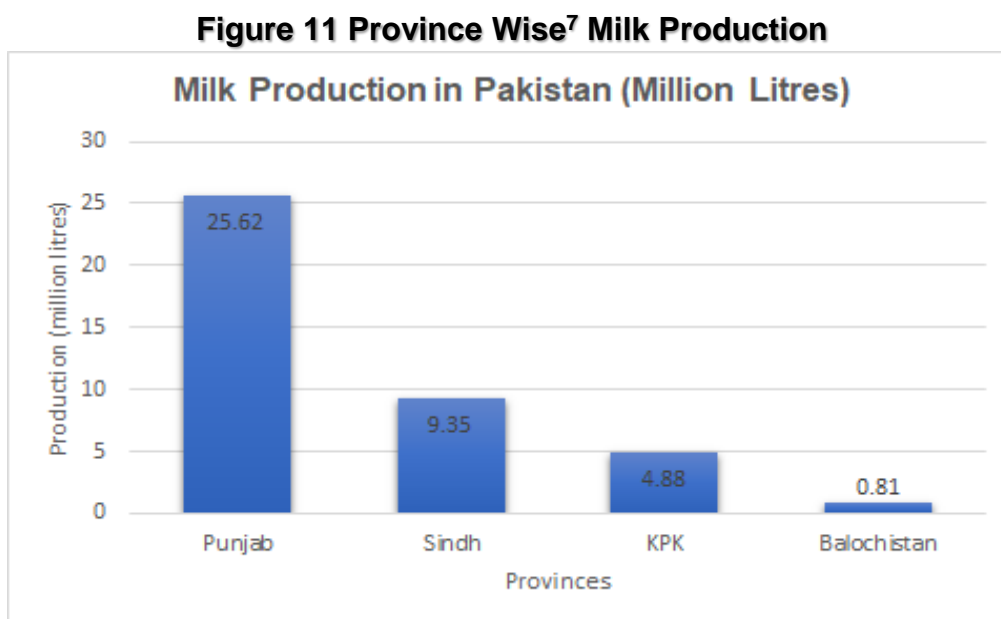


Figure 11 Province Wise Milk Production identifies that major share of the milk is produced in the province of Punjab.

9 PROJECT COST SUMMARY

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

The projected Income Statement, Cash Flow Statement and Balance Sheet are attached as annexures 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 Initial Project Cost Estimates

Table 4 provides fixed and working capital requirements for establishment and operations of the Dairy Shop business.

⁷ Source: <https://pide.org.pk/blog/milk-production-in-pakistan>

Table 4:Initial Project Cost

| Cost Item | Cost (PKR) | Details Reference |
|--------------------------------|------------------|-------------------|
| Land | - | 9.1.1 |
| Renovation Cost | 176,000 | 0 |
| Machinery & equipment | 1,015,000 | 9.1.3 |
| Shop Equipment | 1,021,500 | 9.1.4 |
| Furniture & fixtures | 181,000 | 9.1.5 |
| Vehicles | 318,958 | 9.1.6 |
| Pre-operating costs | 124,213 | 9.1.7 |
| Advance for Milk | 2,940,000 | 9.1.8 |
| Security against Building Rent | 225,000 | 9.1.9 |
| Licenses, Permits | 25,000 | 9.1.10 |
| Total Capital Cost | 6,026,671 | |
| Working Capital | 575,000 | 9.1.11 |
| Total Project Cost | 6,601,671 | |

9.1.1 Land

The dairy shop will be established in a rented building to avoid the high cost of land. Suitable location for setting up of shop 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 dairy shop has been estimated as 400 sq. feet.

The breakup of the space requirement is provided in Table 5.

Table 5 Land Area Breakup

| Description | % Break-Up | Area Sq. Ft. |
|--------------|----------------|--------------|
| Shop Area | 100% | 400 |
| Total | 100.00% | 400 |

9.1.2 Building

There will be no cost of building since the shop will be rented. However, there will be a renovation cost required to make the shop ready to use for the business. The proposed shop requires estimated electricity load of 2-3 KW for which an electricity connection under the General Supply Tariff-Commercial single phase will be required. Cost of such electricity connection has not been included in the capital

cost, since such electricity connections are normally available in such rented shops. Building rent of PKR 75,000 per month has been included in the operating cost.

Table 6 provides details of building renovation cost.

Table 6 Renovation Cost Details

| Cost Item | Unit of Measurement | Total Liter / Area / Number | Cost/Unit/ Sq. Feet | Total Cost (PKR) |
|------------------------------|---------------------|-----------------------------|---------------------|------------------|
| Paint Cost | Liters | 40 | 500 | 20,000 |
| Labor Cost-Paint | Feet | 4,000 | 8 | 32,000 |
| Tiles | Sq.Feet | 400 | 120 | 48,000 |
| Labour Cost-Tiles Fixing | Sq.Feet | 400 | 40 | 16,000 |
| Wall Racks | Units | 4 | 15,000 | 60,000 |
| Total Renovation Cost | | | | 176,000 |

9.1.3 Machinery and Equipment Requirement

Table 7 provides details of machinery and equipment required for the project:

Table 7 Machinery and Equipment Requirement

| Cost Item | Unit(s) | Unit Cost (PKR) | Total Cost (PKR) |
|---------------------------------|---------|-----------------|------------------|
| Chiller (D-shape) (1000 Liters) | 1 | 650,000 | 650,000 |
| Deep Freezer (18 Cubic Feet) | 2 | 125,000 | 250,000 |
| Electric Madhani | 1 | 15,000 | 15,000 |
| Stove | 2 | 15,000 | 30,000 |
| Gas Cylinder (20 Kg) | 2 | 35,000 | 70,000 |
| Total Cost | | | 1,015,000 |

9.1.4 Shop Equipment Requirement

Table 8 presents the shop equipment requirement proposed for the unit.

Table 8 Shop Equipment Requirement

| Cost Item | Units | Unit Cost (PKR) | Total Cost (PKR) |
|-------------------------------------|-------|-----------------|------------------|
| Air Conditioners (1.5 Ton Invertor) | 2 | 200,000 | 400,000 |

| | | | |
|---|----|----------------|------------------|
| Water Dispenser / Water Cooler | 1 | 51,000 | 51,000 |
| UPS with installation (3,000 watt) | 1 | 65,000 | 65,000 |
| Electronic Cash Register | 1 | 100,000 | 100,000 |
| Digital Weighing Scale (120 KG) | 1 | 20,000 | 20,000 |
| Milk Tanks (160 Liters) | 2 | 30,000 | 60,000 |
| Milk Tanks (40 Liters) | 6 | 15,000 | 90,000 |
| Wok (Día 2 meter, 100 liters Capacity) | 2 | 30,000 | 60,000 |
| Utensils for Yogurt | 40 | 2,000 | 80,000 |
| Serving and other Utensils | | (Ref. Table 9) | 95,500 |
| Total | | | 1,021,500 |

Table 9 presents the detail of serving and other utensils.

Table 9 Serving and Other Utensils

| Cost Item | Units | Unit Cost (PKR) | Total Cost (PKR) |
|--|-------|-----------------|------------------|
| Plastic Drum | 3 | 6,000 | 18,000 |
| Aluminium Bowls for Measurement | 5 | 1,500 | 7,500 |
| Porcelain Bowls - For Service of Milk Products | 40 | 500 | 20,000 |
| Stainless Steel Glass - Lassi Service | 40 | 600 | 24,000 |
| Table Spoon - Stainless Steel | 60 | 150 | 9,000 |
| Stainless Steel Jugs | 10 | 750 | 7,500 |
| Milk Glass (Rabri + Cold Milk Service) | 20 | 350 | 7,000 |
| Silver Cups (Milk Measurement) | 5 | 500 | 2,500 |
| Total | | | 95,500 |

9.1.5 Furniture and Fixture Requirement

Table 10 gives details of the furniture and fixture required for the project.

Table 10 Furniture and Fixtures Requirement

| Cost Item | Units | Unit Cost (PKR) | Total Cost (PKR) |
|--------------------------|-------|-----------------|------------------|
| Counter | 1 | 20,000 | 20,000 |
| Executive Chairs | 1 | 15,000 | 15,000 |
| Ceiling Fan | 4 | 7,500 | 30,000 |
| Plastic Square Tables | 4 | 5,000 | 20,000 |
| Plastic Chairs | 16 | 2,000 | 32,000 |
| Waste Bins | 4 | 3,500 | 14,000 |
| Customer Service Counter | 1 | 50,000 | 50,000 |
| Total | | | 181,000 |

9.1.6 Vehicle Requirement

Details of vehicles required for the project is given in Table 11.

Table 11 Vehicle Requirement

| Cost Item | Unit(s) | Unit Cost (PKR) | Registration fee @ 1% | Total Cost (PKR) |
|---------------------|---------|-----------------|-----------------------|------------------|
| Motorcycle (100 cc) | 2 | 157,900 | 3,158 | 318,958 |
| Total Cost | | | | 318,958 |

9.1.7 Pre-Operating Cost Requirement

Details of pre operating cost required for the project is given in Table 12.

Table 12 Pre-Operating Cost Requirement

| Staff | No. | Hiring Before Year 0 (Months) | Unit Cost (PKR) | Total (PKR) |
|------------------------------|-----|-------------------------------|-----------------|----------------|
| Cashier | 1 | 1 | 40,000 | 40,000 |
| Utilities Cost for One month | | | 84,213 | 84,213 |
| Total Cost | | | | 124,213 |

9.1.8 Advance for Milk

It is norm of the industry that suppliers of milk require advance against supply of milk. This is usually a handsome amount of money which a milk shop owner must arrange in advance to get uninterrupted supply of milk. Sector norms show that such amount is provided for up to 30 days of milk requirements of a milk shop. However, this amount may vary due to seasonal effect; which means that in summer, the amount of advance against milk may also be based on more than 30 days of milk requirement. Because of the significance of the amount, the advance against milk also sometimes becomes a barrier for new entrants.

Details of advance for milk for the project is given in Table 13.

Table 13 Advance for Milk

| Cost Item | Volume per day | No. of Days of advance | Total Milk | Cost /Liter (PKR) | Total Cost (PKR) | Advance @ 70% (PKR) |
|-------------------|----------------|------------------------|------------|-------------------|------------------|---------------------|
| Advance Security | 1,000 | 30 | 30,000 | 140 | 4,200,000 | 2,940,000 |
| Total Cost | | | | | | 2,940,000 |

9.1.9 Security against Building Rent

Details of advance against building rent for the project are given in Table 14.

Table 14 Advance against Building Rent

| Cost Item | Months | Monthly Rent | Total Cost (PKR) |
|-------------------|--------|--------------|------------------|
| Advance Security | 3 | 75,000 | 225,000 |
| Total Cost | | | 225,000 |

9.1.10 Licenses, Permits

Details of licenses, permits for the project are given in Table 15.

Table 15 Licenses, Permits

| License, Permits | No | Unit Cost (PKR) | Total Cost (PKR) |
|-----------------------|----|-----------------|------------------|
| Punjab Food Authority | 1 | 25,000 | 25,000 |
| Total Cost | | | 25,000 |

9.1.11 Working Capital Requirement

Details of working capital required for the project are given in Table 16.

Table 16 Working Capital Requirement

| Cost Item | No./ Month | Unit Cost (PKR) | Total Cost (PKR) |
|---|------------|-----------------|------------------|
| Upfront building rent | 1 | 75,000 | 75,000 |
| Cash | | | 500,000 |
| Total Initial Working Capital Cost | | | 575,000 |

9.2 Breakeven Analysis

Table 17 shows calculation of break-even analysis.

Table 17 Break-Even Analysis

| Description | Amount First Year (PKR) | Ratios |
|------------------------------|-------------------------|--------|
| Sales (PKR) | 49,413,657 | 100% |
| Variable Cost (PKR) | 44,045,669 | 89% |
| Contribution (PKR) | 5,367,988 | 11% |
| Fixed Cost (PKR) | 3,048,827 | 6% |
| Contribution Margin | 11% | |
| Breakeven Revenue | 28,065,210 | |
| Contribution Margin Per Unit | 22 | |
| Breakeven Quantity (Liters) | 137,091 | |
| Breakeven Capacity | 43% | |

9.3 Revenue Generation

Based on 70% capacity utilization, sales revenues, obtained by selling milk and its products during the first year of operations are shown in Table 18.

Table 18 Revenue Generation

| Product | Sales Quantity (liters/kg) | Sale Price (per liters/kg) | Total Revenue (PKR) |
|-----------------------|----------------------------|----------------------------|---------------------|
| Fresh Milk (Liters) | 118,440 | 180 | 21,319,200 |
| Yogurt (kg) | 45,818 | 210 | 9,621,851 |
| Yogurt Lassi (Liters) | 29,143 | 160 | 4,662,924 |

| | | | |
|--------------------------|--------|-------|-------------------|
| Hot / Cold Milk (Liters) | 34,364 | 220 | 7,560,082 |
| Rabri Milk (Liters) | 12,600 | 400 | 5,040,000 |
| Khoya (Kg) | 1,008 | 1,200 | 1,209,600 |
| Total Cost (PKR) | | | 49,413,657 |

9.4 Variable Cost Estimate

Variable costs of the project have been provided in Table 19.

Table 19 Variable Cost Estimate

| Description of Costs | Amount (PKR) |
|---|-------------------|
| Material Cost | 37,941,113 |
| Operation costs 1 (Direct Labor) | 3,360,000 |
| Operating costs 3 (Electricity Bill) | 1,010,556 |
| Operating costs 4 (Gas Cost) | 144,000 |
| Operating costs 5 (Water cost) | 36,000 |
| Travelling expense | 528,000 |
| Communications expense (phone, internet, etc.) | 396,000 |
| Shop vehicles running expense | 366,000 |
| Shop expenses (stationery, janitorial services, etc.) | 264,000 |
| Total (PKR) | 44,045,669 |

Table 20 Material Cost Estimate

| Fresh Milk | Consumption | Cost per KG (PKR) | Total Cost (PKR) |
|--------------------------|-------------|-------------------|-------------------|
| Fresh Milk | 118,440 | 140 | 16,581,600 |
| Yogurt | 45,818 | 154 | 7,056,000 |
| Yogurt Lassi | 29,143 | 115 | 3,339,795 |
| Hot / Cold Milk (Liters) | 34,364 | 181 | 6,219,818 |
| Rabri Milk (Liters) | 12,600 | 321 | 4,038,300 |
| Khoya | 1,008 | 700 | 705,600 |
| Total (PKR) | | | 37,941,113 |

Table 21 Yogurt Cost Estimate

| Yogurt | Unit of Measurement | Quantity | Cost/Kg | Total Cost (PKR) |
|--------------------|---------------------|----------|---------|------------------|
| Fresh Milk | Liters | 1.1 | 140 | 154 |
| Total (PKR) | | | | 154 |

Table 22 Yogurt Lassi Cost Estimate

| Yogurt Lassi | Unit of Measurement | Quantity | Cost / Kg | Total Cost (PKR) |
|---------------------|---------------------|----------|-----------|------------------|
| Fresh Milk | Milli Liters | 250 | 140 | 35.0 |
| Yogurt | Grams | 400 | 154 | 61.6 |
| Sugar @ Rs. 180/ Kg | Grams | 100 | 180 | 18.0 |
| Water | Grams | 250 | | |
| Total (PKR) | | | | 114.6 |

Table 23 Hot/Cold Milk Cost Estimate

| Hot / Cold Milk | Unit of Measurement | Quantity | Cost / Kg | Total Cost (PKR) |
|------------------------|---------------------|----------|-----------|------------------|
| Fresh Milk | Milli Liter | 250 | 140 | 147.0 |
| Sugar @ Rs. 180 per KG | Grams | 400 | 180 | 18.0 |
| Cardamom | Grams | 100 | 8,000 | 16.0 |
| Total (PKR) | | | | 181.0 |

Table 24 Rabri Milk Cost Estimate

| Rabri Milk | Unit of Measurement | Quantity | Cost/Kg | Total Cost (PKR) |
|----------------------------|---------------------|----------|---------|------------------|
| Fresh Milk | Liters | 0.7 | 140 | 98 |
| Sugar @ Rs. 180/ Kg | Grams | 200 | 180 | 36 |
| Khoya | Grams | 30 | 1200 | 36 |
| Custard | 2 Table Spoon | | | 20 |
| Illaichi | Grams | 2 | | 16 |
| Ispaghool @ Rs. 2 per Gram | Grams | 2.5 | | 5 |
| Goond Katira | Half table spoon | | | 10 |

| | | | | |
|---|------------------|----|--|--------------|
| Takhum Bilanga | Half table spoon | | | 10 |
| Rooh Afza @ Rs. 500 per Liter | ml | 45 | | 22.50 |
| White Vermisilles @ Rs. 130 per 50Grams | Liters | 20 | | 52 |
| Ice | Grams | | | 15 |
| Total (PKR) | | | | 320.5 |

Table 25 Khoya Cost Estimate

| Khoya | Unit of Measurement | Quantity | Cost/Kg | Total Cost (PKR) |
|--------------------|----------------------------|-----------------|----------------|-------------------------|
| Fresh Milk | Liters | 5 | 700 | 700 |
| Total (PKR) | | | | 700 |

Table 26 Operation Costs – Direct Labor

| Post | No of personnel | Monthly Salary (PKR) | Annual Salary (PKR) |
|--------------------|------------------------|-----------------------------|----------------------------|
| Cook-Skilled | 2 | 35,000 | 840,000 |
| Cook-Helper | 2 | 35,000 | 840,000 |
| Waiter | 2 | 35,000 | 840,000 |
| Delivery Boy | 2 | 35,000 | 840,000 |
| Total (PKR) | 8 | | 3,360,000 |

Table 27 Operation Costs – Gas Cost

| Cost Item | No of months | Cost per month | Total (PKR) |
|--------------------|---------------------|-----------------------|--------------------|
| Gas | 12 | 12,000 | 144,000 |
| Total (PKR) | | | 144,000 |

Table 28 Operation Costs – Water Cost

| Cost Item | No of months | Cost per month | Total (PKR) |
|--------------------|--------------|----------------|---------------|
| Water | 12 | 3,000 | 36,000 |
| Total (PKR) | | | 36,000 |

Table 29 Office Vehicle Running Expense

| Particulars | Cost of Motorcycle(s) (for Shop) (PKR) | Cost of Motorcycle(s) for Delivery (PKR) | Total Cost (PKR) |
|-------------------------------------|--|--|------------------|
| Fuel cost | 10,000 | 16,000 | 26,000 |
| Service Charges | 500 | 1,000 | 1,500 |
| Oil & Tuning | 1,500 | 1,500 | 3,000 |
| Monthly expenses/ Motorcycle | 12,000 | 18,500 | 30,500 |
| No of Vehicles | 1 | 1 | 2 |
| Monthly vehicle running cost | 12,000 | 18,500 | 30,500 |
| Total (PKR) | 144,000 | 222,000 | 366,000 |

Table 30 Variable Cost Assumptions

| Description of Costs | Details |
|---|-------------------------------|
| Travelling expense | 40% of administration expense |
| Communications expense (phone, internet, etc.) | 30% of administration expense |
| Office expenses (stationery, janitorial services, etc.) | 20% of administration expense |

9.5 Fixed Cost Estimate

Table 31 shows the estimated fixed cost of the project.

Table 31 Fixed Cost Estimate

| Description of Costs | Amount (PKR) |
|---------------------------------|--------------|
| Administration expense | 1,320,000 |
| Administration benefits expense | 140,400 |
| Building rental expense | 900,000 |
| Depreciation expense | 414,017 |

| | |
|--|------------------|
| Amortization of pre-operating costs | 24,843 |
| Amortization of legal, licensing, and training costs | 2,500 |
| Bad debt expense | 247,068 |
| Total | 3,048,828 |

Table 32 Fixed Cost - Management Staff Salary

| Post | No of personnel | Monthly Salary (PKR) | Annually Salary (PKR) |
|-------------------------|-----------------|----------------------|-----------------------|
| Shop Incharge / Cashier | 1 | 40,000 | 480,000 |
| Sale Counter Persons | 2 | 35,000 | 840,000 |
| Total | 3 | | 1,320,000 |

Table 33 Fixed Cost Assumptions

| Description of Costs | Details |
|---------------------------------|------------------------------|
| Administration benefits expense | 3% of administration expense |
| Bad debt expense | 0.5% of revenue |
| Depreciation expense | |
| Renovation | 10% of renovation cost |
| Machinery | 15% of machinery cost |
| Equipment | 15% of equipment cost |

9.6 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 34.

Table 34 Financial Feasibility Analysis

| Description | Project |
|----------------------------|------------|
| IRR | 63% |
| NPV (PKR) | 35,240,335 |
| Payback Period (years) | 2.35 |
| Projection Years | 10 |
| Discount rate used for NPV | 15% |

9.7 Financial Feasibility Analysis with 50% Debt

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 35.

Table 35 Financial Feasibility Analysis with 50% Debt

| Description | Project |
|----------------------------|---------|
| IRR | 60% |
| NPV (PKR) million | 22.24 |
| Payback Period (years) | 2.51 |
| Discount rate used for NPV | 13% |

9.8 Human Resource Requirement

For the 1st year of operations, the Dairy Shop shall require the workforce at a salary cost shown in Table 36.

Table 36 Human Resource Requirement

| Post | No. of Employees | Monthly Salary (PKR) | Annual Salary (PKR) |
|-------------------------|------------------|----------------------|---------------------|
| Shop Incharge / Cashier | 1 | 40,000 | 480,000 |
| Sale Counter Persons | 2 | 35,000 | 840,000 |
| Cook-Skilled | 2 | 35,000 | 840,000 |
| Cook-Helper | 2 | 35,000 | 840,000 |
| Waiter | 2 | 35,000 | 840,000 |
| Delivery Boy | 2 | 35,000 | 840,000 |
| Total | 11 | | 4,680,000 |

10 CONTACT DETAILS

Names of some relevant suppliers of machinery and equipment are provided in Table 37:

Table 37 Suppliers of Machinery and Equipment

| Cost Item | Supplier Name | City | Contact Number | Email/Web Address |
|------------------------------|--|--------|----------------|--|
| Chiller (1000 Liters) | Al-Madina Engineering and Dairy Equipment | Okara | 044-2700718 | al-madina75@hotmail.com |
| Deep Freezer (18 Cubic Feet) | Waves Singer Pakistan Factory | Lahore | 042-111313233 | www.wavessinger.com |
| Gas Cylinder (20 Kg) | Awan Gas Suppliers | Lahore | 042-35154564 | |
| Stove | Admiral Home & Commercial Kitchen Appliances | Lahore | 0300 4156602 | www.admiral-appliances.com.pk |
| Electric Madhani | ST International | Lahore | 061-65378778 | www.suretrust.com.pk |

11 USEFUL WEB LINKS

Table 38 Useful Web Links

| | |
|--|---|
| Small and Medium Enterprises Development Authority (SMEDA) | www.smeda.org.pk |
| National Business Development Program | www.nbdp.org.pk |
| Government of Pakistan | www.pakistan.gov.pk |
| Ministry of Industries and Production | www.moip.gov.pk |
| Government of Punjab | www.punjab.gov.pk |
| Trade Development Authority of Pakistan | www.tdap.gov.pk |
| Security and Exchange Commission of Pakistan | www.secp.gov.pk |
| State Bank of Pakistan | www.sbp.gov.pk |
| Federation of Pakistan Chambers of Commerce and Industry (FPCCI) | www.fpcci.com.pk |
| Punjab Small Industries Corporation | www.psic.gop.pk |
| Pakistan Agricultural Research Council | www.parc.gov.pk |
| Pakistan Dairy Association | www.pda.com.pk |
| Pakistan Agriculture & Dairy Farmers Association. | www.padfapak.org |
| Punjab Livestock & Dairy Development Board | https://www.plddb.pk/ |
| Livestock & Dairy Development Research(KPK) | http://livestockres.kp.gov.pk/ |
| Livestock & Fisheries Department Sindh | http://www.livestocksindh.gov.pk/ |
| Livestock & Dairy Development Department AJK | https://livestock.ajk.gov.pk/ |
| Dairy Solution Pvt Ltd | dairysolution.com |
| Cattlekit | cattlekit.com.pk |
| Dairy House Pakistan (Pvt) Ltd. | www.dairyhousepakistan.com |

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 | 49,413,657 | 56,913,772 | 65,261,125 | 74,540,442 | 84,844,562 | 96,275,009 | 103,495,635 | 111,257,808 | 119,602,143 | 128,572,304 |
| <i>Cost of sales</i> | | | | | | | | | | |
| Cost of Goods sold - Fresh Milk | 16,581,600 | 18,654,300 | 20,892,816 | 23,308,548 | 25,913,621 | 28,720,930 | 30,156,976 | 31,664,825 | 33,248,066 | 34,910,470 |
| Cost of Goods sold - Yogurt | 7,056,000 | 7,938,000 | 8,890,560 | 9,918,531 | 11,027,073 | 12,221,672 | 12,832,756 | 13,474,394 | 14,148,113 | 14,855,519 |
| Cost of Goods sold- Yogurt Lassi | 3,339,795 | 3,757,269 | 4,208,141 | 4,694,707 | 5,219,410 | 5,784,846 | 6,074,088 | 6,377,793 | 6,696,682 | 7,031,517 |
| Cost of Goods sold - Hot/Cold Milk | 6,219,818 | 6,997,295 | 7,836,971 | 8,743,121 | 9,720,293 | 10,773,325 | 11,311,991 | 11,877,591 | 12,471,470 | 13,095,044 |
| Cost of Goods sold - Rabri Milk | 4,038,300 | 4,543,088 | 5,088,258 | 5,676,588 | 6,311,030 | 6,994,725 | 7,344,461 | 7,711,684 | 8,097,268 | 8,502,132 |
| Cost of Goods sold - Khoya | 705,600 | 793,800 | 889,056 | 991,853 | 1,102,707 | 1,222,167 | 1,283,276 | 1,347,439 | 1,414,811 | 1,485,552 |
| Subtotal | 37,941,113 | 42,683,752 | 47,805,802 | 53,333,348 | 59,294,134 | 65,717,665 | 69,003,548 | 72,453,726 | 76,076,412 | 79,880,233 |
| Operation costs 1 (Direct Labor) | 3,360,000 | 3,605,280 | 3,868,465 | 4,150,863 | 4,453,876 | 4,779,009 | 5,127,877 | 5,502,212 | 5,903,874 | 6,334,856 |
| Operating costs 3 (Electricity Bill) | 1,010,556 | 1,099,485 | 1,196,240 | 1,301,509 | 1,416,041 | 1,540,653 | 1,676,231 | 1,823,739 | 1,984,228 | 2,158,840 |
| Operating costs 4 (Gas Cost) | 144,000 | 156,672 | 170,459 | 185,460 | 201,780 | 219,537 | 238,856 | 259,875 | 282,744 | 307,626 |
| Operating costs 5 (Water Cost) | 36,000 | 39,168 | 42,615 | 46,365 | 50,445 | 54,884 | 59,714 | 64,969 | 70,686 | 76,906 |
| Total cost of sales | 42,491,669 | 47,584,357 | 53,083,581 | 59,017,544 | 65,416,277 | 72,311,748 | 76,106,226 | 80,104,521 | 84,317,944 | 88,758,461 |
| Gross Profit | 6,921,988 | 9,329,415 | 12,177,544 | 15,522,897 | 19,428,285 | 23,963,261 | 27,389,409 | 31,153,287 | 35,284,200 | 39,813,843 |
| <i>General administration & selling expenses</i> | | | | | | | | | | |
| Administration expense | 1,320,000 | 1,416,360 | 1,519,754 | 1,630,696 | 1,749,737 | 1,877,468 | 2,014,523 | 2,161,583 | 2,319,379 | 2,488,694 |
| Administration benefits expense | 140,400 | 150,649 | 161,647 | 173,447 | 186,108 | 199,694 | 214,272 | 229,914 | 246,698 | 264,706 |
| Building rental expense | 900,000 | 990,000 | 1,089,000 | 1,197,900 | 1,317,690 | 1,449,459 | 1,594,405 | 1,753,845 | 1,929,230 | 2,122,153 |
| Travelling expense | 528,000 | 566,544 | 607,902 | 652,279 | 699,895 | 750,987 | 805,809 | 864,633 | 927,752 | 995,477 |
| Communications expense (phone, fax, mail, internet, etc.) | 396,000 | 424,908 | 455,926 | 489,209 | 524,921 | 563,240 | 604,357 | 648,475 | 695,814 | 746,608 |
| Shop vehicles running expense | 366,000 | 396,378 | 429,277 | 464,907 | 503,495 | 545,285 | 590,543 | 639,559 | 692,642 | 750,131 |
| Shop expenses (stationery, entertainment, janitorial services, etc.) | 264,000 | 283,272 | 303,951 | 326,139 | 349,947 | 375,494 | 402,905 | 432,317 | 463,876 | 497,739 |
| Depreciation expense | 414,017 | 414,017 | 414,017 | 414,017 | 414,017 | 752,405 | 641,530 | 680,710 | 680,710 | 680,710 |
| Amortization of pre-operating costs | 24,843 | 24,843 | 24,843 | 24,843 | 24,843 | - | - | - | - | - |
| Amortization of legal, licensing, and training costs | 2,500 | 2,500 | 2,500 | 2,500 | 2,500 | 2,500 | 2,500 | 2,500 | 2,500 | 2,500 |
| Bad debt expense | 247,068 | 284,569 | 326,306 | 372,702 | 424,223 | 481,375 | 517,478 | 556,289 | 598,011 | 642,862 |
| Subtotal | 4,602,827 | 4,954,039 | 5,335,122 | 5,748,639 | 6,197,376 | 6,997,908 | 7,388,323 | 7,969,825 | 8,556,610 | 9,191,580 |
| Operating Income | 2,319,161 | 4,375,376 | 6,842,422 | 9,774,259 | 13,230,909 | 16,965,354 | 20,001,087 | 23,183,462 | 26,727,590 | 30,622,263 |
| Other income 2 | | | | | | | | | | |
| Gain / (loss) on sale of machinery & equipment | - | - | - | - | - | - | 253,750 | - | - | - |
| Gain / (loss) on sale of Shop equipment | - | - | - | - | 408,600 | - | - | - | - | - |
| Gain / (loss) on sale of Shop vehicles | - | - | - | - | 127,583 | - | - | - | - | - |
| Earnings Before Interest & Taxes | 2,319,161 | 4,375,376 | 6,842,422 | 9,774,259 | 13,767,092 | 16,965,354 | 20,254,837 | 23,183,462 | 26,727,590 | 30,622,263 |
| Subtotal | - | - | - | - | - | - | - | - | - | - |
| Earnings Before Tax | 2,319,161 | 4,375,376 | 6,842,422 | 9,774,259 | 13,767,092 | 16,965,354 | 20,254,837 | 23,183,462 | 26,727,590 | 30,622,263 |
| Tax | 617,671 | 896,381 | 1,759,848 | 2,785,990 | 4,183,482 | 5,302,873 | 6,454,192 | 7,479,211 | 8,719,656 | 10,082,792 |
| NET PROFIT/(LOSS) AFTER TAX | 1,701,490 | 3,478,995 | 5,082,575 | 6,988,268 | 9,583,610 | 11,662,480 | 13,800,644 | 15,704,251 | 18,007,934 | 20,539,471 |

12.2 Balance Sheet

| 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 | 945,630 | 2,336,755 | 3,684,433 | 5,201,158 | 11,969,306 | 23,937,374 | 36,113,676 | 52,039,727 | 70,237,963 | 97,127,622 |
| Accounts receivable | | 2,030,698 | 2,184,810 | 2,510,443 | 2,872,635 | 3,275,034 | 3,721,635 | 4,104,876 | 4,412,742 | 4,743,698 | 5,099,475 |
| Pre-paid building rent | 75,000 | 82,500 | 90,750 | 99,825 | 109,808 | 120,788 | 132,867 | 146,154 | 160,769 | 176,846 | - |
| Total Current Assets | 575,000 | 3,058,828 | 4,612,315 | 6,294,701 | 8,183,600 | 15,365,128 | 27,791,876 | 40,364,706 | 56,613,238 | 75,158,507 | 102,227,097 |
| <i>Fixed assets</i> | | | | | | | | | | | |
| Machinery & equipment | 1,015,000 | 862,750 | 710,500 | 558,250 | 406,000 | 253,750 | 101,500 | 1,739,532 | 1,478,602 | 1,217,672 | 956,742 |
| Furniture & fixtures | 181,000 | 153,850 | 126,700 | 99,550 | 72,400 | 346,146 | 273,862 | 210,627 | 165,493 | 120,358 | 575,437 |
| Shop vehicles | 318,958 | 255,166 | 191,375 | 127,583 | 63,792 | 530,239 | 424,191 | 318,143 | 212,096 | 106,048 | - |
| Shop equipment | 1,021,500 | 868,275 | 715,050 | 561,825 | 408,600 | 1,756,294 | 1,377,931 | 1,050,643 | 825,505 | 600,367 | 375,230 |
| Advance payment milk supply | 2,940,000 | 3,307,500 | 3,704,400 | 4,132,721 | 4,594,614 | 5,092,363 | 5,346,982 | 5,614,331 | 5,895,047 | 6,189,800 | - |
| Renovation Cost | 176,000 | 158,400 | 140,800 | 123,200 | 105,600 | 346,602 | 303,142 | 259,681 | 216,221 | 172,761 | 129,301 |
| Security against Building Rent | 225,000 | 225,000 | 225,000 | 225,000 | 225,000 | 225,000 | 225,000 | 225,000 | 225,000 | 225,000 | 225,000 |
| Total Fixed Assets | 5,877,458 | 5,830,941 | 5,813,825 | 5,828,129 | 5,876,005 | 8,550,394 | 8,052,607 | 9,417,957 | 9,017,964 | 8,632,006 | 2,261,710 |
| <i>Intangible assets</i> | | | | | | | | | | | |
| Pre-operation costs | 124,213 | 99,370 | 74,528 | 49,685 | 24,843 | - | - | - | - | - | - |
| Legal, licensing, & training costs | 25,000 | 22,500 | 20,000 | 17,500 | 15,000 | 12,500 | 10,000 | 7,500 | 5,000 | 2,500 | - |
| Total Intangible Assets | 149,213 | 121,870 | 94,528 | 67,185 | 39,843 | 12,500 | 10,000 | 7,500 | 5,000 | 2,500 | - |
| TOTAL ASSETS | 6,601,671 | 9,011,640 | 10,520,668 | 12,190,015 | 14,099,448 | 23,928,022 | 35,854,483 | 49,790,163 | 65,636,202 | 83,793,013 | 104,488,806 |
| Liabilities & Shareholders' Equity | | | | | | | | | | | |
| <i>Current liabilities</i> | | | | | | | | | | | |
| Accounts payable | | 1,559,224 | 1,754,127 | 1,964,622 | 2,191,781 | 2,436,745 | 2,700,726 | 2,835,762 | 2,977,550 | 3,126,428 | 3,282,749 |
| Total Current Liabilities | - | 1,559,224 | 1,754,127 | 1,964,622 | 2,191,781 | 2,436,745 | 2,700,726 | 2,835,762 | 2,977,550 | 3,126,428 | 3,282,749 |
| <i>Other liabilities</i> | | | | | | | | | | | |
| Total Long Term Liabilities | - | - | - | - | - | - | - | - | - | - | - |
| <i>Shareholders' equity</i> | | | | | | | | | | | |
| Paid-up capital | 6,601,671 | 6,601,671 | 6,601,671 | 6,601,671 | 6,601,671 | 6,601,671 | 6,601,671 | 6,601,671 | 6,601,671 | 6,601,671 | 6,601,671 |
| Retained earnings | | 850,745 | 2,164,870 | 3,623,722 | 5,305,995 | 14,889,606 | 26,552,086 | 40,352,730 | 56,056,981 | 74,064,914 | 94,604,386 |
| Total Equity | 6,601,671 | 7,452,416 | 8,766,541 | 10,225,393 | 11,907,666 | 21,491,277 | 33,153,757 | 46,954,401 | 62,658,652 | 80,666,585 | 101,206,057 |
| TOTAL CAPITAL AND LIABILITIES | 6,601,671 | 9,011,640 | 10,520,668 | 12,190,015 | 14,099,448 | 23,928,022 | 35,854,483 | 49,790,163 | 65,636,202 | 83,793,013 | 104,488,806 |

12.3 Cash Flow Statement

| 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 | | 1,701,490 | 3,478,995 | 5,082,575 | 6,988,268 | 9,583,610 | 11,662,480 | 13,800,644 | 15,704,251 | 18,007,934 | 20,539,471 |
| Add: depreciation expense | | 414,017 | 414,017 | 414,017 | 414,017 | 414,017 | 752,405 | 641,530 | 680,710 | 680,710 | 680,710 |
| amortization of pre-operating costs | | 24,843 | 24,843 | 24,843 | 24,843 | 24,843 | - | - | - | - | - |
| amortization of training costs | | 2,500 | 2,500 | 2,500 | 2,500 | 2,500 | 2,500 | 2,500 | 2,500 | 2,500 | 2,500 |
| Accounts receivable | | (2,030,698) | (154,112) | (325,633) | (362,192) | (402,399) | (446,601) | (383,241) | (307,866) | (330,956) | (355,777) |
| Pre-paid building rent | (75,000) | (7,500) | (8,250) | (9,075) | (9,983) | (10,981) | (12,079) | (13,287) | (14,615) | (16,077) | 176,846 |
| Accounts payable | | 1,559,224 | 194,903 | 210,495 | 227,159 | 244,964 | 263,981 | 135,036 | 141,788 | 148,878 | 156,321 |
| Cash provided by operations | (75,000) | 1,663,875 | 3,952,895 | 5,399,721 | 7,284,613 | 9,856,553 | 12,222,687 | 14,183,183 | 16,206,768 | 18,492,989 | 21,200,072 |
| <i>Financing activities</i> | | | | | | | | | | | |
| Issuance of shares | 6,601,671 | - | - | - | - | - | - | - | - | - | - |
| Cash provided by / (used for) financing activities | 6,601,671 | - | - | - | - | - | - | - | - | - | - |
| <i>Investing activities</i> | | | | | | | | | | | |
| Capital expenditure | (6,026,671) | (367,500) | (396,900) | (428,321) | (461,892) | (3,088,405) | (254,618) | (2,006,881) | (280,717) | (294,752) | 5,689,587 |
| Acquisitions | | | | | | | | | | | |
| Cash (used for) / provided by investing activities | (6,026,671) | (367,500) | (396,900) | (428,321) | (461,892) | (3,088,405) | (254,618) | (2,006,881) | (280,717) | (294,752) | 5,689,587 |
| NET CASH | 500,000 | 1,296,375 | 3,555,995 | 4,971,400 | 6,822,720 | 6,768,148 | 11,968,068 | 12,176,302 | 15,926,051 | 18,198,236 | 26,889,658 |

13 KEY ASSUMPTIONS

13.1 Operating Cost Assumptions

Table 39 Operating Cost Assumptions

| Description | Details |
|------------------------------------|---------|
| Building rent growth rate | 10% |
| Furniture and fixture depreciation | 15% |
| Vehicle depreciation | 15% |
| Office equipment depreciation | 15% |
| Inflation growth 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 40 Revenue Assumptions

| Description | Details |
|-----------------------------------|---------|
| Sale price growth rate | 7.5% |
| Initial year capacity utilization | 70% |
| Capacity growth rate | 5% |
| Maximum capacity utilization | 95% |

Financial Assumptions

Table 41 Financial Assumptions

| Description | Details |
|---|---------|
| Project life (Years) | 10 |
| Debt: Equity | 0:100 |
| Discount Rate (Used For Equity) | 15% |
| Discount Rate (Used For Debt: Equity 50:50) | 13% |

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 |

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 |