Pre-feasibility Study

HOMEMADE CANNED FOOD BUSINESS

April 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, andrevenues 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

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2. EXECUTIVE SUMMARY

Canning is a method of preserving food in which the food contents are processed and sealed in an airtight container. Canning process increases the shelf life of food that may range from six months to five years.

The fast-paced lifestyle, rise in working population, boost in local tourism, rising consumer awareness towards hygienic food and increasing demand of consumers for ready-to-eat food, are the major driving factors in the growth of canned food market. Further, due to retention of high amount of nutrients, better taste, color, flavor and hygiene, the homemade canned foods are preferred over other preserved foods by consumers.

This type of preservation makes it easy for travelers, tourists and household users to store and carry ready-to-eat food with ease. Potential customers include frequent travelers, the local and foreigner tourists, the pilgrims, overseas Pakistanis and restaurant & hospitality industry.

This Pre-feasibility document provides details for provision of canning services to clients for packing and preserving their cooked food, thus preparing Homemade Canned Food. The proposed unit has an annual capacity of packing 84,000 food packages at a maximum capacity of 100%. However, the initial operating capacity of the project has been assumed to be 54,600 packages at 65% capacity utilization. A 10% annual increase of capacity utilization has been assumed to achieve a maximum operational capacity of 95%. A setup providing canning services for homemade canned food may be established in areas of major cities such as Lahore, Karachi, Islamabad, Faisalabad, Multan, Bahawalpur, Quetta, Peshawar, etc.

A small size unit will be set up in a rented building with area of 1,575 square feet. The proposed project requires a total investment of PKR 10.43 million. This includes capital investment of PKR 9.54 million and working capital of PKR 0.887 million. This project is financed through 100% equity. The Net Present Value (NPV) of project is PKR 5.58 million with an Internal Rate of Return (IRR) of 31% and a Payback period of 3.45 years. Further, this project is expected to generate Gross Revenues of PKR 11.23 million during first year of operations. The project is expected to generate Gross Profit (GP) ratio ranging from of 37% to 44% and Net Profit (NP) ratio ranging from 2% to 32% during the projection period of ten years. The proposed project will achieve its estimated breakeven point at capacity of 59% (49,290 packs) with breakeven revenues of PKR 10.14 million.

The proposed project may also be established using leveraged financing. At 50% debt financing at a cost of KIBOR+3%, the proposed homemade canned food business provides Net Present Value (NPV) of PKR 8.59 million, Internal Rate of Return (IRR) of 30% and Payback period of 3.55 years. Further, the debt-financed project is expected to generate Net Profit (NP) ratio ranging from 2% to 32% during the projection period of ten years. The proposed project will achieve its estimated

breakeven point at capacity of 60% (50,123 packs) with revenue of approximately PKR 10.31 million.

The proposed project will provide employment opportunities to 7 to 10 people. High return on investment is expected with the entrepreneur having some prior experience or education in the related field of business. The legal business status of this project is proposed as “Sole Proprietorship”. Further, the proposed project may also be established as a Partnership or Private Limited company.

3. INTRODUCTION TO SMEDA

The Small and Medium Enterprises Development Authority (SMEDA) was established in October 1998 with an 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 establishing a business for providing canning services to pack and preserve already cooked food, thus, termed as “Homemade Canned Food”. 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.

5. BRIEF DESCRIPTION OF PROJECT & SERVICES

This document provides details for setting up a business to offer canning services to its clients for preparation of “Homemade Canned Food”. It involves canning and packaging of food items to increase their shelf life. This type of preservation makes it easy for travelers, tourists and even household users to store and carry ready-to-eat food with ease. As the tourism industry is growing in Pakistan, the demand for homemade canned food is also increasing.

The proposed unit is assumed to operate for 8 hours a day for 280 days a year. Factors which create attraction for potential investment in this business include: easy availability of required machinery, cheap labor and simple canning process to prepare homemade canned food. Packing of food items may be done in various sizes of “Aluminium Cans” or “Retort Pouches”. These sizes normally vary from 200 grams to 1,200 grams. Figure 1 shows pictures of packing material.

Figure 1: Packing Material

	
Retort Pouches	**Aluminium Cans**

The project is based on the “Thermal Processing” method, using one exhausting machine, one can washer machine, two filling machines (1 each for can and pouch), two vacuum chambers (1 each for can and pouch), two sealers (1 each for can and

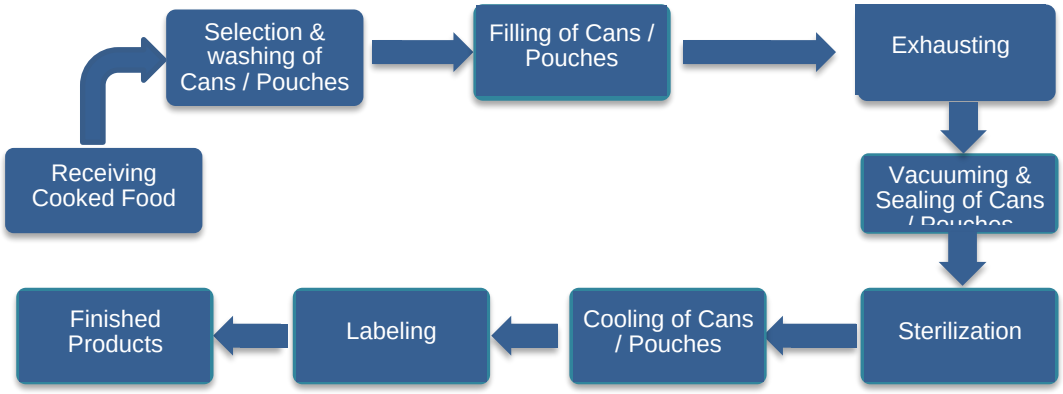
pouch), and two autoclaves sterilizer machines (100 liter and 2,200 liter) with a packaging capacity of 300 units per day in 6 batches of 50 units per batch.

The shop will be established in a rented building to avoid high land costs. Total human resources required for this project is 9 persons.

5.1. Packaging Process

Packaging process of canned food is as follows:

Figure 2: Process Flow Diagram



Brief description of packaging process is provided below:

Receiving Cooked Food

This prefeasibility document has been prepared based on assumption that client will bring the cooked food to get it packed/preserved. The cooked food should meet some predefined quality parameters with respect to temperature, necessary ingredients, water level etc. These parameters vary for different food items.

Explanation: One such parameter is that food should not be completely cooked. Because canning process involves heating mechanism. Hence, receiving partially cooked food prevents the risk of overcooking the food.

Selection and Washing of Cans / Pouches

Before filling food, cans are first examined to identify any nicks, cracks and rough edges. Presence of these defects will not permit an airtight seal on cans and will result in food spoilage. The selected cans are then washed in soapy water using cans washer machine.

Figure 3 shows cans washer machine.

Figure 3: Cans Washer Machine

Filling of Cans / Pouches

The cooked food is loaded into a feeding container from where it is automatically filled in the required quantities into the properly washed aluminum cans or retort pouches of specified sizes; varying from 200 grams to 1200 grams. The quantity of the food to be poured into the cans/pouches is controlled by the machine settings. There are different machines for filling of food into cans and pouches but the process is same. The food filled cans / pouches are then sent for further processing. Figure 4 shows an automated food-filling machine.

Figure 4: Automated Food Filling Machine

Exhausting

Unsealed cans/pouches filled with food are passed through moving conveyor belt through a steam box of the exhausting machine. This activity prevents the food from spoilage by removing air from the container in which the food has to be preserved. Exhausting process also ceases chemical reactions which may take place between food and cans. Figure 5 shows an exhausting machine.

Figure 5: Exhausting Machine

Vacuuming and Sealing

The filled cans/pouches are then moved to vacuuming and sealing machines, where the seaming mechanism seal the can automatically after vacuuming. A can vacuuming and sealing machine is shown in Figure 6.

Figure 6: Can Vacuuming and Sealing Machine

Pouches are vacuumed and sealed by using a pouch sealing machine as shown in Figure 7.

Figure 7: Pouch Sealing Machine

Sterilization

Sterilization consists of heat treatment which is sufficient to eliminate growth of spoilage causing microorganisms including bacteria and spores.

The time and temperature required for the sterilization of foods is influenced by several factors, including the type of food, the size of the container, the acidity or pH of the food etc.

Machine used for sterilization process is called autoclave. Autoclave sterilizer heats up the food cans / pouches to high temperature by using steam. This heating mechanism kills harmful bacteria, viruses, fungi, and spores in the cans/pouches. The usual procedure is to heat at 1.1 kilograms/square centimeter (kg/cm2) steam

pressure, which yields a temperature of 121°C. At 121°C, the time of autoclaving to achieve sterilization is generally considered to be 15-20 minutes, depending on the volume of the load. Figure 8 shows autoclave sterilizer machine.

Figure 8: Autoclave Sterilizer Machine

Cooling

The automatic cooling system installed in autoclave machine cools down the cans using water sprayers. These cans are then dried to prevent any surface rusting.

Labeling

The cans / pouches are then labeled by a paper sticker, identifying quantity of food and brand logo of the service provider.

Finished Products

The finished product is stored and kept in a cool dry place and delivered to the client.

Figure 9 shows sealed cans and Figure 10 shows sealed retort pouches of different sizes.

Figure 9: Sealed Food Cans

Figure 10: Sealed Retort Pouch

5.2. The ISO 9001 Standard

The concept of quality varies from one user to another with a company producing goods of different degrees of quality. Quality is defined as the fitness for a purpose.

Companies voluntarily register for these standards and are issued certificates. ISO 9001 standard is not a product certification. It is a quality process certification. Quality for homemade canned food products can be improved by adapting quality parameters prescribed by ISO 9001:2015.

The new ISO 9001:2015 management system standard helps ensure that consumers get reliable, desired quality goods and services. This further increases benefits for a business.

5.3. The ISO 22000 Standard-Food Safety Management

ISO's food safety management standards help organizations identify and control food safety hazards, at the same time as working together with other ISO management standards, such as ISO 9001. Applicable to all types of producers, ISO 22000 provides a layer of reassurance within the global food supply chain, helping products cross borders and bringing people food that they can trust.

5.4. Other Certifications and Registrations

The homemade canned food business may take following measures to improve the quality of its processing, leading to the better standing of its product/service.

Obtaining a license from food department/authority of relevant jurisdiction is mandatory for operating homemade canned food business. These food department/authorities are *Food Department-ICT*[1] (Islamabad), *Punjab Food Authority*, *Sindh Food Authority, Balochistan Food Department and Food Safety* and *Halal Food Authority, KP*. Licenses obtained from these food department/authorities have to be renewed every year and are valid for one calendar year. Further, food tests are frequently conducted to ensure its fitness for human consumption and to maintain necessary biological and chemical parameters. These tests may be conducted by Pakistan Council of Scientific and Industrial Research (PCSIR) established under Ministry of Science and Technology, Government of Pakistan.

[1] Islamabad Capital Territory

5.5. Installed and Operational Capacities

The proposed canning and packing facility will have a total installed capacity to package 300 cans/pouches per day, which will be 80 cans of 450 grams, 120 cans of 800 grams, 40 pouches of 1,200 grams and 30 pouches each of 800 grams and 200 grams daily. However, the initial operating capacity utilization of the project has been assumed to be 65% with an annual increase of 10% to achieve a maximum operational capacity of 95% in the 4th year.

The unit would operate for 8 hours per day, working in one shift per day for 280 working days in a year. Table 1 shows the installed and operational capacities of the proposed unit.

Table 1 : Installed and Operational Capacity

Product	Capacity Per Batch (Units) (A)	Prod. Ratio	Time Required per Batch (Hours)	No. of Batches processed per day (B)	Production Ratio (C)	Maximum Per day Production (Units) B*C*A=D	Total Can/Pouch Processed per Year D*280 days per year
Can 800 grams	50	70%	1.33 (80 minutes)	4 (8 hours /1.33 hours per Batch) * 70%	60%	120	33,600
Can 450 grams					40%	80	22,400
Total Cans							**56,000**
Pouch 1,200 grams		30%		2 (8 hours /1.33 hours per Batch) * 30%	40%	40	11,200
Pouch 800 grams					30%	30	8,400
Pouch 200 grams					30%	30	8,400
Total Pouches							**28,000**

6. CRITICAL FACTORS

Before making the decision to invest in Homemade Canned Food business, one should carefully analyze the associated critical factors. Important factors to be considered are as follows:

- Strict Compliance with the standards of hygiene
- Arrangement of modern machines and equipment
- Employment of skilled workers
- Usage of cans and retort pouches of highest quality
- Proper Sterilization of food, cans, and pouches
- Intactness of seal and;
- Usage of safety gears such as gloves, masks, and head caps

7. GEOGRAPHICAL POTENTIAL FOR INVESTMENT

The metropolitan cities of Lahore, Karachi, Islamabad, Peshawar, Quetta, Multan and Faisalabad offer good potential for investment in this business. Middle and elite class of these cities opt for this service while touring locally or travelling abroad. Further, these metropolitan cities of Pakistan are big tourist attractions because of their culture and traditional cuisines. Tourists, both local and international, want to avail canning services to preserve and carry the traditional foods with them as souvenir. The trend of preserving home-cooked food in tin cans is more common in metropolitan cities as people also get seasonal food preserved for use throughout the year.

8. POTENTIAL TARGET MARKETS

The lockdowns due to COVID-19 pandemic has changed routines and eating habits of people. People have started cooking their own food at home and stopped eating at restaurants. It is anticipated that this trend will prevail even after the pandemic is over because of homemade food being organic, healthier, hygienic and economical. Homemade food is safe to consume because it is hygienic and the consumer himself cooks it according to his taste and health. Some of the canning service providers are already doing this business. They are mainly rendering the canning services in the markets of Karachi, Lahore and Islamabad.

The target market for Homemade Canned Food includes elite and middle-class segments of the society who are frequent travelers, the local and foreigner tourists, the pilgrims, overseas Pakistanis and restaurant and hospitality industry. The demand for the homemade canned food will increase if the canning food setup is established in the areas of Pakistan that have extreme weather conditions like Gilgit Baltistan, Northern Areas and coldest parts of Balochistan like Quetta and Ziarat. People will enjoy their favorite foods throughout the year irrespective of the weather conditions.

The future prospects of “Homemade Canned Food Business” are bright as normally the tourists, local and foreign, prefer to use home-made canned food during their travel. Pakistan is a growing industry for tourism. It is geographically and ethnically diverse country, blessed with famous historical and cultural heritage sites. The rise in tourism in the past few years has been aided by the Government of Pakistan. Pakistan was ranked as The Best Holiday Destination for 2020 by Condé Nast Traveler Magazine (a leading traveler magazine worldwide) and was also declared the third-highest potential adventure destination in the world for 2020 by British Backpackers Society. As security in the country improves, tourism activity is expected to increase further. Pakistani government has launched online visa services for 175 countries and 50 countries are offered visa on arrival, making visit to Pakistan easier. The country has been receiving an influx of travel v-loggers who are showing the beauty of the Pakistan to the world through their v-logs. All these people cannot cook or arrange food in the northern areas with extreme weather conditions like Gilgit, Skardu and mountain ranges like K2. Therefore, the demand for home-made canned food is expected to increase in the coming times.

9. PROJECT COST SUMMARY

A detailed financial model has been developed to analyze the commercial viability of the Homemade Canned Food Business. Various cost and revenue related assumptions along with the results of the analysis are outlined in this section.

The projected Income Statement, Balance Sheet, and Cash Flow Statement are attached as annexures.

Total Project cost of PKR. 10.43 million for our proposed project will be financed through (100%) Equity.

9.1. Project Economics

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

9.1.1. Financial Feasibility Analysis

Table 2 provides the financial feasibility analysis which shows the information regarding projected IRR, NPV and payback period of the study based on 100% equity.

Table 2: Financial Feasibility Analysis

Description	Details
IRR	31%
NPV (PKR.)	5,725,925
Payback Period (Yrs.)	3.45
Projection Years	10
Discount Rate used for NPV	20%

9.1.2. Financial Feasibility Debt Financing

Table 3 provides the information regarding projected IRR, NPV and payback period of the study based on combination of equity (50%) and debt (50%) financing for the proposed project.

Table 3: Financial Feasibility Analysis Debt Financing

Description	Project
IRR	30%
NPV (PKR)	8,589,294
Payback Period (years)	3.55
Projection Years	10
Discount Rate used for NPV	16%

9.2. Initial Project Cost

Table 4 provides details of the project cost.

Table 4: Project Cost

Cost Item	Cost (PKR)
Land	-
Building / Infrastructure	273,750
Machinery and Equipment	8,100,000
Furniture & Fixtures	250,000
Office equipment	452,500
Vehicle	80,800
Pre operating expenses	150,823
Licenses, Permits, etc.	6,000
Advance Against Building Rent	225,000
Total Capital Cost	**9,538,873**
Working Capital	
Equipment spare part inventory	13,500
Raw material inventory	398,883
Prepaid Building Rent	75,000
Cash	400,000
Total Working Capital	**887,383**
Total Project Cost	**10,426,256**

9.2.1. Land Requirement

The setup for canning services to prepare homemade canned food will be established in a rented building to avoid the high cost of land. Suitable location for setting up businesses like this can be easily available on rent. Therefore, no land cost has been added to the project cost. Total space requirement for the proposed project has been estimated as 1575 sq. feet (7 Marla).

The breakup of space requirement is provided in Table 5.

Table 5: Break up of Space Requirement

Area Required	% Break up	Area Required (Sq. Ft)
Processing Hall	61%	960
Office Area	11%	180
Reception and Waiting Area	10%	150
Store	13%	200
Washroom	5%	85
Total Land Cost (PKR)	**100%**	**1575**

9.2.2. Building / Civil Works

There will be no cost of building since the business will be started in the rented premises. However, there will be a renovation cost required to make the building ready to use for the business. The proposed clinic requires estimated electricity load of 6.9 KW for which an electricity connection under the General Supply Tarif-Commercial three phase will be required. Cost of such electricity connection has not been considered in this document since electricity connection is generally available in such buildings, which are offered for rent. Building rent of PKR 75,000 per month has been included in the operating cost. Further, details of renovation cost are given in Table 6.

Table 6: Building Renovation Cost

Cost Item	Units of measure ment	Total Litre / Area / Number	Unit Cost/ sq. ft. (PKR)	Total Cost (PKR)
Paint Cost	Liter	158	500	78,750
Labour Cost	sq. feet.	15,750	8	126,000
Wall Racks	Units	4	15,000	60,000
Curtains	Units	1	5,000	5,000
Blinds	Units	2	2,000	4000
Total				**273,750**

9.2.3. Machinery and Equipment Requirement

Table 7 provides details of machinery and equipment requirements for the project.

Table 7: Machinery and Equipment

Cost Item	Number of Items	Unit Cost (PKR)	Total Cost (PKR)
Exhausting Machine	1	1,250,000	1,250,000
Can Washer	1	450,000	450,000
Filling Machine-Cans	1	350,000	350,000
Filling Machine- Pouches	1	350,000	350,000
Vacuum Chamber-Cans	1	2,000,000	2,000,000
Vacuum Chamber-Pouches	1	1,200,000	1,200,000
Sealer – Cans	1	150,000	150,000
Sealer – Pouches	1	35,000	35,000
Retort / Autoclave Sterilizer (100 Liters)	1	115,000	115,000
Retort /Autoclave sterilizer (2200 Liters)	1	2,200,000	2,200,000
Total Cost (PKR)			**8,100,000**

9.2.4. Furniture and Fixture Requirements

Details of the furniture and fixture required for the project, along with their cost, are given in Table 8.

Table 8: Furniture and Fixtures

Cost Item	Number of Items	Unit Cost (PKR)	Total Cost (PKR)
Office Tables	2	25,000	50,000
Reception Counter	1	50,000	50,000
Executive Table	1	30,000	30,000
Executive Chairs	1	20,000	20,000
Office Chairs	6	10,000	60,000
Sofa Sets	1	40,000	40,000
Total Cost (PKR)			**250,000**

9.2.5. Office Equipment Requirement

Table 9 provides details of office equipment for the project.

Table 9: Office Equipment

Cost Item	No.	Unit Cost (PKR)	Total Cost (PKR)
Air Conditioners	2	90,000	180,000
Laptop / Computer	1	80,000	80,000
Printer	1	40,000	40,000
LED/LCD 32 inch	1	40,000	40,000
Water Dispensers	2	20,000	40,000
Ceiling Fans	7	4,500	31,500
Exhaust Fans	3	2,000	6,000
Bracket Fans	3	4,000	12,000
WIFI Router and Connection	1	5,000	5,000
Cooling Fans	4	4,500	18,000
Total Cost (PKR)			**452,500**

9.2.6. Vehicle Required

Vehicles are required for the transport of raw material and finished goods. Details of the vehicles required along with the cost for the proposed project is provided in Table 10.

Table 10: Vehicles Cost

Cost Item	Number of Vehicles	Unit Cost (PKR) (A)	Registration Charges @ 1% (B)	Total Cost (PKR) (A+B)
Motorcycle	1	80,000	800	80,800
Total Cost (PKR)			**800**	**80,800**

9.2.7. Pre-Operating Expense

The estimated pre-operating costs are PKR. 152,536 including essential cost to be borne by the project is the cost of staff salaries estimated to be Rs. 122,000 and utility expenses estimated to be PKR. 30,536. Details are given in Table 11.

Table 11: Pre-Operating Expenses

Cost Item	Number of months	Monthly Cost	Total Cost (PKR)
Owner	2	50,000	100,000
Labour-Sterilization	1	22,000	22,000
Electricity Charges	1	28,823	28,823
Total Cost (PKR)			**150,823**

9.2.8. Licenses, Permits, etc.

Table 12 provides details of Licenses, Permits cost for the project.

Table 12 : Licenses, Permits Cost

Cost Item	Frequency	Total Cost (PKR)
Punjab Food Authority	Annual	5,000
Federal Ministry of Health, Govt. of Pakistan	Annual	1,000
Total Cost (PKR)		**6,000**

9.2.9. Advance against Building Rent

Table 13 provides details of advance against building rent for the project.

Table 13: Advance against Building Rent

Cost Item	Number of Months	Unit Cost (PKR)	Total Cost (PKR)
Advance against Building Rent	3	75,000	225,000
Total Cost (PKR)			**225,000**

9.3. Break Even Analysis

Table 14 and Table 15 provide details of Breakeven Analysis.

Table 14: Break Even Analysis

Particulars	Amount First Year (PKR)	Ratios
Sales	11,229,400	100%
Variable Cost	7,449,813	66%
Contribution	3,779,587	34%
Fixed Cost	3,411,991	30%
Breakeven		

Breakeven Units	49,290
Breakeven Revenue	10,137,246
Breakeven Capacity	59%

Table 15: Break Even Analysis

Products	Break Even Units	Charges (PKR)	Break Even Revenue	Break Even Capacity
Can - 800 gram	19,870	250	4,967,453	59%
Can - 450 gram	13,247	170	2,251,912	59%
Pouch - 1,200 gram	6,623	250	1,655,818	59%
Pouch - 800 gram	4,967	170	844,467	59%
Pouch - 200 gram	4,967	100	496,745	59%
Total	**49,675**		**10,216,396**	

9.4. Revenue Generation

Table 16 provides details of revenue generation for the project.

Table 16: Revenue Generation

Products	Sales (Units)	Service Charges per can / pouch (PKR)	Revenue (PKR)
Can 800 grams	21,840	250	5,460,000
Can 450 grams	14,560	170	2,475,200
Pouch 1,200 gram	7,280	250	1,820,000
Pouch 800 gram	5,460	170	928,200
Pouch 200 gram	5,460	100	546,000
Total	**54,600**		**11,229,400**

9.5. Variable Cost Estimate

Table 17 provides details of variable cost.

Table 17: Variable Cost Detail

Description of Costs	Total Cost (PKR)
Can Cost-800g	2,839,200
Can Cost-450g	1,310,400
Pouch Cost-1200g	364,000
Pouch Cost-800g	163,800
Pouch Cost-200g	109,200
Direct Labour	1,824,000
Utilities and Internet Cost	299,213
Machinery Maintenance – Cost	162,000
Travelling expense	84,000
Communications expense (phone, fax, mail, internet, etc.)	126,000
Office expenses (stationery, entertainment, janitorial services)	168,000
Total	**7,449,813**

9.5.1. Can/Pouch Cost

Table 18 provides details of can / pouch cost.

Table 18: Can/Pouch Cost details

Description of Costs	Production (Unit)	Charges per Can / Pouch (PKR)	Total Cost (PKR)
Can Cost-800g	33,600	130	2,839,200
Can Cost-450g	22,400	90	1,310,400
Pouch Cost-1200g	11,200	50	364,000
Pouch Cost-800g	8,400	30	163,800
Pouch Cost-200g	8,400	20	109,200

9.6. Fixed Cost

Table 19 Provides details of fixed cost.

Table 19: Fixed Cost details

Description of Costs	Total Cost (PKR)
Management Staff	840,000
Building rental expense	900,000
Utilities	166,662
Promotional expense [2]	112,294
Depreciation expense	1,359,870
Amortization of pre-operating costs	30,165
Amortization of legal, licensing, and training costs	3,000
Total	**3,411,991**

[2] *Promotional expense includes pamphlet and social media marketing (Facebook, YouTube and Instagram).

9.7. Human Resource Requirement

To run the operations of proposed business, a small team is required to run the operations. Details of Human resources required, along with the number of employees and monthly and annual salaries, are shown in Table 20.

Table 20: Human Resource Requirements

Description	Number of Employees	Salary Per Month Per Resource (PKR)	Annual Salaries (PKR)
Owner Manager	1	50,000	600,000
Labour-Sterilization	1	22,000	264,000
Labour-Filling	1	20,000	240,000
Labour-Sealing	1	20,000	240,000
Labour-Autoclave	1	20,000	240,000
Labour-Packing & Labelling	1	20,000	240,000
Admin & Finance Officer	1	30,000	360,000
Office Boy	1	20,000	240,000
Security guard	1	20,000	240,000
Total	**7**		**2,664,000**

10. CONTACT DETAILS

In order to facilitate the potential investors, contact details of some relevant vendors to the proposed project is given in Table 21.

Table 21 : Contact Details

Name of supplier	Type of supplies	Email/ Website	Contact Number
Suzhou Yaoshi Machinery Co., Ltd.	Sterilizers/ Autoclave/ Filling Machine	https://yaoshi.en.china.cn	+86 512 5853 8148 +86 189 1568 9801
Henan Dafu Mechanical Import and Export Co., Ltd.	Sterilizers/ Autoclave	https://dafumachinery.en.china.cn	+86 371 6782 2251 +86 150 9327 1995
Komachine Korea	Filling Machine	https://www.komachine.com/en	+82 31 335 9901
Wuhan Global Import and Export Limited	Vacuuming and Sealing Machine	Cs02@gloex.co..cn https://www.gloex.net	+86 27 8738 5628
AU Foods	Technical Information/ Food Canning	https://www.facebook.com/aufoods.pk	03364858898
Hussain Can Co. (Pvt.) Ltd.	Cans/ raw material	https://www.hussaincan.com	+924237914881-3

11. USEFUL LINKS

Table 22 : 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
Government of Pakistan	www.pakistan.gov.pk
Ministry of National Health Services, Regulation and Coordination	http://www.nhsrc.gov.pk
Punjab Food Authority	https://www.pfa.gop.pk
Sindh Food Authority	https://sfa.gos.pk
Khyber Pakhtunkhwa Food Safety & Halal Food Authority	https://kpfsa.gov.pk
Balochistan Food Department	https://balochistan.gov.pk/departments/food-department/
Pakistan Council of Scientific and Industrial Research (PCSIR)	http://www.pcsir.gov.pk http://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
Sindh Small Industries Corporation	https://ssic.gos.pk
Small Industries Development Board	www.small_industries_de.kp.gov.pk/

12. ANNEXURES

12.1. Income Statement

Calculations **SMEDA**

Income Statement

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Revenue	**11,229,400**	**14,032,431**	**17,223,406**	**20,847,413**	**22,577,748**	**24,451,701**	**26,481,193**	**28,679,132**	**31,059,500**	**33,637,438**
Cost of sales										
Can Cost-800g	2,839,200	3,547,908	4,354,702	5,270,983	5,708,474	6,182,278	6,695,407	7,251,126	7,852,969	8,504,766
Can Cost-450g	1,310,400	1,637,496	2,009,863	2,432,761	2,634,681	2,853,359	3,090,188	3,346,673	3,624,447	3,925,276
Pouch Cost-1200g	364,000	454,860	558,295	675,767	731,856	792,600	858,385	929,631	1,006,791	1,090,355
Pouch Cost-800g	163,800	204,687	251,233	304,095	329,335	356,670	386,273	418,334	453,056	490,660
Pouch Cost-200g	109,200	136,458	167,489	202,730	219,557	237,780	257,516	278,889	302,037	327,106
Utilities and Internet Cost	299,213	325,414	353,909	384,900	418,604	455,260	495,126	538,482	585,635	636,917
Direct Labor	1,824,000	1,957,760	2,101,329	2,255,427	2,420,824	2,598,352	2,788,897	2,993,417	3,212,934	3,448,549
Machinery Maintenance - Cost	162,000	175,446	190,008	205,779	222,858	241,356	261,388	283,083	306,579	332,025
Total cost of sales	7,071,813	8,440,029	9,986,828	11,732,442	12,686,189	13,717,654	14,833,180	16,039,636	17,344,449	18,755,654
Gross Profit	4,157,587	5,592,402	7,236,578	9,114,971	9,891,559	10,734,048	11,648,012	12,639,496	13,715,051	14,881,784
General administration & selling expenses										
Management Staff	840,000	901,600	967,717	1,038,683	1,114,853	1,196,609	1,284,361	1,378,547	1,479,641	1,588,148
Administration benefits expense	26,640	28,594	30,690	32,941	35,357	37,950	40,733	43,720	46,926	50,367
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
Utilities	166,662	181,256	197,128	214,390	233,163	253,581	275,786	299,935	326,200	354,764
Travelling expense	84,000	90,160	96,772	103,868	111,485	119,661	128,436	137,855	147,964	158,815
Communications expense (phone, fax, mail, internet,	126,000	135,240	145,158	155,802	167,228	179,491	192,654	206,782	221,946	238,222
Office expenses (stationery, entertainment, janitorial	168,000	180,320	193,543	207,737	222,971	239,322	256,872	275,709	295,928	317,630
Promotional expense	112,294	140,324	172,234	208,474	225,777	244,517	264,812	286,791	310,595	336,374
Depreciation expense	1,359,870	1,359,870	1,359,870	1,359,870	1,359,870	1,359,870	915,705	2,314,879	2,314,879	2,314,879
Amortization of pre-operating costs	30,165	30,165	30,165	30,165	30,165	-	-	-	-	-
Amortization of legal, licensing, and training costs	3,000	3,000	6,739	7,487	7,487	7,487	9,169	9,169	10,694	10,694
Subtotal	3,816,631	4,040,529	4,289,016	4,557,317	4,826,046	5,087,947	4,962,932	6,707,232	7,084,002	7,492,045
Operating Income	340,957	1,551,874	2,947,562	4,557,654	5,065,512	5,646,101	6,685,080	5,932,263	6,631,049	7,389,739
Gain / (loss) on sale of machinery & equipment	-	-	-	-	-	-	2,025,000	-	-	
Gain / (loss) on sale of office equipment	-	-	-	-	-	-	113,125	-	-	
Gain / (loss) on sale of office vehicles	-	-	-	-	-	-	20,200	-	-	
Earnings Before Interest & Taxes	340,957	1,551,874	2,947,562	4,557,654	5,065,512	5,646,101	8,843,405	5,932,263	6,631,049	7,389,739
Subtotal	-	-	-	-	-	-	-	-	-	-
Earnings Before Tax	340,957	1,551,874	2,947,562	4,557,654	5,065,512	5,646,101	8,843,405	5,932,263	6,631,049	7,389,739
Tax	140,368	175,405	215,293	260,593	282,222	305,646	331,015	358,489	388,244	420,468
NET PROFIT/(LOSS) AFTER TAX	**200,589**	**1,376,468**	**2,732,269**	**4,297,062**	**4,783,291**	**5,340,455**	**8,512,391**	**5,573,774**	**6,242,805**	**6,969,271**

12.2. Balance Sheet

Statement Summaries **SMEDA**

Balance Sheet

Rs. in actuals

	Year 0	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Assets											
Current assets											
Cash & Bank	400,000	1,713,613	3,581,364	5,733,987	8,117,839	10,160,567	12,005,082	14,697,370	22,269,939	30,461,695	39,590,489
Accounts receivable	-	307,655	346,052	428,162	521,518	594,865	644,239	697,711	755,621	818,337	886,259
Raw material inventory	398,883	398,883	539,822	717,572	940,647	1,103,275	1,294,019	1,517,741	1,780,142	2,087,908	2,448,885
Equipment spare part inventory	13,500	15,790	18,469	21,602	25,266	29,553	34,566	40,430	47,288	55,310	-
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	887,383	2,518,441	4,576,458	7,001,148	9,715,078	12,009,048	14,110,773	17,099,405	25,013,759	33,600,097	42,925,633
Fixed assets											
Building/Infrastructure	273,750	246,375	219,000	191,625	164,250	136,875	109,500	82,125	54,750	27,375	-
Machinery & equipment	8,100,000	6,885,000	5,670,000	4,455,000	3,240,000	2,025,000	810,000	13,881,977	11,799,680	9,717,384	7,635,087
Furniture & fixtures	250,000	212,500	175,000	137,500	100,000	62,500	25,000	428,456	364,188	299,919	235,651
Office vehicles	80,800	68,680	56,560	44,440	32,320	20,200	8,080	164,086	139,473	114,860	90,247
Office equipment	452,500	384,625	316,750	248,875	181,000	113,125	45,250	775,505	659,180	542,854	426,528
Medical Books & Study material	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	9,382,050	8,022,180	6,662,310	5,302,440	3,942,570	2,582,700	1,222,830	15,557,149	13,242,270	10,927,392	8,612,513
Intangible assets											
Pre-operation costs	150,823	120,658	90,494	60,329	30,165	-	-	-	-	-	-
Legal, licensing, & training costs	6,000	9,480	13,478	14,297	14,974	16,303	18,337	19,452	21,389	22,688	11,994
Total Intangible Assets	156,823	130,138	103,972	74,627	45,138	16,303	18,337	19,452	21,389	22,688	11,994
TOTAL ASSETS	10,426,256	10,670,759	11,342,740	12,378,214	13,702,786	14,608,051	15,351,940	32,676,006	38,277,418	44,550,177	51,550,141
Liabilities & Shareholders' Equity											
Current liabilities											
Accounts payable	-	144,208	178,102	216,633	260,336	282,053	305,585	331,088	358,726	388,680	419,373
Total Current Liabilities	-	144,208	178,102	216,633	260,336	282,053	305,585	331,088	358,726	388,680	419,373
Other liabilities											
Total Long Term Liabilities	-	-	-	-	-	-	-	-	-	-	-
Shareholders' equity											
Paid-up capital	10,426,256	10,426,256	10,426,256	10,426,256	10,426,256	10,426,256	10,426,256	19,212,428	19,212,428	19,212,428	19,212,428
Retained earnings	-	100,295	738,381	1,735,325	3,016,193	3,899,742	4,620,099	13,132,489	18,706,263	24,949,068	31,918,339
Total Equity	10,426,256	10,526,551	11,164,638	12,161,581	13,442,450	14,325,998	15,046,355	32,344,918	37,918,692	44,161,497	51,130,768
TOTAL CAPITAL AND LIABILITI	10,426,256	10,670,759	11,342,740	12,378,214	13,702,786	14,608,051	15,351,940	32,676,006	38,277,418	44,550,177	51,550,141

12.3. Cash Flow Statement

Statement Summaries **SMEDA**

Cash Flow Statement

Rs. in actuals

	Year 0	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Operating activities											
Net profit	-	200,589	1,376,468	2,732,269	4,297,062	4,783,291	5,340,455	8,512,391	5,573,774	6,242,805	6,969,271
Add: depreciation expense	-	1,359,870	1,359,870	1,359,870	1,359,870	1,359,870	1,359,870	915,705	2,314,879	2,314,879	2,314,879
amortization expense	-	33,165	33,165	36,904	37,651	37,651	7,487	9,169	9,169	10,694	10,694
Accounts receivable	-	(307,655)	(38,398)	(82,110)	(93,356)	(73,347)	(49,374)	(53,472)	(57,910)	(62,717)	(67,922)
Finished good inventory	-	-	(140,939)	(177,750)	(223,076)	(162,628)	(190,744)	(223,722)	(262,401)	(307,767)	(360,976)
Equipment inventory	(398,883)	(2,290)	(2,679)	(3,133)	(3,665)	(4,286)	(5,013)	(5,864)	(6,858)	(8,022)	55,310
Raw material inventory	(13,500)	-	-	-	-	-	-	-	-	-	-
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	-	144,208	33,894	38,530	43,704	21,716	23,533	25,503	27,638	29,954	30,693
Cash provided by operations	(487,383)	1,420,387	2,613,132	3,895,506	5,408,208	5,951,286	6,474,135	9,166,423	7,583,675	8,203,750	9,128,794
Financing activities											
Issuance of shares	10,426,256	-	-	-	-	-	-	8,786,172	-	-	-
Cash provided by / (used for) financ	10,426,256	-	-	-	-	-	-	8,786,172	-	-	-
Investing activities											
Capital expenditure	(9,538,873)	(6,480)	(6,998)	(7,558)	(8,163)	(8,816)	(9,521)	(15,260,307)	(11,106)	(11,994)	-
Cash (used for) / provided by invest	(9,538,873)	(6,480)	(6,998)	(7,558)	(8,163)	(8,816)	(9,521)	(15,260,307)	(11,106)	(11,994)	-
NET CASH	400,000	1,413,907	2,606,133	3,887,948	5,400,045	5,942,470	6,464,613	2,692,288	7,572,569	8,191,756	9,128,794

13. KEY ASSUMPTIONS

13.1. Operating Cost Assumptions

Table 23: Operating Cost Assumptions

Description	Details
Operating costs growth rate	8.3% of general inflation rate
Building rent growth rate	10% of current monthly rent
Travelling expenses	10% of administration expenses
Communication expenses	15% of administration expenses
Promotional expense	1% of revenue
Office expenses (stationery, janitorial, etc.)	20% of administration expenses

13.2. Production Cost Assumptions

Table 24: Production Cost Assumptions

Description	Details
Cost of goods sold growth rate	8.3%
Cost per Can 800g	PKR 130/unit
Cost per Can 450g	PKR 90/unit
Cost per Pouch 1,200g	PKR 50/unit
Cost per Pouch 800g	PKR 30/unit
Cost per Pouch 200g	PKR 20/unit
Machinery maintenance Cost	PKR 2% of Machinery Cost

13.3. Revenue Assumptions

Table 25:Revenue Assumptions

Description	Details
Sale price growth rate	8.3%
Production capacity utilization	65%
Production capacity utilization growth rate	10%
Maximum capacity utilization	95%

13.4. Financial Assumptions

13.4.1. Debt: Equity - 0:100

Table 26 Financial Assumptions

Description	Details
Project life (Years)	10
Discount Rate (used for 100% equity)	20%
Discount Rate (used for 50:50 debt-equity)	16%

13.4.2. Cash Flow Assumptions

Table 27 Cash Flow Assumptions

Description	Details
Accounts receivable cycle (in days)	10
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
3rd 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	5TH 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