



**Pre-feasibility Study**

# **PRODUCTION UNIT OF COOKIES AND CRACKERS**

**August 2021**

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

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

## Table of Contents

<b>1. DISCLAIMER .....</b>	<b>4</b>
<b>2. EXECUTIVE SUMMARY .....</b>	<b>5</b>
<b>3. INTRODUCTION TO SMEDA .....</b>	<b>6</b>
<b>4. PURPOSE OF THE DOCUMENT .....</b>	<b>6</b>
<b>5. BRIEF DESCRIPTION OF PROJECT &amp; Services .....</b>	<b>7</b>
5.1. Machinery and Equipment .....	8
5.2. Process Flow of Production of Cookies and Crackers .....	11
5.3. Installed and Operational Capacities .....	13
<b>6. CRITICAL FACTORS .....</b>	<b>15</b>
<b>7. GEOGRAPHICAL POTENTIAL FOR INVESTMENT .....</b>	<b>15</b>
<b>8. POTENTIAL TARGET Customers/MARKETS .....</b>	<b>15</b>
<b>9. PROJECT COST SUMMARY .....</b>	<b>16</b>
9.1. Project Economics .....	16
9.2. Financial Feasibility Analysis-Debt Financing .....	16
9.3. Initial Project Cost .....	16
9.3.1. Land .....	17
9.3.2. Building .....	17
9.3.3. Machinery and Equipment Requirement .....	18
9.3.4. Furniture & Fixtures Requirement .....	18
9.3.5. Office Equipment Requirement .....	19
9.3.6. Office Vehicle Requirement .....	19
9.3.7. Security against Building .....	20
9.3.8. Pre-Operating Cost .....	20
9.3.9. Working Capital Requirements .....	20
9.4. Breakeven Analysis .....	20
9.5. Revenue Generation .....	21
9.6. Variable Cost Estimate .....	21
9.7. Fixed Cost Estimate .....	26
9.8. Human Resource Requirement .....	27
<b>10. CONTACT DETAILS .....</b>	<b>28</b>
<b>11. USEFUL LINKS .....</b>	<b>29</b>
<b>12. ANNEXURES .....</b>	<b>30</b>
12.1. Income Statement .....	30
12.2. Balance Sheet .....	31
12.3. Cash Flow Statement .....	32

<b>13. KEY ASSUMPTIONS.....</b>	<b>33</b>
13.1. Operating Cost Assumptions.....	33
13.2. Revenue Assumptions .....	33
13.3. Financial Assumptions .....	33

### Table of Tables

Table 1 Installed and Operational Capacity .....	14
Table 2 Project Economics .....	16
Table 3 Financial Feasibility Analysis-Debt Financing.....	16
Table 4 Project Cost .....	16
Table 5 Breakup of Space Requirement .....	17
Table 6 Building Renovation Cost .....	18
Table 7 Machinery and Equipment Requirement.....	18
Table 8 Furniture and Fixtures Requirement.....	19
Table 9 Office Equipment Requirement .....	19
Table 10 Office Vehicle Requirement .....	19
Table 11 Security against Building .....	20
Table 12 Pre-Operating Cost .....	20
Table 13 Working Capital Requirements.....	20
Table 14 Breakeven Analysis.....	20
Table 15 Revenue Generation .....	21
Table 16 Variable Cost Estimate .....	21
Table 17 Raw Material Cost-Cookies .....	22
Table 18 Raw Material Cost–Crackers.....	22
Table 19 Direct Labor.....	23
Table 20 Machinery Maintenance Cost.....	23
Table 21 Fuel Cost.....	23
Table 22 Other Consumables .....	24
Table 23 Other Materials .....	25
Table 24 Variable cost Assumptions.....	26
Table 25 Fixed Cost Estimate .....	26
Table 26 Staff Salaries .....	26
Table 27 License, Permits, etc.* .....	26
Table 28 Fixed Cost Assumption.....	27
Table 29 Human Resource Requirement.....	27
Table 30 Contact Details.....	28
Table 31 Useful Links .....	29
Table 32 Operating Cost Assumptions .....	33
Table 33 Revenue Assumptions.....	33
Table 34 Financial Assumptions.....	33

## Table of Figures

Figure 1 Baking Oven.....	8
Figure 2 Dough Mixer.....	8
Figure 3 Bench-top Manual Cookie Maker .....	9
Figure 4 Transport Trolleys .....	10
Figure 5 Grinder .....	10
Figure 6 Other Equipment .....	11
Figure 7 Process Flow of Production Unit of Cookies and Crackers.....	11

## 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.

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### **Document Control**

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## 2. EXECUTIVE SUMMARY

The cookies and crackers manufacturing industry is a rapidly growing industry in Pakistan. The manufacturing of cookies and crackers has shifted from home-operated informal units to small scale formal manufacturing units. A large number of cookie and crackers manufacturing units are working all across the Pakistan.

Both cookies and crackers are made through baking. The major difference between the two is that the cookies are soft and sweet baked products; whereas crackers are crunchy and salty baked products. Cookies are made from white flour (maida), sugar, oil (or fat), eggs; with other optional ingredients such as raisins, oats, chocolate chips, nuts, etc. Crackers are usually salty, flat, dry baked products typically made from white flour (maida), oil (or fat) and eggs. Different flavorings or seasonings, such as herbs, seeds, or cheese, may be added to the dough or sprinkled on top before baking.

The proposed cookies and crackers production unit aims to produce healthy baked products, to meet different preferences and tastes of customers. Currently, cookies and crackers are manufactured both by bakeries, and the units established especially for this purpose. The current market of biscuits and bread (includes biscuits, wafers, white and brown bread and rusks) in Pakistan is worth US \$11,024,059 and around 42 formal units of biscuits and bread manufacturing are working across Pakistan<sup>1</sup>. An increasing popularity of snack products like cookies and crackers, owing to the advantage of on-the-go consumption, is a major factor driving the market growth during the forecast period 2019-2025.

This “Pre-feasibility Document” provides details for setting up “Production Unit of Cookies and Crackers” to supply high quality baked cookies and crackers. This production unit may be established in major cities such as Karachi, Lahore, Sargodha, Peshawar, Rawalpindi, Quetta, Faisalabad, Sialkot, Hyderabad, Gujranwala, Bahawalpur, Multan, Gilgit, Muzaffarabad, Khushab, Sukkur, Mardan or any other major city with a large population. In addition to large cities, the project may also be established in smaller cities and towns all over the country where such products are high in demand, but not very easily available.

The proposed project has a total investment of PKR 3.80 million. This includes capital investment of PKR 3.14 million and working capital of PKR 0.66 million. This project is financed through 100% equity in which case the Net Present Value (NPV) is PKR 19.51 million with an Internal Rate of Return (IRR) of 58% and a Payback period of 2.77 years. Further, this project is expected to generate Gross Annual Revenues of PKR 15.05 million during first year, Gross Profit (GP) ratio ranging from 21% to 40% and Net Profit (NP) ratio ranging from 3% to 21% during the projection period of 10 years. The proposed project will achieve its estimated breakeven point at capacity of 46% (28,552 boxes of 1 kg) with annual revenue of PKR 11.42 million.

The proposed project may also be established using leveraged financing. At 50% financing at a cost of KIBOR+3%, the proposed production unit of cookies and

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<sup>1</sup> Food Processing Sector in Pakistan 2021 (SMEDA report)

crackers provides Net Present Value (NPV) of PKR 22.15 million, Internal Rate of Return (IRR) of 57% and Payback period of 2.82 years. Further, this project is expected to generate Net Profit (NP) ratio ranging from 3% to 21% during the projection period of ten years. The proposed project will achieve its estimated breakeven point at capacity of 46% (29,061 boxes in 1 kg) with annual revenue of PKR 11.62 million.

The proposed project will provide employment opportunities to around 9 people including the owner. The legal business status of this project is proposed as "Sole Proprietorship" or "Partnership".

### **3. INTRODUCTION TO SMEDA**

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

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

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

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

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

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

### **4. PURPOSE OF THE DOCUMENT**

The objective of the pre-feasibility study is primarily to facilitate potential entrepreneurs in project identification for investment. The project pre-feasibility may form the basis of an important investment decision and in order to serve this objective, the

document/study covers various aspects of project concept development, start-up, and production, marketing, finance and business management.

The purpose of this document is to provide information to the potential investors about establishing a “Production Unit of Cookies and Crackers”. The document provides a general understanding of the business to facilitate potential investors in crucial and effective investment decisions.

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

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

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

## 5. BRIEF DESCRIPTION OF PROJECT & SERVICES

This document provides details for establishing a production unit for cookies and crackers. Cookies and Crackers represent staple food that is generally prepared by the baking of dough; although steaming or frying are also used as alternative techniques.

**Cookies:** Cookies are sweet in taste. Key ingredients for making cookies are white flour (maida), water, yeast and sugar.

**Crackers:** Crackers are salty in taste. Key ingredients for making crackers are white flour (maida), water, salt, yeast and sugar.

Cookies are soft and sweet and are often served with hot beverages, such as milk, coffee or tea. Cookies are mostly baked until they are crisp or baked enough that they remain soft. Cookies are made in a wide variety of styles, using different ingredients including sprinkled sugar, spices, chocolate, butter, peanut butter, nuts, or dried fruits. The softness of the cookies depends on their baking time. Crackers are crunchy and salty. Crackers may be eaten on their own, and may also be used with other food items such as cheese, meat slices, fruits, dips, or soft spreads such as jams, simple butters, peanut butters, mousse, etc.

The proposed unit will be equipped with basic baking equipment; which includes gas operated baking oven (8x8 feet), dough mixing machine (30 kg), bench top manual cookie and cracker maker, cookie / cracker pans, oven trays and other supportive equipment.



## 5.1. Machinery and Equipment

Machinery and equipment required for establishing a “Production Unit of Cookies and Crackers” are briefly discussed below:

### **Baking Oven**

Gas operated baking oven mainly uses flames for baking process which are easy to control and maintain the moisture of cookies and crackers. A gas oven still requires some electricity; not for heating, but for running gas igniter and other oven accessories like clock/timer and oven lights. Oven will be used in the machine area of the proposed unit for baking cookies and crackers. The proposed gas operated automatic baking oven is of 8x8 feet size with a capacity of 55 trays (18x12 inches) per batch which approximately takes 30 minutes to fully bake the cookies, depending upon the set temperature. Figure 1 shows a typical baking oven.

**Figure 1 Baking Oven**



### **Dough Mixer**

The ingredients of cookies and crackers are mixed using a Dough<sup>2</sup> Mixer. Electric operated automatic dough mixer (also known as spiral mixer) consists of a spiral-shaped agitator that remains stationary, while the bowl revolves around it. This specialized design makes it suitable for mixing large quantities of dough at a time. The dough mixer bowl has a capacity of 30 kg; however, bowl with higher capacity can also be used depending on the production requirement. Figure 2 shows dough mixer.

**Figure 2 Dough Mixer**

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<sup>2</sup> Dough is a thick, malleable mixture of flour and liquid, used for baking into bread or pastry.

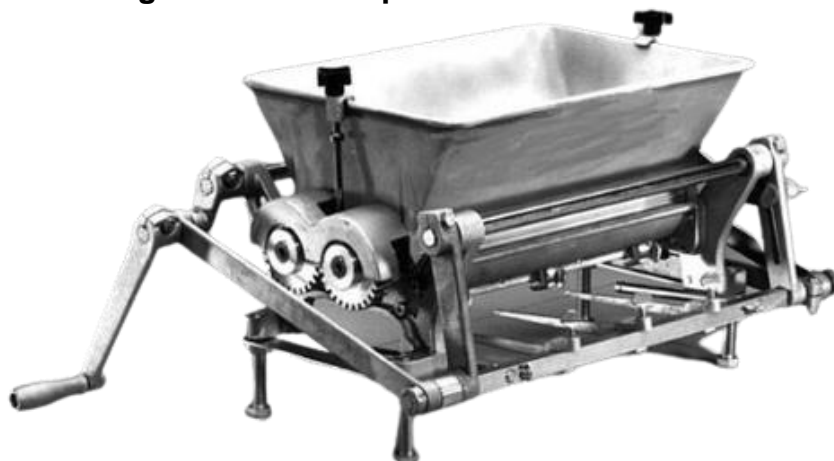


### **Bench-top Manual Cookie Maker**

Bench top manual cookie maker is a hand operated cookie maker machine, which converts dough into cookies and crackers of different shapes. Dough is placed in the hopper and after passing through its roller, it is given different shapes by passing through dies of different shapes. The hopper of machine can hold up to 20 kg of dough in one time and can make 300 cookies per minute depending on the style and shape of the die. The selected machine comes with 4 dies of different shapes. There are around 150 dies of different shapes and sizes available in the market; each costing up to PKR 15,000.

Traditionally, such businesses use hand operated small biscuit dies which involves a labor-intensive procedure and increases the labor cost and production time. In order to reduce the labor cost and production time, and to produce higher quality products, it has been proposed to use Bench-top Manual Cookie Maker machine. Figure 3 shows the bench top manual cookie maker.

**Figure 3 Bench-top Manual Cookie Maker**



### **Transport Trolleys**

Transport Trolleys are used to move final product after production from machine area to open area. The frame of trolley is made of stainless steel. Trolleys may be with

or without shelves. Trolley without shelves is known as Platform Transport Trolley whereas the one with shelves is known as Open Transport Trolley. A typical Transport Trolley is equipped with 3-4 shelves which are mounted on fixed height. The trolleys without shelves are used to transfer raw material from open area to machine area. Figure 4 shows the transport trolleys.

**Figure 4 Transport Trolleys**



### **Grinder**

Grinder is used to grind sugar and other topping material; the capacity of the proposed grinder is 3 kg. The ground sugar is used in dough mixer. Figure 5 shows the grinder.

**Figure 5 Grinder**



### **Other Equipment**

Other equipment includes oven trays, biscuit dies and spatulas. Biscuit dies are used for giving variety of shapes and sizes of cookies and crackers, the shapes of cookies

and crackers are decided by the baking staff. Oven tray is used for placing cookies and crackers of variety of shapes and sizes for baking. Spatula is used lift the uncooked cookies without any damage.

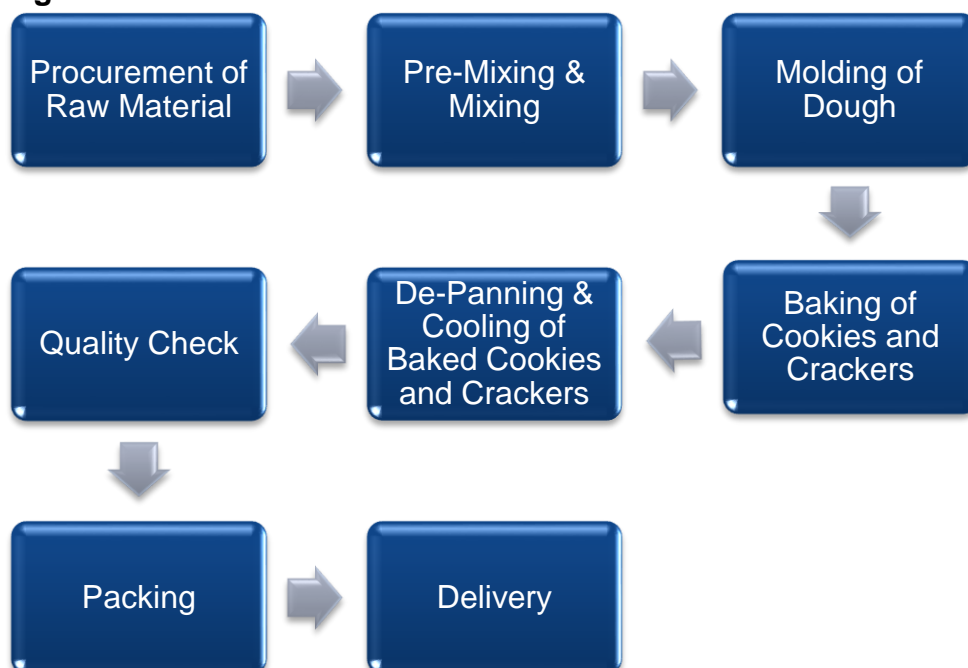
**Figure 6 Other Equipment**



## 5.2. Process Flow of Production of Cookies and Crackers

The process flow of production unit of cookies and crackers is shown in Figure 7.

**Figure 7 Process Flow of Production Unit of Cookies and Crackers**



Brief description of process flow is provided below:

### **Procurement of Raw Materials**

For making cookies, eggs, ghee, crystallized sugar, baking powder and white flour are mixed in the dough mixer.

For making crackers, required raw materials include eggs, ghee, oil, white flour, sugar

(used comparatively in a small quantity than used in cookies) and salt.

All the above-mentioned raw materials are procured from local suppliers. All of these ingredients are easily available in all local markets of all cities of Pakistan.

### **Pre-Mixing and Mixing**

All the ingredients are put into the dough mixer for preparing the dough. Average time for mixing the ingredients is around half an hour. The dough mixer can mix up to 30 kg of dough at one time. The baking staff will press the dough gently with knuckle or finger to determine if it is properly proofed and ready for baking. If the dough springs back right away, it needs more proofing. But if it springs back slowly and leaves a small dent, it is ready to be baked. The ready dough is moved to cookie maker machine to convert it into cookies/crackers of different shapes and sizes.

### **Molding of Dough**

For the proposed project bench top manual cookie maker machine is being used. The hopper capacity of this machine is 20 kg. The worker manually operates the machine. Dough is placed in the hopper and the worker operates the machine by rotating its lever. The dough first passes through rollers and is then given different shapes by passing through die. This die can be changed to give different shapes to the cookies and crackers.

### **Baking of Cookies and Crackers**

The molded cookies and crackers are placed in trays, which are then placed in the baking oven. The cookies are baked at 200-220 centigrade for 20-25 minutes. For crackers, dry baking method is used. Dry baking is an indirect heating method in which baking is done by heating the air in the surrounding of products in an oven. For crackers, the dry baking time is also 20-25 minutes at 230 centigrade. The baking process is the bottleneck since this is the longest process and other processes have excess capacity.

### **De-Panning and Cooling of Baked Cookies and Crackers**

After specified time of 20-25 minutes, the cookies and crackers are completely baked. During baking, the cookies and crackers may get stuck with the pan; therefore, a little quantity of oil is sprayed on them to prevent them from breaking as they are removed from the oven tray. After baking, the cookies and/or crackers are cooled down to room temperature for 15-20 minutes to maintain their natural texture and quality.

### **Quality Check**

In order to ensure that the final products is not substandard and is properly baked, the baking staff performs quality checks on the baked cookies and crackers. This testing is done after cooling of the products. The baking staff checks for uneven texture and the appearance of the cookies and crackers and will remove the ones with uneven texture, breakage or the ones which are not in a presentable condition.

### **Packing**

After quality checks, the cookies and crackers are packed in paper boxes. A box is of 1 kg and it usually contains 60 cookies or crackers.

### **Delivery**

Packed cookies and crackers are delivered to the customers through a loader rickshaw.

### **5.3. Installed and Operational Capacities**

The proposed production unit of cookies and crackers will have maximum capacity of producing 47,040 boxes of 1 kg cookies and 15,680 boxes of 1 kg of crackers in a year. The initial operational capacity utilization has been assumed to be 60% which translates into 28,224 boxes of cookies and 9,408 boxes of crackers. The operational capacity utilization is assumed to increase at the rate of 5% per annum to reach a maximum of 90% in year 7. Table 1 shows details of maximum annual capacity and operational capacity utilized during first year of operations.

Table 1 Installed and Operational Capacity

Products	Baking Time per Batch (Hours)	Per Day Capacity (Batches)	Trays per batch	Product per tray (Cookies/ Crackers)	Products in per batch (Cookies/ Crackers)	No of products per box (Cookies/ Crackers )	Boxes per batch	Boxes per day	Max Operational Boxes Per Year	Intial Capacity per Year @60%
Cookies	0.5	12	55	15	825	60	14	168	47,040	28,224
Crackers		4	55	15	825	60	14	56	15,680	9,408
<b>Total</b>		<b>16</b>			<b>1,650</b>				<b>62,720</b>	<b>37,632</b>

## **6. CRITICAL FACTORS**

Before making the decision to invest in “Cookies and Crackers Production Unit”, one should carefully analyze the associated risk factors. The important considerations in this regard include:

- The entrepreneur should have prior technical knowledge and experience of the baking business.
- The business must comply with standards set by provincial Food Authorities and Pakistan Standards & Quality Control Authority (PSQCA) to obtain license.
- Availability of trained resources is very critical for production of cookies and crackers.
- Competitive pricing and targeted marketing will play an important role in attracting the target customers.
- Maintaining consistent quality of the cookies and crackers will be a critical factor in retaining the customers and securing reorders from the customers.

## **7. GEOGRAPHICAL POTENTIAL FOR INVESTMENT**

The factors that are considered for selecting the area for setting up a “Production Unit of Cookies and Crackers” are easily availability of raw material; skilled labor and target market. This production unit of cookies and crackers can be established in major cities such as Karachi, Lahore, Islamabad, Peshawar, Rawalpindi, Quetta, Faisalabad, Sialkot, Hyderabad, Bahawalpur, Gujrat, Gujranwala, Multan, Gilgit, Muzaffarabad, Mardan, Sukkur, Jhelum or any other major city with a large population. In addition to large cities, the project may also be established in smaller cities and towns with growing middle-income group where demand for such products is high but current production units are not able to meet the demand in such areas.

## **8. POTENTIAL TARGET CUSTOMERS/MARKETS**

The potential target customers of the proposed unit mainly comprise of general household consumers, bakery shops, small retailers, tea stalls, and cafeterias of universities, colleges, schools and hospitals. The demand of these target customers will be higher where middle-income groups are larger in number. In large cities, wholesalers may sell to small retail shops and in small cities wholesalers work as distribution agents.



## 9. PROJECT COST SUMMARY

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

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

### 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.

**Table 2 Project Economics**

Description	Project
IRR	58%
NPV (PKR)	19,507,102
Payback Period (years)	2.77
Projection Years	10
Discount Rate used for NPV	15%

### 9.2. Financial Feasibility Analysis-Debt Financing

The financial feasibility analysis provides the information regarding projected IRR, NPV and payback period of the study on the basis of Debt: Equity Model (50:50), which is shown in Table 3.

**Table 3 Financial Feasibility Analysis-Debt Financing**

Description	Project
IRR	57%
NPV (PKR)	22,156,851
Payback Period (years)	2.82
Projection Years	10
Discount Rate used for NPV	13%

### 9.3. Initial Project Cost

Table 4 provides fixed and working capital requirements for establishment and operations of the Production Unit of Cookies and Crackers business.

**Table 4 Project Cost**

Description of Costs	Amount (PKR)	Reference
Land	-	9.3.1

Building Renovation Costs	323,005	9.3.2
Machinery & Equipment	1,443,300	9.3.3
Furniture & Fixtures	315,000	9.3.4
Office Equipment	333,300	9.3.5
Office Vehicles	350,000	9.3.6
Security Against Building	270,000	9.3.7
Pre-operating Costs	101,437	9.3.8
<b>Total Capital Cost</b>	<b>3,136,042</b>	
Working Capital	655,094	9.3.9
<b>Total Project Cost</b>	<b>3,791,135</b>	

### 9.3.1. Land

The proposed production unit of cookies and crackers will be established in a rented building to avoid the high cost of land, generally such business operates in basement facilities. Suitable location for setting up the production unit can be easily found on rent. Therefore, no land cost has been added to the project cost. Total space requirement for the proposed production unit of cookies and crackers has been estimated as 1,585 sq. feet (7 Marla). The breakup of the space requirement is provided in Table 5.

**Table 5 Breakup of Space Requirement**

Description	% Break-Up	Area (Sq. Ft.)
Office	14%	225
Store	21%	340
Machine Area	29%	460
Open Area	28%	440
Washrooms	8%	120
<b>Total</b>	<b>100%</b>	<b>1,585</b>

### 9.3.2. Building

There will be no cost of building since the business will be started in rented premises. However, there will be a renovation cost; required to make the building usable for the business. The proposed project requires electricity load of 3-4 KW for which an electricity connection under the industrial tariff three phase will be required. Building rent PKR 90,000 is included in the operating cost. The rental cost is low because such businesses operate in basement facilities. Table 6 provides details of building renovation cost.

**Table 6 Building Renovation Cost**

Cost Item	Unit of Measurement (UOM)	Total Unit	Cost/Unit/Sq.foot (PKR)	Total Cost (PKR)
Paint Cost	Liter	46	500	23,135
Labour Cost	Sq. Feet	4,627	10	46,270
Tiles	Sq. Feet	1,585	120	190,200
Labour Cost	Sq. Feet	1,585	40	63,400
<b>Total Cost (PKR)</b>				<b>323,005</b>

### 9.3.3. Machinery and Equipment Requirement

Table 7 provides details of machinery and equipment required for establishing Production Unit of Cookies and Crackers.

**Table 7 Machinery and Equipment Requirement**

Cost Item	Unit(s)	Unit Cost (PKR)	Total Cost (PKR)
Baking Oven (8x8 feet)	1	550,000	550,000
Dough Mixer (30 KG)	2	90,000	180,000
Bench top Manual Cookie Maker (With 4 dies)	1	250,000	250,000
Trolley	4	30,000	120,000
Generator (5 KW)	1	100,000	100,000
Digital Weigh Scale	1	7,000	7,000
Deep Freezer (DC Invertor)	1	60,000	60,000
Oven Tray (18x12 inch)	200	300	60,000
Spatula	10	130	1,300
LPG Cylinder (45 kg)	1	50,000	50,000
Grinder (3 kg)	1	40,000	40,000
Working Tables	5	5,000	25,000
<b>Total Cost</b>			<b>1,443,300</b>

### 9.3.4. Furniture & Fixtures Requirement

Table 8 provides details of the furniture and fixture requirement of the project.

**Table 8 Furniture and Fixtures Requirement**

Cost Item	No.	Unit Cost (PKR)	Total Cost (PKR)
Owner's Table	1	30,000	30,000
Owner's Chair	1	20,000	20,000
Staff Chairs	8	10,000	80,000
Sofa Sets	1	35,000	35,000
Wall Racks for Finished Products	10	15,000	150,000
<b>Total</b>			<b>315,000</b>

**9.3.5. Office Equipment Requirement**

Details of office equipment required for the project is provided in Table 9.

**Table 9 Office Equipment Requirement**

Cost Item	Units	Unit Cost (PKR)	Total Cost (PKR)
Laptop	1	80,000	80,000
LED/LCD (Surveillance)	2	40,000	80,000
Water Dispenser	1	20,000	20,000
Ceiling Fan	8	5,000	40,000
Industrial Exhaust Fan	3	30,000	90,000
Air Cooler	2	10,000	20,000
Security Cameras - 2MP	4	2,000	8,000
Digital Video Recorder (DVR)	1	12,000	12,000
<b>Total Cost</b>			<b>350,000</b>

**9.3.6. Office Vehicle Requirement**

Details of office vehicle required for the project is provided in Table 10.

**Table 10 Office Vehicle Requirement**

Cost Item	Unit(s)	Unit Cost (PKR)	Registration fee @ 1%	Total Cost (PKR)
Loader Rickshaw	1	250,000	2,500	252,500
Motorcycle	1	80,000	800	80,800
<b>Total Cost</b>				<b>333,300</b>

### 9.3.7. Security against Building

Details of security against building for the project are provided in Table 11.

**Table 11 Security against Building**

Cost Item	No. of Months	Unit Cost	Total Cost (PKR)
Security Against Building	3	90,000	270,000
<b>Total (PKR)</b>			<b>270,000</b>

### 9.3.8. Pre-Operating Cost

Details of pre-operating cost for the project are provided in Table 12.

**Table 12 Pre-Operating Cost**

Cost Item	Number /Months	Hiring before Year 0	Unit Cost (PKR)	Total Cost (PKR)
Labor Skilled	1	1	75,000	75,000
Utilities expense				26,437
<b>Total (PKR)</b>				<b>101,437</b>

### 9.3.9. Working Capital Requirements

Table 13 provides details of working capital requirements for the project.

**Table 13 Working Capital Requirements**

Cost Item	No. of Months	Unit Cost (PKR)	Amount (PKR)
Equipment spare part inventory	1	12,028	12,028
Raw material inventory	0.25	143,066	143,066
Cash		500,000	500,000
<b>Total</b>			<b>655,094</b>

### 9.4. Breakeven Analysis

Breakeven analysis is provided in Table 14.

**Table 14 Breakeven Analysis**

Particulars	Amount First Year (PKR)	Ratios
Sales	15,052,800	100%
Variable Cost	12,223,777	81%

Contribution	2,829,023	19%
Fixed Cost	2,146,450	14%
<b>Breakeven</b>		
Breakeven (Boxes of 1 kg)		28,552
Breakeven Revenue		11,420,930
Breakeven Capacity		46%

### 9.5. Revenue Generation

Table 15 provides details for revenue generation of the Production Unit of Cookies and Crackers during the first year of operations, based on 60% capacity utilization.

**Table 15 Revenue Generation**

Products	Annual Capacity (boxes)	Initial Capacity per Year @60%	Price per Box (PKR)	Revenue per Year (PKR)
Cookies	47,040	28,224	400	11,289,600
Crackers	15,680	9,408	400	3,763,200
<b>Total</b>	<b>62,720</b>	<b>37,632</b>		<b>15,052,800</b>

### 9.6. Variable Cost Estimate

Variable costs of the project have been provided in detail in Table 16.

**Table 16 Variable Cost Estimate**

Description of Costs	Total Cost (PKR)
Raw Material Cost-Cookies	5,207,328
Raw Material Cost-Crackers	1,659,840
Other Consumables	571,840
Other Material	1,636,600
Utilities Cost	118,221
Direct Labor	1,860,000
Machinery Maintenance Cost	184,330
Fuel Cost	160,720
Gas expense	624,897
Communications expense ( phone,mail, internet, etc.)	120,000

Office expenses (stationery, entertainment, janitorial services, etc.)	120,000
<b>Total Variable Cost (PKR)</b>	<b>12,263,777</b>

Table 17 Raw Material Cost-Cookies

Cost Item	Unit of Measurement (UOM)	Required Quantity per batch	Cost (PKR)	Total Cost (PKR)
Eggs	Dozen	2	150	300
Ghee	Kgs	5	300	1,500
Sugar	Kgs	4	85	340
Baking Powder	Kgs	0.1	80	8
White Flour (maida)	Kgs	4	70	280
Oil	Liter	0.5	310	155
<b>Total Cost per batch (PKR) (A)</b>				<b>2,583</b>
Boxes per batch (B)				14
<b>Total Cost per box (PKR) (C=A/B)</b>				<b>185</b>
Cookie Boxes Produced (D)				28,224
<b>Total Cost (PKR) (E=C*D)</b>				<b>5,207,328<sup>3</sup></b>

Table 18 Raw Material Cost-Crackers

Cost Item	Unit of Measurement (UOM)	Required Quantity per batch	Cost (PKR)	Total Cost (PKR)
Eggs	Dozen	2	150	300
Oil	Liter	5	310	1,550
Sugar	Kg	2	85	170
White Flour (maida)	Kg	4	70	280
Salt	Kg	2	35	70

<sup>3</sup> Due to round off the number shows in total are not multiply exactly.

Optional Topping (sesame seeds, cumin, elaichi, almonds, etc.)				100
<b>Total Cost per batch (PKR) (A)</b>				<b>2,470</b>
Boxes per batch (B)				14
<b>Total Cost per box (PKR) (C=A/B)</b>				<b>176</b>
Cracker Boxes Produced (D)				9,408
<b>Total Cost (PKR) (E=C*D)</b>				<b>1,659,840<sup>4</sup></b>

Table 19 Direct Labor

Post	No. of Employees	Monthly Salary (PKR)	Annual Salary (PKR)
Labor Skilled	3	25,000	900,000
Labor – Unskilled	4	20,000	960,000
<b>Total Direct Labor Cost (PKR)</b>			<b>1,860,000</b>

Table 20 Machinery Maintenance Cost

Cost Item	Machinery Cost	Rate	Total Cost (PKR)
Maintenance Cost	1,356,800	8%	144,330
<b>Total (PKR)</b>			<b>144,330</b>

Table 21 Fuel Cost

Cost Item	Fuel cost per liter (PKR)	Kilome ter per day	Per day Consump tion (Liters)	Cost/D ay (PKR)	Annual Cost (PKR)
Petrol for Loader Rickshaw (30 km/ liter)	123	80	3	328	91,840
Petrol for Motorcycle (50 km/ liter)	123	100	2	246	68,880
<b>Total (PKR)</b>					<b>160,720</b>

<sup>4</sup> Due to round off the number shows in total are not multiply exactly.



**Table 22 Other Consumables**

<b>Cost Item</b>	<b>Unit of Measurement (UOM)</b>	<b>Required Quantity</b>	<b>Unit Cost (PKR)</b>	<b>Total Cost(PKR)</b>
Paper box	Box of 1 KG	37,632	15	564,480
Detergent	Pack of 1 KG	12	180	2,160
Sponge	Piece	24	60	1,440
Mop	Piece	2	200	400
Stainless Steel Spiral	Piece	24	50	1,200
Liquid Soap	100ml	12	180	2,160
<b>Total (PKR)</b>				<b>571,840</b>

Table 23 Other Materials

Cost Item	Consumption per kg	Annual Production (kgs)	Production Ratio	Initial year Production (kgs)	Annual Consumption (kgs)	Cost per kg (PKR)	Total Cost (PKR)
Butter	0.10	28,224	20%	5,645	565	1,000	565,000
Chocolate	0.05		20%	5,645	282	1,000	282,000
Almonds	0.05		20%	5,645	282	1,600	451,200
Jam	0.05		20%	5,645	282	200	56,400
Coconut Powder	0.03		20%	5,645	188	1,500	282,000
<b>Total (PKR)</b>							<b>1,636,600</b>

**Table 24 Variable cost Assumptions**

Description of Costs	Rate	Rationale
Gas expense	12%	of raw material
Communications expense ( phone,mail, internet, etc.)	25%	of administration expense
Office expenses (stationery, entertainment, janitorial services, etc.)	25%	of administration expense

**9.7. Fixed Cost Estimate**

Details of fixed cost for the project are provided in Table 25.

**Table 25 Fixed Cost Estimate**

Description of Costs	Amount (PKR)
Staff Salaries	480,000
Administration benefits expense	117,000
Building rental expense	1,080,000
Depreciation expense	458,541
Utilities	19,022
Amortization of pre-operating costs	20,287
License, Permits,etc.	31,600
<b>Total Fixed Cost</b>	<b>2,206,450</b>

**Table 26 Staff Salaries**

Post	No.of Employees	Monthly Salary (PKR)	Annual Salary (PKR)
Office Boy	1	20,000	240,000
Security Guard	1	20,000	240,000
<b>Total Cost (PKR)</b>			<b>480,000</b>

**Table 27 License, Permits, etc.\***

Cost Item	No.	Total Cost (PKR)
Punjab Food Authority	1	13,000
Social Security Corporation	1	5,000

Pakistan Standards & Quality Control Authority (PSQCA)	2	13,600
<b>Total Cost (PKR)</b>		<b>31,600</b>

\* License, Permits, etc. are expensed out annually as it is fixed as per the rules. The license fees for food authority may differ in different provinces. Sindh Food Authority license is PKR 20,000.

**Table 28 Fixed Cost Assumption**

Description of Costs	Rate	Rationale
Administration benefit expense	5%	of administration expense
<b>Depreciation</b>		
Building Renovation	10%	of renovation cost
Machinery and Equipment	15%	of cost
Office Equipment/Office Vehicle/Furniture and Fixture	15%	of cost

### 9.8. Human Resource Requirement

For the 1<sup>st</sup> year of operations, the human resource requirements are projected in Table 29.

**Table 29 Human Resource Requirement**

Post	No.of Employees	Monthly Salary (PKR)	Annual Salary (PKR)
Labor Skilled	3	25,000	900,000
Labor – Unskilled	4	20,000	960,000
Office Boy	1	20,000	240,000
Security Guard	1	20,000	240,000
<b>Total</b>			<b>2,340,000</b>

## 10. CONTACT DETAILS

Details of suppliers of Machinery and Equipment are provided in Table 30.

**Table 30 Contact Details**

<b>Name of Supplier/Manufacturer</b>	<b>Contacts Number</b>	<b>Email Address</b>
Kitchen Equipment   Dastgir Engineering (Lahore)	0321-8420186	<a href="http://www.deckitchen.org">www.deckitchen.org</a>
Mughal Electric and Machinery Store (Lahore)	0321-4601455	<a href="http://www.mughalelectric.com">www.mughalelectric.com</a>
Ital Kitchen Equipment (Gujranwala)	0313-8270002	<a href="http://www.ital.com.pk">www.ital.com.pk</a>
Mak & Sons Commercial Kitchen Equipment (Rawalpindi)	0335-5966697	<a href="http://www.makandsons.co">www.makandsons.co</a>
Hatimi Engineering Works (Commercial kitchen Equipment) (Karachi)	0332-3302797	<a href="http://www.hatimiengg.pk">www.hatimiengg.pk</a>
Farhan Fon Gas Agency Chitral (Chitral)	0333-2466913	<a href="http://www.farhan-fon-gas-agency-chitral.business.site">www.farhan-fon-gas-agency-chitral.business.site</a>
Daniyal Traders (LPG gas agency) (Mirpur)	0346-6044566	
Haikal Traders Pol Gas Agency Gilgit (Gilgit)	0355-5303636	
Hamza Gases (Quetta)	0301-8385260	<a href="http://www.hamzagases.business.site">www.hamzagases.business.site</a>
Kabari Bazar (Peshawar)	0311-1938773	

## 11. USEFUL LINKS

**Table 31 Useful Links**

<b>Name of Organization</b>	<b>Website</b>
Small and Medium Enterprises Development Authority (SMEDA)	<a href="http://www.smeda.org.pk">www.smeda.org.pk</a>
National Business Development Program (NBDP)	<a href="http://www.nbdp.org.pk">www.nbdp.org.pk</a>
Government of Punjab	<a href="http://www.punjab.gov.pk">www.punjab.gov.pk</a>
Government of Sindh	<a href="http://www.sindh.gov.pk">www.sindh.gov.pk</a>
Government of Balochistan	<a href="http://www.balochistan.gov.pk">www.balochistan.gov.pk</a>
Government of Khyber Pakhtunkhwa	<a href="http://www.kp.gov.pk">www.kp.gov.pk</a>
Government of Azad Jammu and Kashmir	<a href="http://www.ajk.gov.pk">www.ajk.gov.pk</a>
Government of Gilgit Baltistan	<a href="http://www.gilgitbaltistan.gov.pk">www.gilgitbaltistan.gov.pk</a>
Punjab Food Authority	<a href="http://www.pfa.gop.pk">www.pfa.gop.pk</a>
Sindh Food Authority	<a href="http://www.sfa.gos.pk">www.sfa.gos.pk</a>
Food Department Government of Balochistan	<a href="http://www.balochistan.gov.pk/tender-categories/food-department/">www.balochistan.gov.pk/tender-categories/food-department/</a>
Food Safety and Halal Food Authority Khyber Pakhtunkhwa	<a href="http://www.kpfsa.gov.pk">www.kpfsa.gov.pk</a>
Food Department of Azad Jammu and Kashmir	<a href="http://www.ajk.gov.pk">www.ajk.gov.pk</a>
Food Department of Gilgit Baltistan	<a href="http://www.gilgitbaltistan.gov.pk">www.gilgitbaltistan.gov.pk</a>

## 12. ANNEXURES

### 12.1. Income Statement

Calculations										
Income Statement										SMEDA
	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Revenue	15,052,800	18,133,606	21,715,691	25,872,695	30,688,466	36,258,422	42,691,093	47,472,495	52,789,415	58,701,829
<i>Cost of sales</i>										
Raw Material Cost-Cookies	5,207,328	6,109,498	7,125,554	8,268,188	9,551,410	10,990,688	12,603,087	13,649,143	14,782,022	16,008,930
Raw Material Cost-Crackers	1,659,840	1,798,160	1,936,480	2,074,800	2,213,120	2,351,440	2,489,760	2,489,760	2,489,760	2,489,760
Other Consumables	571,840	629,405	692,765	762,504	839,262	923,748	1,016,739	1,119,091	1,231,746	1,355,741
Other Materials	1,636,600	1,951,464	2,313,135	2,727,847	3,202,614	3,745,323	4,364,844	4,804,238	5,287,865	5,820,176
Utilities Cost	118,221	128,904	140,553	153,254	167,104	182,204	198,669	216,622	236,198	257,542
Direct Labor	1,860,000	2,040,420	2,238,341	2,455,460	2,693,639	2,954,922	3,241,550	3,555,980	3,900,910	4,279,299
Machinery Maintenance - Cost	144,330	156,309	169,283	183,334	198,550	215,030	232,877	252,206	273,139	295,810
Gas expense	624,897	799,411	1,016,609	1,286,226	1,620,115	2,032,708	2,541,551	3,001,231	3,544,052	4,185,051
Total cost of sales	11,823,057	13,613,571	15,632,721	17,911,612	20,485,814	23,396,064	26,689,077	29,088,271	32,049,848	35,021,711
Gross Profit	3,229,743	4,520,035	6,082,970	7,961,083	10,202,651	12,862,359	16,002,016	18,384,224	20,739,567	23,680,119
	21%	25%	28%	31%	33%	35%	37%	39%	39%	40%
<i>General administration &amp; selling expenses</i>										
Management Staff	480,000	526,560	577,636	633,667	695,133	762,561	836,529	917,672	1,006,687	1,104,335
Administration benefits expense	117,000	128,349	140,799	154,456	169,439	185,874	203,904	223,683	245,380	269,182
Building rental expense	1,080,000	1,188,000	1,306,800	1,437,480	1,581,228	1,739,351	1,913,286	2,104,614	2,315,076	2,546,584
Utilities	19,022	20,741	22,615	24,659	26,887	29,317	31,966	34,855	38,004	41,439
Fuel Cost	160,720	174,060	188,507	204,153	221,097	239,449	259,323	280,847	304,157	329,402
License,Permits,etc.	31,600	34,781	38,282	42,136	46,378	51,047	56,185	61,841	68,067	74,919
Communications expense ( phone,mail, internet,	120,000	131,640	144,409	158,417	173,783	190,640	209,132	229,418	251,672	276,084
Office expenses (stationery, entertainment, etc.)	120,000	131,640	144,409	158,417	173,783	190,640	209,132	229,418	251,672	276,084
Depreciation expense	398,541	398,541	398,541	398,541	398,541	398,541	276,461	707,950	707,950	707,950
Amortization of pre-operating costs	20,287	20,287	20,287	20,287	20,287	-	-	-	-	-
Subtotal	2,547,170	2,754,599	2,982,285	3,232,212	3,506,556	3,787,418	3,995,918	4,790,298	5,188,664	5,625,978
Operating Income	682,574	1,765,437	3,100,685	4,728,871	6,696,095	9,074,940	12,006,098	13,593,926	15,550,903	18,054,141
Gain / (loss) on sale of machinery & equipment	-	-	-	-	-	-	360,825	-	-	-
Gain / (loss) on sale of office equipment	-	-	-	-	-	-	87,500	-	-	-
Gain / (loss) on sale of office vehicles	-	-	-	-	-	-	83,325	-	-	-
Earnings Before Interest & Taxes	682,574	1,765,437	3,100,685	4,728,871	6,696,095	9,074,940	12,537,748	13,593,926	15,550,903	18,054,141
Subtotal	-	-	-	-	-	-	-	-	-	-
Earnings Before Tax	682,574	1,765,437	3,100,685	4,728,871	6,696,095	9,074,940	12,537,748	13,593,926	15,550,903	18,054,141
Tax	188,160	226,670	395,171	838,661	1,463,633	2,296,229	3,508,212	3,877,874	4,562,816	5,438,949
<b>NET PROFIT/(LOSS) AFTER TAX</b>	<b>494,414</b>	<b>1,538,767</b>	<b>2,705,514</b>	<b>3,890,210</b>	<b>5,232,462</b>	<b>6,778,711</b>	<b>9,029,537</b>	<b>9,716,052</b>	<b>10,988,087</b>	<b>12,615,192</b>
	3%	8%	12%	15%	17%	19%	21%	20%	21%	21%

## 12.2. Balance Sheet

Calculations	SMEDA										
Balance Sheet											
	Year 0	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
<b>Assets</b>											
<i>Current assets</i>											
Cash & Bank	500,000	412,093	1,098,350	2,059,096	3,135,549	4,313,915	5,581,010	9,835,606	19,796,823	30,965,703	46,277,186
Accounts receivable	-	1,344,000	1,619,072	1,938,901	2,310,062	2,740,042	3,237,359	3,811,705	4,238,616	4,713,341	3,818,193
Equipment spare part inventory	12,028	14,272	16,935	20,095	23,845	28,295	33,575	39,840	47,275	56,097	-
Raw material inventory-Cookies	108,486	137,846	174,114	218,804	273,741	341,135	423,649	496,894	582,801	683,561	-
Raw material inventory-Crackes	34,580	40,571	47,318	54,906	63,427	72,985	83,693	90,639	98,162	106,310	-
Finished goods inventory-Cookies		99,268	114,038	131,174	150,518	171,818	196,487	223,765	243,880	268,711	293,627
Finished goods inventory-Crackes		99,162	113,811	131,054	150,518	171,679	196,487	223,605	243,706	268,518	293,417
<b>Total Current Assets</b>	<b>655,094</b>	<b>2,246,212</b>	<b>3,292,539</b>	<b>4,673,820</b>	<b>6,239,430</b>	<b>7,984,814</b>	<b>9,911,699</b>	<b>14,897,439</b>	<b>25,444,186</b>	<b>37,274,455</b>	<b>50,682,424</b>
<i>Fixed assets</i>											
Land	-	-	-	-	-	-	-	-	-	-	-
Building/Infrastructure	323,005	290,705	258,404	226,104	193,803	161,503	129,202	96,902	64,601	32,301	-
Machinery & equipment	1,443,300	1,226,805	1,010,310	793,815	577,320	360,825	144,330	2,735,935	2,325,545	1,915,154	1,504,764
Furniture & fixtures	315,000	267,750	220,500	173,250	126,000	78,750	31,500	597,117	507,550	417,982	328,415
Office vehicles	333,300	283,305	233,310	183,315	133,320	83,325	33,330	507,817	431,644	355,472	279,299
Office equipment	350,000	297,500	245,000	192,500	140,000	87,500	35,000	663,464	563,944	464,425	364,905
<b>Total Fixed Assets</b>	<b>3,034,605</b>	<b>2,636,065</b>	<b>2,237,524</b>	<b>1,838,984</b>	<b>1,440,443</b>	<b>1,041,903</b>	<b>643,362</b>	<b>4,871,234</b>	<b>4,163,284</b>	<b>3,455,333</b>	<b>2,747,383</b>
<i>Intangible assets</i>											
Pre-operation costs	101,437	81,150	60,862	40,575	20,287	-	-	-	-	-	-
<b>Total Intangible Assets</b>	<b>101,437</b>	<b>81,150</b>	<b>60,862</b>	<b>40,575</b>	<b>20,287</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>
<b>TOTAL ASSETS</b>	<b>3,791,135</b>	<b>4,963,426</b>	<b>5,590,925</b>	<b>6,553,378</b>	<b>7,700,160</b>	<b>9,026,717</b>	<b>10,555,061</b>	<b>19,768,673</b>	<b>29,607,469</b>	<b>40,729,788</b>	<b>53,429,807</b>
<b>Liabilities &amp; Shareholders' Equity</b>											
<i>Current liabilities</i>											
Accounts payable		677,877	783,199	901,191	1,033,394	1,181,535	1,347,547	1,531,622	1,654,367	1,788,599	1,873,426
<b>Total Current Liabilities</b>	<b>-</b>	<b>677,877</b>	<b>783,199</b>	<b>901,191</b>	<b>1,033,394</b>	<b>1,181,535</b>	<b>1,347,547</b>	<b>1,531,622</b>	<b>1,654,367</b>	<b>1,788,599</b>	<b>1,873,426</b>
<i>Other liabilities</i>											
<b>Total Long Term Liabilities</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>
<i>Shareholders' equity</i>											
Paid-up capital	3,791,135	3,791,135	3,791,135	3,791,135	3,791,135	3,791,135	3,791,135	3,791,135	3,791,135	3,791,135	3,791,135
Retained earnings		494,414	1,016,590	1,861,052	2,875,631	4,054,046	5,416,379	14,445,915	24,161,967	35,150,054	47,765,246
<b>Total Equity</b>	<b>3,791,135</b>	<b>4,285,549</b>	<b>4,807,726</b>	<b>5,652,187</b>	<b>6,666,766</b>	<b>7,845,182</b>	<b>9,207,514</b>	<b>18,237,051</b>	<b>27,953,102</b>	<b>38,941,189</b>	<b>51,556,381</b>
<b>TOTAL CAPITAL AND LIABIL</b>	<b>3,791,135</b>	<b>4,963,426</b>	<b>5,590,925</b>	<b>6,553,378</b>	<b>7,700,160</b>	<b>9,026,717</b>	<b>10,555,061</b>	<b>19,768,673</b>	<b>29,607,469</b>	<b>40,729,788</b>	<b>53,429,807</b>



### 12.3. Cash Flow Statement

Calculations	SMEDA										
Cash Flow Statement											
	Year 0	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Operating activities											
Net profit		494,414	1,538,767	2,705,514	3,890,210	5,232,462	6,778,711	9,029,537	9,716,052	10,988,087	12,615,192
Add: depreciation expense		398,541	398,541	398,541	398,541	398,541	398,541	276,461	707,950	707,950	707,950
amortization of pre-operating costs		20,287	20,287	20,287	20,287	20,287	-	-	-	-	-
Accounts receivable		(1,344,000)	(275,072)	(319,829)	(371,161)	(429,980)	(497,318)	(574,346)	(426,911)	(474,725)	895,147
Equipment inventory	(12,028)	(2,244)	(2,663)	(3,160)	(3,750)	(4,450)	(5,280)	(6,265)	(7,434)	(8,822)	56,097
Raw Material Inventory-Cookies	(108,486)	(29,360)	(36,269)	(44,689)	(54,938)	(67,394)	(82,515)	(73,244)	(85,907)	(100,760)	683,561
Raw Material Inventory-Crackers	(34,580)	(5,991)	(6,747)	(7,588)	(8,521)	(9,558)	(10,707)	(6,946)	(7,523)	(8,147)	106,310
Finished Goods Inventory-Cookies		(99,268)	(14,769)	(17,137)	(19,343)	(21,300)	(24,669)	(27,279)	(20,115)	(24,830)	(24,917)
Finished Goods Inventory-Crackers		(99,162)	(14,649)	(17,242)	(19,464)	(21,161)	(24,807)	(27,118)	(20,101)	(24,813)	(24,899)
Accounts payable		677,877	105,322	117,991	132,203	148,141	166,012	184,075	122,745	134,232	84,827
Cash provided by operations	(155,094)	(87,907)	1,702,847	2,821,797	3,952,084	5,232,412	6,683,473	8,758,930	9,961,217	11,168,880	15,311,483
Financing activities											
Issuance of shares	3,791,135	-	-	-	-	-	-	-	-	-	-
Cash provided by / (used for) financin	3,791,135	-	-	-	-	-	-	-	-	-	-
Investing activities											
Capital expenditure	(3,136,042)	-	-	-	-	-	-	(4,504,333)	-	-	-
Cash (used for) / provided by investin	(3,136,042)	-	-	-	-	-	-	(4,504,333)	-	-	-
NET CASH	500,000	(87,907)	1,702,847	2,821,797	3,952,084	5,232,412	6,683,473	4,254,597	9,961,217	11,168,880	15,311,483
Cash balance brought forward		500,000	412,093	1,098,350	2,059,096	3,135,549	4,313,915	5,581,010	9,835,606	19,796,823	30,965,703
Cash available for appropriation	500,000	412,093	2,114,940	3,920,148	6,011,180	8,367,961	10,997,388	9,835,606	19,796,823	30,965,703	46,277,186
Dividend		-	1,016,590	1,861,052	2,875,631	4,054,046	5,416,379	-	-	-	-
Cash balance	500,000	412,093	1,098,350	2,059,096	3,135,549	4,313,915	5,581,010	9,835,606	19,796,823	30,965,703	46,277,186
Cash carried forward	500,000	412,093	1,098,350	2,059,096	3,135,549	4,313,915	5,581,010	9,835,606	19,796,823	30,965,703	46,277,186

## 13. KEY ASSUMPTIONS

### 13.1. Operating Cost Assumptions

**Table 32 Operating Cost Assumptions**

Description	DetailsRate
Furniture and fixture depreciation rate	15%
Vehicle depreciation rate	15%
Office equipment depreciation rate	15%
Inflation rate	10.1%
Wage growth rate	9.7%
Gas price growth rate	9.0%
Electricity price growth rate	9.0%
Office equipment price growth rate	9.6%
Office vehicle price growth rate	6.2%

### 13.2. Revenue Assumptions

**Table 33 Revenue Assumptions**

Description	Details
Sale price growth rate	11.2%
Initial capacity utilization	60%
Capacity growth rate	5%
Maximum capacity utilization	90%

### 13.3. Financial Assumptions

**Table 34 Financial Assumptions**

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

# Small and Medium Enterprises Development Authority

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