



Pre-feasibility Study

PRODUCTION UNIT FOR PACKAGED POPCORN

September 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

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1. DISCLAIMER

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2. EXECUTIVE SUMMARY

Popcorn are made from maize grains, which when heated, expand and puff up to form white starchy mass. Popcorns are consumed as a snack and are liked by people from all age groups. Popcorns, being an edible snack, compete with other snack products such as chips, nuts, seeds, etc. The versatility and nutritional attributes of popcorn bring it closer to the heart of the people. Popcorn is known to be low in fat and high in carbohydrates.

This “Pre-feasibility Document” provides details for setting up a “Production Unit for Packaged Popcorn” in which popcorns can be produced from locally produced Zea maize. Popcorns can be made in different flavors; however, salted, sweet glazed and sweet caramelized popcorns are the most commonly demanded flavors in the local market. The proposed unit will produce five different flavors of popcorns; including salted, caramel, sweet, butter, and chocolate popcorns. These products will be sold in two types of packings; 100 grams and 50 grams packets.

This production unit is proposed to be located in larger cities like Karachi, Lahore, Islamabad, Peshawar, Rawalpindi, Quetta, Faisalabad, Sialkot, Hyderabad, Gujranwala, Multan or any other major city of Pakistan. These cities are preferred because of easy availability of raw material (corn) and presence of large consumer base. Popcorns are liked by the students of schools and colleges and are consumed in entertainment places such as cinemas, parks and other recreational venues. Common presence of such places in larger cities make them more favorable markets for these products. Children, teenagers, students are the prime customers of the proposed business and the consumption of popcorns has been on a rise among these age groups.

The proposed project will be set up in a rented building having an area of 3,820 sq. ft. (17 Marla). The proposed project requires a total investment of PKR 41.7 million. This includes capital investment of PKR 27.9 million and working capital of PKR 13.8 million. The proposed unit will have a capacity of producing 7,280,000 popcorn packets in a year which includes 3,920,000 100-gram packets and 3,360,000 50-gram packets. The project is assumed to attain 40% capacity utilization during the first year of operations; which is equal to a total of 2,912,000 packets; including 1,568,000 100-gram packets and 1,344,000 50-gram packets. The production capacity utilization is assumed to increase at a rate of 5% per annum with a capacity at 85% of total capacity. This project is financed through 100% equity.

The Net Present Value (NPV) of project is PKR 210.34 million with an Internal Rate of Return (IRR) of 58% and a Payback period of 2.54 years. Further, the proposed project is expected to generate Annual Revenues of PKR 148.96 million in 1st year of operations, Gross Profit (GP) ratio ranging from of 46% to 56% and Net Profit (NP) ratio ranging from 8% to 20% during the projection period of ten years. The proposed project will achieve its estimated breakeven point at capacity of 29% (2,093,092 packets) with breakeven revenue of PKR 107.07 million in a year.

The proposed project may also be established using leveraged financing. At 50% financing at a cost of KIBOR+3%, the proposed unit provides Net Present Value (NPV) of PKR 241.54 million, Internal Rate of Return (IRR) of 58% and Payback period of 2.56 years. Further, this project is expected to generate Net Profit (NP) ratio ranging from 8% to 20% during the projection period of ten years. The proposed project will achieve its estimated breakeven point at capacity of 29% (2,129,789 packets) with breakeven revenue of PKR 108.95 million.

The proposed project will provide employment opportunities to around 40 people. The legal form of this project is proposed as "Sole-Proprietorship".

3. INTRODUCTION TO SMEDA

The Small and Medium Enterprises Development Authority (SMEDA) was established in October 1998 with 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 “Production Unit for Packaged Popcorn”. 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 attains greater imminence as the research that precedes such reports reveal certain thumb rules; best practices developed by existing enterprises by trial and error, and certain industrial norms that become a guiding source regarding various aspects of business setup and its successful management.

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

5. BRIEF DESCRIPTION OF PROJECT & PRODUCTS

This document provides details for setting up a Production Unit for Packaged Popcorns, a popular snack of the modern age. Charles Cretor of Chicago is credited as the inventor of the modern popcorn, due to introduction of his mobile popcorn cart in the 1880s. However, making of popcorns is much older and dates back to 5,000 years in Mexico. In earlier days, cooks would simply toast corn kernels on a dry pan over an open fire until they popped; ancient preparations likely involved cooking the popped kernels with water.

Locally, the salted popcorn used to be sold on streets by hawkers; however, with the passage of time, it also became a popular snack to be consumed in cinema halls, amusement parks and shopping malls. Just like the rest of the world, in Pakistan as well, popcorn is a popular snack. Packaged popcorns were introduced in the local market in mid-nineties. The traditional salted flavor has always been the most popular flavor of this snack. However, increasing market demand encouraged the local manufacturers to add more popcorns products in other interesting flavors as well. While salted popcorns still exists as the most popular product, other commonly available popcorns products in the local market include sweet popcorns, chocolate popcorns, caramel popcorns and butter popcorns.

Microwave popcorn is another competitive product which is sold on large retail stores in a packet containing corn grains. That packet is put into a microwave for the recommended time and the corns inside pop to convert into popcorns. Microwave popcorns generally, contain higher percentage of fat, sometimes taking up to 60% of the calories, due to which this product is not very popular and the consumers usually prefer ready-to-eat packaged popcorns.

Popcorn is not only tasty but also good for human health since it is a rich source of fiber and high in important nutrients like vitamins, minerals and polyphenol antioxidants.

In order to fulfill the customer expectations, it is necessary to offer customers a wider range of products for which popcorns of different flavors have been added in the proposed product line. The proposed production unit for packaged popcorn will produce popcorns in five flavors; including salted, sweet, butter, caramel and chocolate flavors. Each flavor will be packed in predesigned packets of 100 grams and 50 grams weight. In the process of manufacturing popcorn, flavor additives are used, which can have different tastes.

The production unit for packaged popcorn will make direct sales to cinema houses, medium to large scale general stores, tuck shops of schools and colleges, medium to large departmental stores and also bakeries. To generate new customers and to market the products of production unit for packaged popcorn, one Sale Manager and one Marketing Manager will be hired.

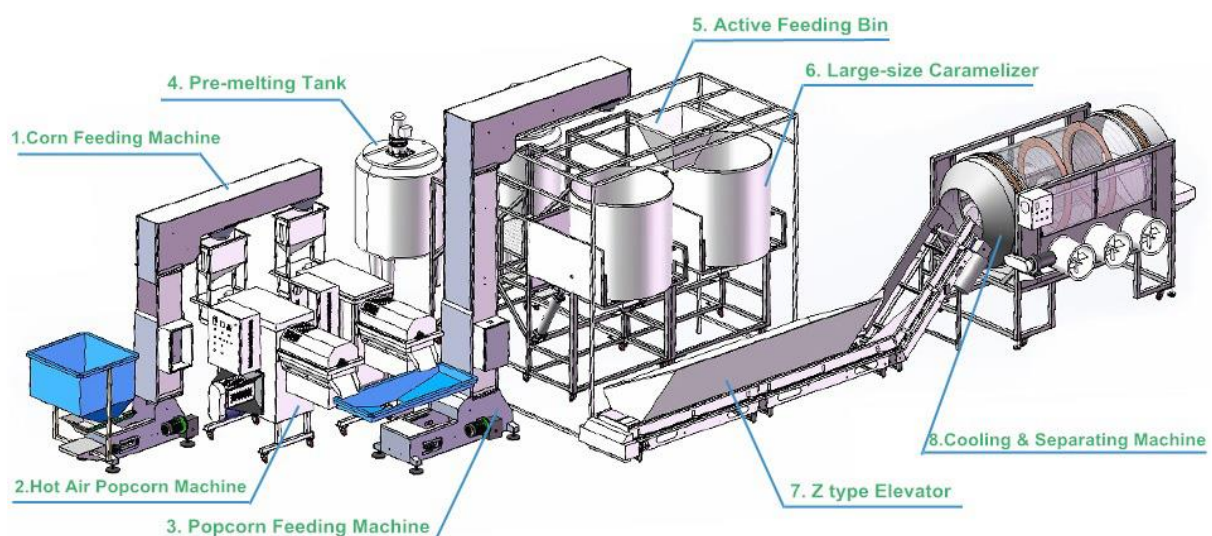
5.1. Machinery and Equipment

Machinery and equipment required for establishing “Production Unit for Packaged Popcorn” is discussed below:

Automatic Hot Air Popcorn Line

Automatic Hot Air Popcorn Line is used for making popcorn of different flavors. It has a capacity to process 250 kilograms of corn grains per hour to produce 3,360,000 100-grams packets and 4,480,000 50-grams packets of packaged popcorns per year. This machine ensures protection of popcorns from dust and other contaminants and the coating of popcorn is done perfectly without any interaction with the external environment. Figure 1 shows automatic hot air popcorn line.

Figure 1 Automatic Hot Air Popcorn Line



Automatic Packing Machine

Automatic Packing Machine is used for packing of popcorns. It is equipped with main packer, date printer and stainless-steel chain conveyor. It has a capacity of packing 30 bags per minute. In this project, 2 packing machines are used, which have a combined capacity of 60 bags per minute. Figure 2 shows automatic packing machine.

Figure 2: Automatic Packing Machine

**Platform Trolley**

A Platform Trolley will be used in the proposed unit to move corn sacks within the proposed unit. As the sacks are of 20 kg so this trolley will help to carry and move the sacks easily. Figure 3 shows platform trolley.

Figure 3: Platform Trolley



Deep Freezer (DC Invertor)

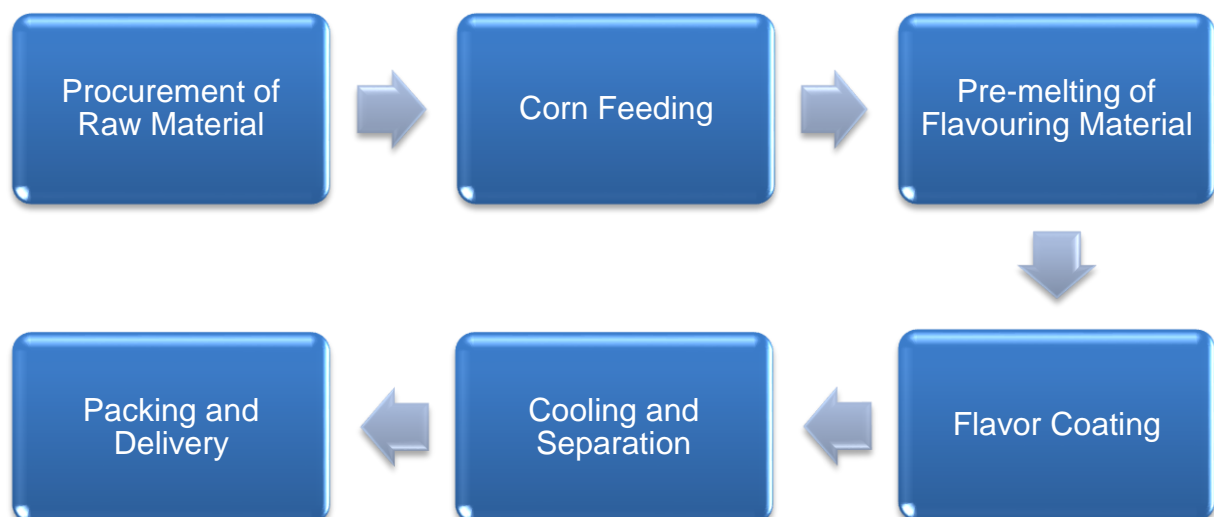
An inverter deep freezer is an energy efficient, large stand-alone freezer used to store large quantities of food for extended periods. In this project, it is used to store raw materials like chocolate, caramel, butter, etc. Figure 4 shows deep freezer.

Figure 4: Deep Freezer (DC Invertor)

**5.2. Process Flow for Production unit of Packaged Popcorn**

The process flow for production unit of packaged popcorn shown in Figure 5.

Figure 5 Process Flow for Production unit of Packaged Popcorn



The brief description of process flow is as follows:

Procurement of Raw Material

Corn is the primary raw material to produce packaged popcorns. However, all types of corns cannot be used for making popcorns. Zea maize is generally used for making popcorns. This variety is locally produced in Pakistan and is cultivated in two seasons i.e. spring and autumn. Grain markets are present in all the cities of Pakistan. The required maize variety can be easily procured from these grain markets throughout the year. In this project, it has been assumed to procure maize quarterly. Majority of corn crop i.e., 97% of the total production comes from the province of Punjab and Khyber Pakhtunkhwa. Whereas, Sindh and Balochistan contribute 2-3% in the total production of maize crop. Dried corn is also available in the wholesale markets throughout the year, therefore corn for producing popcorn can also be purchased from these markets for the proposed project during the year. Table 1 shows yearly province wise production of maize in Pakistan.

Table 1: Province Wise Production of Maize¹

Production in '000' Tons					
Year	Punjab	Sindh	Khyber Pakhtunkhwa	Balochistan	Total
2015-16	4,391.2	3.6	873	3.1	5,270.9
2016-17	5,237.2	3.6	890.1	3.4	6,134.3
2017-18	5,028	3.6	867	3	5,901.6
2018-19	5,915.5	3.5	904.5	2.8	6,826.3
2019-20	6,994.7	4	881.6	2.8	7,883.1

Imported corn is very costly. Using imported corn will increase production cost and the production unit of packaged popcorn will not be price competitive. Therefore, using imported corn is not financially feasible for the proposed production unit of packaged popcorn.

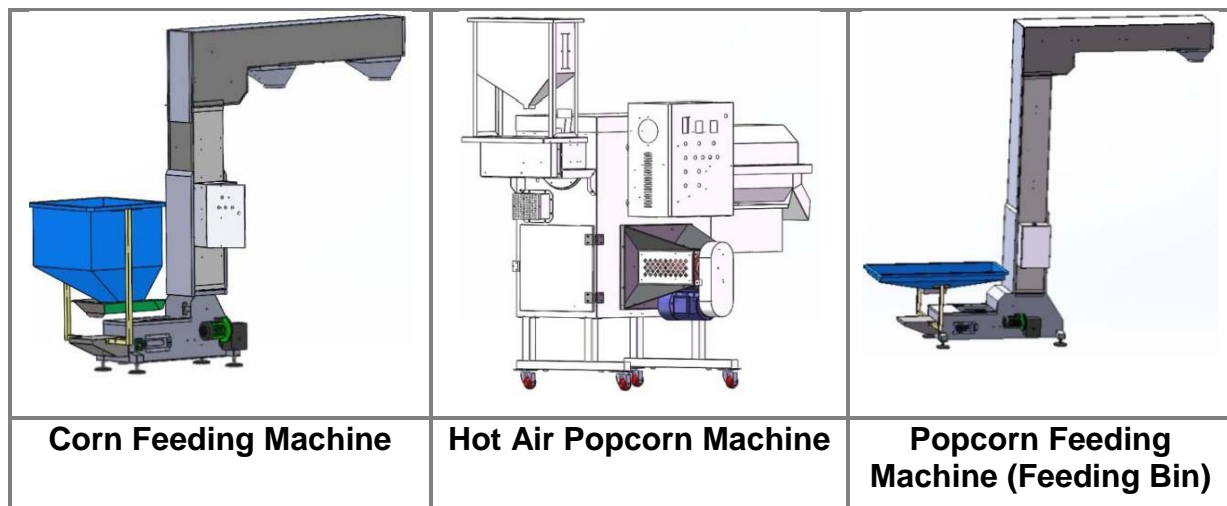
Salt, butter and flavors are also used in this process. All the raw materials are easily available in all the major cities of Pakistan. Quality assurance of the corn should be ensured during procurement. The required corn variety is locally available and its price is higher than other corn varieties due to its higher quality.

¹ <http://www.amis.pk/Agristatistics/Data/HTML%20Final/Maize/Production.html>

Production of Popcorns from Corn

The corn is fed into the corn feeding machine which transfers raw corns through belt conveyer (built in the corn feeding machine) into hot air popcorn machine. This machine starts blowing hot air on the raw corn to convert them into popcorns. Popcorns are then transferred into feeding bin. Figure 6 shows machine for corn feeding.

Figure 6 Production of Popcorn



Pre-Melting of Flavoring Material

For flavor coating, raw material, such as caramel, sugar, etc. is added into the pre melting tank. The quantity of raw material depends upon the desired flavoring. The raw materials are melted for flavor coating. Figure 7 shows pre melting tank.

Figure 7 Pre-Melting Tank



Flavor Coating

Popcorn is transferred from feeding bin to caramelizer. Melted flavor from pre-melting tank and the popcorns are mixed together in the caramelizer and flavor gets coated on the popcorns. After coating, popcorns are transferred to cooling and separating machine through Z type elevator. Figure 8 shows feeding bin, large size caramelizer and Z-type elevator.

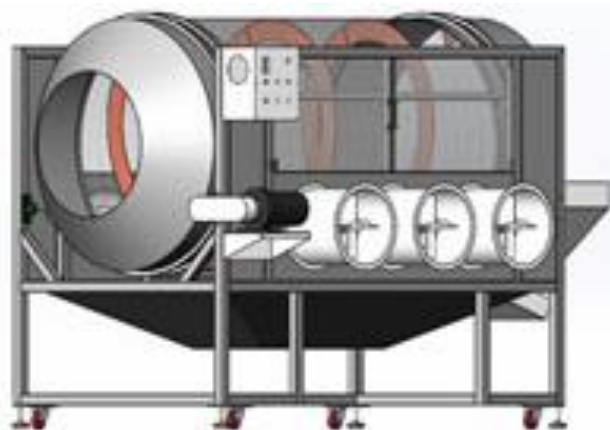
Figure 8 Flavor Coating Section



Cooling and Separation of Popcorn

In cooling and separating machine, the rotatory speed is adjusted according to the need. Built-in fans cool the coated popcorn in the cooling and separating machine. Through rotation, popcorn is then separated for packing. Figure 9 shows cooling and separation machine.

Figure 9 Cooling and Separating Machine



Packing and Delivery of Popcorns

Prepared popcorns are then packed into printed packets of 100-gram and 50-grams through two packing machines having combined capacity of packing 60 packets per minute (30 bags/min each). Packets are then packed into larger cartons having

capacity of 24 100-gram packets or 48 50-gram packets. The final products are delivered to the customers.

5.3. Installed and Operational Capacities

The total production capacity of the unit is based on the production capacity of the hot air popcorn machine. The production unit will operate in a single shift of 8 hours per day. The proposed business will have maximum capacity of producing 7,280,000 popcorn packets in a year which includes 3,920,000 100-gram packets and 3,360,000 50-gram packets. The project is assumed to attain 40% capacity utilization during the first year of operations; which is equal to a total of 2,912,000 packet; including 1,568,000 100-gram packets and 1,344,000 50-gram packets. The operational capacity utilization is assumed to increase at the rate of 5% per annum to reach a maximum of 85%.

Table 2 depicts the installed and operational capacities of the proposed unit. Table 3 shows the product wise distribution of 100 grams packets and Table 4 shows the product wise distribution of 50 grams packets. The flavors selected in this project are because there is huge market demand for these flavors.

Historically salted popcorn was the only flavor available in the Pakistani market. However, due to changing trends flavored popcorn have taken significant proportion of market share. Caramel Popcorn, sweet popcorn are the most wanted flavors of popcorn, these are followed by butter and chocolate flavors. However, salted popcorn is still the preferred choice of Pakistani market. Based on the results research, the production ratio for the proposed production unit for packaged popcorn is given in Table 3 and Table 4.

Table 2: Installed and Operational Capacity

Product	Production Capacity of Machine (kg/hour)	Per Day Capacity (kg)	Per Day Capacity (grams)	Production Ratio	Weight per Packet (grams)	Total Packets per day	Total Annual Capacity per year (Packets)	Initial Year Capacity @ 40%
Popcorn (100 Gram Packets)	250	2,000	2,000,000	70%	100	14,000	3,920,000	1,568,000
Popcorn (50 Gram Packets)				30%	50	12,000	3,360,000	1,344,000
Total						26,000	7,280,000	2,912,000

Table 3: Product Wise Distribution – 100 grams

Products	Ratio	Total Annual Capacity per year (Packets)	Annual Capacity Per Year (Packets)	Initial Capacity per Year @40%
Salted Popcorn	30%	3,920,000	1,176,000	470,400
Caramel Popcorn	20%		784,000	313,600
Sweet Popcorn	20%		784,000	313,600
Butter Popcorn	15%		588,000	235,200
Chocolate Popcorn	15%		588,000	235,200
Total	100%		3,920,000	1,568,000

Table 4: Product Wise Distribution – 50 grams

Products	Production Ratio	Total Annual Capacity per year (Packets)	Annual Capacity Per Year (Packets)	Intial Capacity per Year @40%
Salted Popcorn	30%	3,360,000	1,008,000	403,200
Caramel Popcorn	20%		672,000	268,800
Sweet Popcorn	20%		672,000	268,800
Butter Popcorn	15%		504,000	201,600
Chocolate Popcorn	15%		504,000	201,600
Total	100%		3,360,000	1,344,000

6. CRITICAL FACTORS

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

- Technical know-how and basic knowledge of the entrepreneur
- Uninterrupted and efficient procurement of corn
- Availability of skilled workforce
- Rigorous supervision of the process at every level
- Contracts with bakeries and cinemas
- Effective distributive channels and;
- Hygienic and neat processing facility

7. GEOGRAPHICAL POTENTIAL FOR INVESTMENT

The Pakistan's savory snack market is forecasted to reach USD 956.2 million by 2024 growing at a CAGR of 9.34% during the forecast period (2019 - 2024)². The consumers in Pakistan make their purchase decision considering the factors like quality, features (like flavor), designs, brands and package sizes. That is why, the companies in Pakistan's savory snack market keep launching innovative products in different formats, flavors, and packaging which is leading to rapid growth of snack industry.

Popcorns are beneficial for human health since these are rich in fiber. Popcorns are made from whole grain, an important food group that reduce the risk of diabetes, heart disease and hypertension in humans. Due to different benefits and consumption patterns, people like to consume popcorn which enhances the demand and need of popcorn products in Pakistan.

The demand for setting up the production unit for packaged popcorn will be higher in major cities of Pakistan. Therefore, the geographical potential for investment in the proposed manufacturing unit is in the cities of Karachi, Lahore, Islamabad, Peshawar, Rawalpindi, Quetta, Faisalabad, Sialkot, Hyderabad, Gujranwala, Multan, Mardan, Muzaffarabad, Sukkur or any other major city of Pakistan due to the presence of large consumer base.

8. POTENTIAL TARGET CUSTOMERS/MARKETS

The demand for quality popcorns is growing in Pakistan, especially among the educated middle and upper-income urban population, owing to change in eating habits, change in the consumer taste and preferences, international trends and impact of external media. Children, teenagers, students and the young population are the prime target of the proposed business in Pakistan, due to the growing consumption of

² Source: <https://www.mordorintelligence.com/industry-reports/pakistan-savory-snack-market>

snacks among these age groups. Hence, the product produced from the proposed unit shall be placed at local bakeries, cinemas, cafeterias and local shops which will attract the people of all ages.

The potential target customers of the proposed business are cinema houses, medium to large scale general stores, tuck shops of schools and colleges, medium to large departmental stores and also bakeries. The identified target customers exist in all the small, medium and large cities of all the provinces of Pakistan.

9. PROJECT COST SUMMARY

A detailed financial model has been developed to analyze the commercial viability of the Production Unit for Packaged Popcorn. 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.

Project is proposed to be financed through 100% equity. Total project cost has been estimated to be PKR 41,703,613 comprises of capital investment of PKR 27,873,700 and working capital of PKR 13,829,913.

9.1. Initial Project Cost

The details of initial project cost calculated for the Production Unit for Packaged Popcorn are shown in Table 5.

Table 5: Initial Project Cost Estimates

Particulars	Cost (PKR)	Reference
Land		9.1.1
Building / Infrastructure	205,110	9.1.2
Machinery and Equipment	24,840,000	0
Office Equipment	511,000	9.1.4
Furniture & Fixtures	315,000	9.1.5
Office Vehicles	1,167,250	9.1.6
Pre-operating Costs	355,340	9.1.7
Security against building	480,000	9.1.8
Total Capital Cost – (A)	27,873,700	
Working Capital Requirement - (B)	13,829,913	9.1.9
Total Project Cost - (A+B)	41,703,613	

9.1.1. Land

The proposed unit will be established in a rented building to avoid the high cost of land. Suitable location for setting up a production unit of packaged popcorn can easily find on rent. Therefore, no land cost has been added to the project cost. Total space requirement for the proposed center has been estimated as 3,820 sq. feet (17 Marla). The breakup of the space requirement is provided in Table 6.

Table 6: Breakup of Space Requirement

Break-up of Area	% Break-up	Area (Sq. ft.)
Office Area	4%	150
Raw Material Store	14%	550
Production Area	71%	2,700
Finished Goods Store	8%	300
Washrooms	3%	120
Total	100%	3,820

9.1.2. Building and Renovation Cost

There will be no cost of building construction since the production unit will be started in a rented premise. However, there will be a renovation cost required to make the building usable for the business. The proposed project requires electricity load of around 64 KW for which an industrial electricity connection will be required. Building rent of PKR 160,000 per month has been included in the operating cost. Building renovation cost is shown in Table 7.

Table 7: Building Renovation Cost

Cost Item	Unit of measurement	Total Units	Cost/Unit (PKR)	Total Cost (PKR)
Paint Cost	Liter	78	500	39,170
Labor Cost- Paint	Sq. Feet	7,834	10	78,340
Tiles Cost	Sq. Feet	510	120	61,200
Labor Cost- Tiles	Sq. Feet	510	40	20,400
Curtains	Units	2	3,000	6,000
TOTAL (PKR)				205,110

9.1.3. Machinery and Equipment Requirement

Table 8 provides details of machinery and equipment required for the proposed project.

Table 8: Machinery and Equipment Requirement

Cost Item	No.	Unit Cost (PKR)	Total Cost (PKR)
Hot Air Automatic Popcorn Machine (250 kg/h)	1	23,000,000	23,000,000
Automatic Packing Machine (30 bags/min)	2	300,000	600,000
Platform Trolley	4	30,000	120,000
Generator (125 KW)	1	1,000,000	1,000,000
Deep Freezer (DC Invertor) (400Ltr/14 cubic feet)	2	60,000	120,000
Total	10		24,840,000

9.1.4. Office Equipment Cost

Table 9 provides details of office equipment required for the proposed project.

Table 9: Office Equipment Cost Details

Cost Item	No.	Unit Cost (PKR)	Total Cost (PKR)
Laptop	1	80,000	80,000
Printer	1	40,000	40,000
LED/LCD (Surveillance)	2	40,000	80,000
Water Dispenser	2	20,000	40,000
Ceiling Fan	8	5,000	40,000
Wi-Fi / Internet Routers	1	5,000	5,000
Exhaust Fan	6	3,000	18,000
1.5 ton Air Conditioner	2	90,000	180,000
Security Cameras - 2MP	8	2,000	16,000
Digital Video Recorder (DVR)	1	12,000	12,000
Total	32		511,000

9.1.5. Furniture and Fixture Requirements

Table 10 provides details of furniture and fixtures.

Table 10: Furniture & Fixtures Cost Details

Cost Item	No.	Unit Cost (PKR)	Total Cost (PKR)
Owner Tables	1	30,000	30,000
Owner Chairs	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
Total	21		315,000

9.1.6. Vehicle Requirement

Table 11 provides details of the vehicles required along with their cost for the proposed project.

Table 11: Office Vehicle Cost Details

Cost Item	No.	Unit Cost (PKR)	Registration fee (PKR)	Total Cost (PKR)
Carry Van	1	1,075,000	10,750	1,085,750
Motorcycle	1	80,000	1,500	81,500
Total	2			1,167,250

9.1.7. Pre-Operating Costs

Table 12 provides details of estimated pre-operating costs.

Table 12: Pre-Operating Cost Details

Costs Item	Hiring Months Before Year 0	Unit Cost (PKR)	Total Cost (PKR)
Mechanical Engineer	1	150,000	150,000
Utilities Expense			205,340
Total Cost (PKR)			355,340

9.1.8. Security against Building

Table 13 provides details of security against building for the project.

Table 13: Security against Building

Cost Item	No. of Months	Rent per month (PKR)	Total Cost (PKR)
Security against building	3	160,000	480,000
Total (PKR)			480,000

9.1.9. Initial Working Capital

Table 14 provides details of working capital requirements for the project.

Table 14: Initial Working Capital Details

Particulars	No. of Months	Total Cost (PKR)
Equipment spare part inventory	2	414,000
Raw Material Inventory	3	12,415,913
Cash		1,000,000
Working Capital		13,829,913

9.2. Breakeven Analysis

Table 15 shows calculation of break-even analysis.

Table 15: Breakeven Analysis

Description	First Year Values (PKR)	Ratios
Sales (PKR) – A	148,960,000	100%
Variable Cost (PKR) – B	86,155,762	58%
Contribution (PKR) (A-B) = C	62,804,238	42%
Fixed Cost (PKR) – D	45,142,529	30%
Contribution Margin	42%	
Production (Packets of Popcorn)	2,912,000	
Contribution Margin Per Packet	22	
<u>Breakeven</u>		
Breakeven Revenue (PKR)		107,069,702
Breakeven Packets		2,093,092
Breakeven Capacity		29%

9.3. Revenue Generation

Table 16 provides details for revenue generation of the production unit of packaged popcorn during the 1st year of operations.

Table 16: Revenue Details

Particular	Ratio	Annual Capacity Per Year (Packets)	Initial Capacity per Year @40%	Price per Packet (PKR)	Revenue (PKR)
<u>100 Grams Packets</u>					
Salted Popcorn	30%	1,176,000	470,400	60	28,224,000
Caramel Popcorn	20%	784,000	313,600	70	21,952,000
Sweet Popcorn	20%	784,000	313,600	60	18,816,000
Butter Popcorn	15%	588,000	235,200	70	16,464,000
Chocolate Popcorn	15%	588,000	235,200	70	16,464,000
Sub Total	100%	3,920,000	1,568,000		101,920,000
<u>50 Grams Packets</u>					
Salted Popcorn	30%	1,008,000	403,200	30	12,096,000
Caramel Popcorn	20%	672,000	268,800	40	10,752,000
Sweet Popcorn	20%	672,000	268,800	30	8,064,000
Butter Popcorn	15%	504,000	201,600	40	8,064,000
Chocolate Popcorn	15%	504,000	201,600	40	8,064,000
Sub total	100%	3,360,000	1,344,000		47,040,000
Total (PKR)		7,280,000	2,912,000		148,960,000

9.4. Variable Cost Estimate

Variable costs of the project have been provided in Table 17.

Table 17: Variable Cost Estimate

Description of Costs	Amount (PKR)
Raw Material Cost-Salted Popcorn*	14,230,588
Raw Material Cost-Caramel Popcorn*	8,506,914
Raw Material Cost-Sweet Popcorn*	8,575,872
Raw Material Cost-Butter Popcorn*	9,813,606
Raw Material Cost-Chocolate Popcorn*	8,536,671
Packing Cost-100 grams	6,272,000
Packing Cost-50 grams	3,225,600
Cartons for packaging-100 grams	3,266,667
Cartons for packaging-50 grams	1,400,000
Direct Utilities Cost	2,170,025
Direct Labor	12,060,000
Machinery Maintenance Cost	2,484,000
Fuel Cost – Generator	217,002
Office vehicles running expense-Carry Van	402,000
Water expense	74,495
Other Consumables	78,320
Communication expense (phone, mail, internet, etc.)	2,358,000
Office vehicles running expense	126,000
Office expenses (stationery, entertainment, etc.)	2,358,000
Total (PKR)	86,155,762

*In the process of manufacturing of flakes, 15 to 20% of raw material is lost due to evaporation which reduces the total weight of the finished good.

Table 18: Raw Material Cost-Salted Popcorn

Cost Item	Unit of Measurment	Cost per Unit (PKR)	Consumption per kg Corn	Cost (PKR)
Water	Liter	-	0.50	-
Corn	Kg	50	1.00	50
Salt	Kg	40	0.10	4

Butter	Kg	1000	0.20	200
Corn Syrup	Liter	460	0.25	115
Total			2.05	369
Number of packet (100 grams) per 2.05 kg				17.4 ³
Cost per Packet (PKR)				21.18
Number of packet (50 grams) per 2.05 kg				34.9
Cost per Packet (PKR)				10.59

Table 19: Raw Material Cost-Caramel Popcorn

Cost Item	Unit of Measurment	Cost per Unit (PKR)	Consumption per kg Corn	Cost (PKR)
Water	Liter	-	0.5	-
Corn	Kg	50	1	50
Salt	Kg	40	0.10	4.00
Butter	Kg	1000	0.20	140
Corn Syrup	Liter	460	0.25	115
Sugar	Kg	115	0.70	81
Soda	Kg	105	0.10	10.50
Total			2.85	460
Number of packet (100 grams) per 2.85 kg				24.23 ⁴
Cost per Packet (PKR)				18.99
Number of packet (50 grams) per 2.85 kg				48.45
Cost per Packet (PKR)				9.49

Table 20: Raw Material Cost-Sweet Popcorn

Cost Item	Unit of Measurment	Cost per Unit (PKR)	Consumption per kg Corn	Cost (PKR)
Water	Liter		0.50	-

³ The number of packets are taken in decimals as we are doing calculation on a small basis of 1 kg corn.

⁴ The number of packets are taken in decimals as we are doing calculation on a small basis of 1 kg corn.

Corn	Kg	50	1	50
Sugar	Kg	115	1	115
Butter	Kg	1000	0.20	200
Corn Syrup	Liter	460	0.25	115
Total			2.95	480
Number of packet (100 grams) per 2.95 kg				25.08 ⁵
Cost per Packet (PKR)				19.14
Number of packet (50 grams) per 2.95 kg				50.15
Cost per Packet (PKR)				9.57

Table 21: Raw Material Cost-Butter Popcorn

Cost Item	Unit of Measurment	Cost per Unit (PKR)	Consumption per kg Corn	Cost (PKR)
Water	Liter		0.50	
Corn	Kg	50	1	50
Salt	Kg	40	0.15	6.00
Butter	Kg	1000	0.40	400
Corn Syrup	Liter	460	0.25	115
Total			2.30	571
Number of packet (100 grams) per 2.30 kg				19.55 ⁶
Cost per Packet (PKR)				29.21
Number of packet (50 grams) per 2.30 kg				39.1
Cost per Packet (PKR)				14.60

⁵ The number of packets are taken in decimals as we are doing calculation on a small basis of 1 kg corn.

⁶ The number of packets are taken in decimals as we are doing calculation on a small basis of 1 kg corn.

Table 22: Raw Material Cost-Chocolate Popcorn

Cost Item	Unit of Measurment	Cost per Unit (PKR)	Consumption per KG(kg/ltr)	Cost (PKR)
Water	Liter	-	0.50	-
Corn	Kg	50	1	50
Salt	Kg	40	0.10	4
Butter	Kg	1000	0.25	250
Corn Syrup	Liter	460	0.20	92
Cocoa Powder	Kg	500	0.20	100
Sugar	Kg	115	0.10	12
Total			2.35	508
Number of packet (100 grams) per 2.35 kg				19.98 ⁷
Cost per Packet (PKR)				25.41
Number of packet (50 grams) per 2.35 kg				39.95
Cost per Packet (PKR)				12.70

Table 23: Direct Labor

Personnel	Number of Personnel	Salary Per Month (PKR)	Annual Salaries (PKR)
Mechanical Engineer	1	150,000	1,800,000
Labor Skilled	10	45,000	5,400,000
Labor Unskilled	10	35,000	4,200,000
Production Supervisor	1	55,000	660,000
Total	22		12,060,000

⁷ The number of packets are taken in decimals as we are doing calculation on a small basis of 1 kg corn.

Table 24: Machinery Maintenance Cost

Cost Item	Machinery Cost	Rate	Total Cost (PKR)
Machinery Maintenance Cost	24,840,000	10%	2,484,000
Total			2,484,000

Table 25: Office Vehicle Running Expense

Particulars	Motorcycle (PKR)	Carry Van (PKR)	Total (PKR)
Fuel cost	9,000	30,000	39,000
Service Charges	500	2,000	500
Oil & Tuning	1,000	1,500	1,000
Monthly expenses/ Motorcycle	10,500	33,500	40,500
No of Vehicles	1	1	2
Monthly Vehicle Running Cost	10,500	33,500	44,000
Yearly Cost	126,000	402,000	528,000

Table 26: Cartons for Packaging

Cost Item	Packets per carton	No. of Cartons	Unit Cost (PKR)	Total Cost (PKR)
Cartons for Packaging-100 grams	24	65,333	50	3,266,667
Cartons for Packaging-50 grams	48	28,000	50	1,400,000
Total (PKR)				4,666,667

Table 27: Other Consumables

Cost Item	No.	Unit Cost (PKR)	Total Cost (PKR)
Soap	60	40	2,400
Detergent	12	180	2,160
Sponge	24	60	1,440

Mop	10	200	2,000
Stainless Steel Spiral	24	50	1,200
Liquid Soap	12	180	2,160
Phenyle	24	190	4,560
Net Caps	1,040	60	62,400
Total			78,320

Table 28: Packing Cost

Cost Item	Cost/Kg	Consumption per packet (Grams)	Cost per Packet (PKR)
Packing Cost-100 gram	800	5	4
Packing Cost-50 gram	800	3	2.4
Total packets produced 100 grams			1,568,000
Total Packing Cost			6,272,000
Total packets produced 50 grams			1,344,000
Total Packing Cost			3,225,600

Table 29: Variable Cost Assumption

Description of Costs	Rate	Rational
Fuel Cost	10%	of utilities cost
Water expense	0.15 %	of total raw material cost
Communications expense (phone,mail, internet, etc.)	30%	of Management staff expense
Office expenses (stationery, entertainment, etc.)	30%	of Management staff expense

9.5. Fixed Cost Estimate

Table 30 shows the estimated fixed cost of the project.

Table 30: Fixed Cost Estimate

Description of Costs	Amount (PKR)
Management Staff	7,860,000
Administration benefits expense	1,394,400
Building rental expense	1,920,000
Marketing and Promotional expense	29,792,000
Depreciation expense	4,045,449
Indirect Utilities	39,562
Amortization of pre-operating costs	71,068
License,Permits,etc.	20,000
Total (PKR)	45,142,529

Table 31: Management Staff

Personnel	Number of Personnel	Salary Per Month (PKR)	Annual Salaries (PKR)
Office Boy	1	20,000	240,000
Security	1	20,000	240,000
Driver	1	25,000	300,000
Accounts Manager	1	65,000	780,000
Accountant	2	45,000	1,080,000
Procurement Manager	1	50,000	600,000
Procurement Staff	2	30,000	720,000
Admin Manager	1	50,000	600,000
Admin Staff	3	35,000	1,260,000
Sales and Marketing Manager	1	50,000	600,000
Sales and Marketing Staff	4	30,000	1,440,000
Total (PKR)			7,860,000

Table 32: License, Permits, etc.*

Cost Item	No.	Total Cost (PKR)
Punjab Food Authority	1	15,000
Social Security Corporation	1	5,000
Total	2	20,000

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

Table 33: Fixed Cost Assumption

Description of Costs	Rate	Rational
Administration benefits expense	7%	of administration expense
Marketing and Promotional expense	20%	of revenue
<u>Depreciation</u>		
Building	10%	of cost
Machinery and Equipment/Office Equipment/Office Vehicle/Furniture & Fixture	15%	of cost

9.6. Financial Feasibility Analysis

The financial feasibility analysis provides the information regarding projected Internal Rate of Return (IRR), Net Present Value (NPV) and Payback period of the study, which is shown in Table 34.

Table 34: Financial Feasibility Analysis

Description	Project
IRR	58%
NPV (PKR)	210,339,204
Payback Period (years)	2.54
Projection Years	10
Discount rate used for NPV	15%

9.7. Financial Feasibility Analysis with 50% Debt

The financial feasibility analysis provides the information regarding projected IRR, NPV and payback period of the study on the basis of Debt: Equity Model (50:50) with the interest rate of KIBOR+3%, which is shown in Table 35.

Table 35: Financial Feasibility Analysis with 50% Debt

Description	Project
IRR	58%
NPV (PKR)	241,541,379
Payback Period (years)	2.56
Projection Years	10
Discount rate used for NPV	13%

9.8. Human Resource Requirement

The proposed project shall require the workforce as provided in Table 36.

Table 36 Human Resource

Personnel	Number of Personnel	Salary Per Month (PKR)	Annual Salaries (PKR)
Mechanical Engineer	1	150,000	1,800,000
Labour Skilled	10	45,000	5,400,000
Labor Unskilled	10	35,000	4,200,000
Production Supervisor	1	55,000	660,000
Office Boy	1	20,000	240,000
Security	1	20,000	240,000
Driver	1	25,000	300,000
Accounts manager	1	65,000	780,000
Accountant	2	45,000	1,080,000
Procurement Manager	1	50,000	600,000
Procurement Staff	2	30,000	720,000
Admin Manager	1	50,000	600,000
Admin Staff	3	35,000	1,260,000
Sales and Marketing Manager	1	50,000	600,000
Sales and Marketing Staff	4	30,000	1,440,000
Total	40		19,920,000

10. CONTACT DETAILS

The contact details of all the major suppliers of machinery and equipment used in proposed production unit of packaged popcorn is given in Table 37.

Table 37 Contact Details

Name of Supplier	Origin	Contact	Email/Website
XFD Popcorn Maker	China	86-15960236006	binochen@xfdpopcorn.com
Hannan Engineering Packing Machine	Lahore	0301-4157591	www.hannanengineering.com
Loncin Generator	Karachi	0333-7063875	www.generators.com.pk
Powerzone Generators Pakistan	Lahore	0304-1113087	www.powerzone.com.pk
New Power Generator	Peshawar	0321-9092993	
M.T Engineering services Quetta	Quetta	0332-1374474	www.mt-engineering-services-quetta.business.site
Gem Electric & Generator House	Gujranwala	0300-6314302	www.gem-electric-generator-house.business.site
Steely Product	Karachi	0300-8967598	www.steelyproduct.com

11. USEFUL LINKS

Table 38 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
Trade Development Authority of Pakistan	www.tdap.gov.pk
Federal Board of Revenue	www.fbr.gov.pk
Government of Punjab	www.punjab.gov.pk
Government of Sindh	www.sindh.gov.pk
Government of Khyber Pakhtunkhwa	www.kp.gov.pk
Government of Balochistan	www.balochistan.gov.pk
Government of Azad Jammu and Kashmir	www.ajk.gov.pk
Government of Gilgit Baltistan	www.gilgitbaltistan.gov.pk
Punjab Food Authority	www.pfa.gop.pk
Sindh Food Authority	www.sfa.gos.pk
Food Department Government of Balochistan	www.balochistan.gov.pk/departments/food-department/
Khyber Pakhtunkhwa Food Safety & Halal Food Authority	www.kpfsa.gov.pk
Small Industries Development Board, Khyber Pakhtunkhwa	www.sidbkgp.com
Sindh Small Industries Corporation	www.ssic.gos.pk
Punjab Small Industries Corporation	www.psic.gop.pk

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-Salted Popcorn (PKR)	40,320,000	50,440,320	62,321,818	76,232,047	92,476,404	111,403,241	133,409,666	158,948,087	188,533,625	222,752,477
Revenue-Caramel Popcorn (PKR)	32,704,000	40,912,704	50,549,919	61,832,661	75,008,638	90,360,406	108,210,062	128,924,560	152,921,718	180,677,010
Revenue-Sweet Popcorn (PKR)	26,880,000	33,626,880	41,547,878	50,821,365	61,650,936	74,268,827	88,939,777	105,965,392	125,689,083	148,501,652
Revenue-Butter Popcorn (PKR)	24,528,000	30,684,528	37,912,439	46,374,495	56,256,479	67,770,305	81,157,547	96,693,420	114,691,288	135,507,757
Revenue-Chocolate Popcorn (PKR)	24,528,000	30,684,528	37,912,439	46,374,495	56,256,479	67,770,305	81,157,547	96,693,420	114,691,288	135,507,757
Total Revenue (PKR)	148,960,000	186,348,960	230,244,493	281,635,064	341,648,935	411,573,084	492,874,598	587,224,878	696,527,002	822,946,653
Cost of sales										
Raw Material Cost-Salted Popcorn	14,230,588	17,621,026	21,549,862	26,091,136	31,328,339	37,355,563	44,278,794	52,217,350	61,305,489	71,694,215
Raw Material Cost-Caramel Popcorn	8,506,914	10,533,687	12,882,309	15,597,041	18,727,792	22,330,811	26,469,455	31,215,050	36,647,856	42,858,140
Raw Material Cost-Sweet Popcorn	8,575,872	10,619,074	12,986,734	15,723,472	18,879,602	22,511,827	26,684,019	31,468,083	36,944,928	43,205,553
Raw Material Cost-Butter Popcorn	9,813,606	12,151,698	14,861,076	17,992,801	21,604,446	25,760,902	30,535,255	36,009,791	42,277,095	49,441,301
Raw Material Cost-Chocolate Popcorn	8,536,671	10,570,533	12,927,370	15,651,598	18,793,300	22,408,922	26,562,043	31,324,237	36,776,047	43,008,055
Packing Cost-50 grams	3,225,600	3,994,099	4,884,635	5,913,991	7,101,090	8,467,261	10,036,527	11,835,933	13,895,911	16,250,689
Packing Cost-100 grams	6,272,000	7,766,304	9,497,902	11,499,427	13,807,675	16,464,119	19,515,469	23,014,313	27,019,827	31,598,561
Cartons for packaging-100grams	3,266,667	4,044,950	4,946,824	5,989,285	7,191,498	8,575,062	10,164,307	11,986,622	14,072,826	16,457,584
Cartons for packaging-50grams	1,400,000	1,733,550	2,120,067	2,566,836	3,082,070	3,675,026	4,356,131	5,137,124	6,031,211	7,053,250
Direct Utilities Cost	2,170,025	2,366,123	2,579,942	2,813,082	3,067,291	3,344,472	3,646,701	3,976,241	4,335,561	4,727,351
Direct Labor	12,060,000	13,229,820	14,513,113	15,920,884	17,465,210	19,159,336	21,017,791	23,056,517	25,292,999	27,746,420
Machinery Maintenance - Cost	2,484,000	2,734,056	3,009,284	3,312,219	3,645,649	4,012,644	4,416,584	4,861,187	5,350,546	5,889,168
Fuel Cost-Generator	217,002	260,431	312,551	375,102	450,172	540,265	648,388	778,150	933,882	1,120,779
Water expense	74,495	100,580	134,121	177,059	231,811	301,387	389,528	500,876	641,190	817,606
Total cost of sales	80,833,442	97,725,930	117,205,791	139,623,933	165,375,946	194,907,597	228,720,991	267,381,471	311,525,367	361,868,673
Gross Profit	68,126,558	88,623,030	113,038,702	142,011,131	176,272,990	216,665,487	264,153,607	319,843,407	385,001,635	461,077,980
	46%	48%	49%	50%	52%	53%	54%	54%	55%	56%
General administration & selling expenses										
Management Staff	7,860,000	8,622,420	9,458,795	10,376,298	11,382,799	12,486,930	13,698,162	15,026,884	16,484,492	18,083,488
Administration benefits expense	1,394,400	1,529,657	1,678,034	1,840,803	2,019,361	2,215,239	2,430,117	2,665,838	2,924,424	3,208,094
Indirect Utilities	39,562	43,137	47,035	51,286	55,920	60,974	66,484	72,492	79,042	86,185
Other Consumables	78,320	86,204	94,882	104,434	114,947	126,518	139,254	153,272	168,702	185,684
License,Permits,etc.	20,000	22,013	24,229	26,668	29,353	32,308	35,560	39,140	43,080	47,417
Communications expense (phone,mail, internet, etc.)	2,358,000	2,586,726	2,837,638	3,112,889	3,414,840	3,746,079	4,109,449	4,508,065	4,945,348	5,425,046
Office Vehicles Running Expense-Motorcycle	126,000	138,684	152,645	168,011	184,924	203,540	224,030	246,582	271,405	298,726
Office Vehicles Running Expense-Carry Van	402,000	438,327	477,938	521,127	568,220	619,568	675,556	736,604	803,168	875,748
Office expenses (stationery, entertainment, janitorial etc.)	2,358,000	2,586,726	2,837,638	3,112,889	3,414,840	3,746,079	4,109,449	4,508,065	4,945,348	5,425,046
Promotional expense	29,792,000	37,269,792	46,048,899	56,327,013	68,329,787	82,314,617	98,574,920	117,444,976	139,305,400	164,589,331
Depreciation expense	4,045,499	4,045,499	4,045,499	4,045,499	4,045,499	4,045,499	2,703,836	7,585,186	7,585,186	7,585,186
Amortization of pre-operating costs	71,068	71,068	71,068	71,068	71,068	-	-	-	-	-
Subtotal	50,464,849	59,552,254	70,097,499	82,313,505	96,442,628	112,689,529	130,168,213	156,728,641	181,671,286	210,337,210
Operating Income	17,661,710	29,070,776	42,941,202	59,697,626	79,830,361	103,975,958	133,985,394	163,114,766	203,330,350	250,740,770
Gain / (loss) on sale of machinery & equipment	-	-	-	-	-	-	6,210,000	-	-	-
Gain / (loss) on sale of office equipment	-	-	-	-	-	-	127,750	-	-	-
Gain / (loss) on sale of office vehicles	-	-	-	-	-	-	291,813	-	-	-
Earnings Before Interest & Taxes	17,661,710	29,070,776	42,941,202	59,697,626	79,830,361	103,975,958	140,614,957	163,114,766	203,330,350	250,740,770
Subtotal	-	-	-	-	-	-	-	-	-	-
Earnings Before Tax	17,661,710	29,070,776	42,941,202	59,697,626	79,830,361	103,975,958	140,614,957	163,114,766	203,330,350	250,740,770
Tax	5,301,598	9,294,772	14,149,421	20,014,169	27,060,627	35,511,585	48,335,235	56,210,168	70,285,622	86,879,269
NET PROFIT/(LOSS) AFTER TAX	12,360,111	19,776,005	28,791,782	39,683,457	52,769,735	68,464,373	92,279,722	106,904,598	133,044,727	163,861,500

12.2. Balance Sheet

Calculations	SMEDA										
Balance Sheet											
	Year 0	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Assets											
<i>Current assets</i>											
Cash & Bank	1,000,000	5,659,545	10,155,511	13,929,796	16,887,670	18,782,283	19,178,489	73,280,158	160,319,580	266,304,643	324,961,064
Accounts receivable	-	15,960,000	19,965,960	24,669,053	30,175,185	36,605,243	44,097,116	52,807,993	62,916,951	74,627,893	62,444,123
Equipment spare part inventory	414,000	499,269	602,100	726,111	875,664	1,056,019	1,273,520	1,535,820	1,852,143	2,233,617	-
Raw material inventory-Salted Popcom	3,557,647	4,848,719	6,526,737	8,697,620	11,494,779	15,086,009	19,682,066	25,547,331	33,013,068	42,493,886	-
Raw material inventory-Caramel Popcom	2,126,729	2,898,519	3,901,623	5,199,357	6,871,473	9,018,277	11,765,757	15,271,959	19,734,907	25,402,453	-
Raw material inventory-Sweet Popcom	2,143,968	2,922,015	3,933,250	5,241,504	6,927,174	9,091,380	11,861,132	15,395,755	19,894,881	25,608,368	-
Raw material inventory-Butter Popcom	2,453,402	3,343,742	4,500,926	5,997,997	7,926,955	10,403,516	13,573,019	17,617,785	22,766,258	29,304,359	-
Raw material inventory-Chocolate Popcom	2,134,168	2,908,658	3,915,271	5,217,544	6,895,509	9,049,822	11,806,913	15,325,379	19,803,938	25,491,309	-
Finished goods inventory-Salted Popcom		272,036	328,885	394,443	469,888	556,554	655,939	769,734	899,841	1,048,403	1,217,827
Finished goods inventory-Caramel Popcom		181,348	219,257	262,940	313,247	371,036	437,265	513,141	599,894	698,899	811,865
Finished goods inventory-Sweet Popcom		181,348	219,257	262,940	313,247	371,036	437,265	513,141	599,894	698,899	811,865
Finished goods inventory-Butter Popcom		136,018	164,428	197,221	234,927	278,277	327,949	384,867	449,896	524,201	608,884
Finished goods inventory-Chocolate Popcom		136,018	164,428	197,221	234,927	278,277	327,949	384,867	449,896	524,201	608,884
Total Current Assets	13,829,913	39,947,235	54,597,634	70,993,748	89,620,646	110,947,728	135,424,380	219,347,928	343,301,149	494,961,133	391,464,513
<i>Fixed assets</i>											
Building/Infrastructure	205,110	184,599	164,088	143,577	123,066	102,555	82,044	61,533	41,022	20,511	-
Machinery & equipment	24,840,000	21,114,000	17,388,000	13,662,000	9,936,000	6,210,000	2,484,000	47,086,969	40,023,924	32,960,878	25,897,833
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	1,167,250	992,163	817,075	641,988	466,900	291,813	116,725	1,778,425	1,511,661	1,244,897	978,134
Office equipment	511,000	434,350	357,700	281,050	204,400	127,750	51,100	968,657	823,358	678,060	532,761
Total Fixed Assets	27,518,360	23,472,862	19,427,363	15,381,865	11,336,366	7,290,868	3,245,369	50,972,701	43,387,515	35,802,329	28,217,143
<i>Intangible assets</i>											
Pre-operation costs	355,340	284,272	213,204	142,136	71,068	-	-	-	-	-	-
Total Intangible Assets	355,340	284,272	213,204	142,136	71,068	-	-	-	-	-	-
TOTAL ASSETS	41,703,613	63,704,368	74,238,201	86,517,749	101,028,080	118,238,596	138,669,749	270,320,630	386,688,664	530,763,462	419,681,656
Liabilities & Shareholders' Equity											
<i>Current liabilities</i>											
Accounts payable		15,820,700	19,556,558	23,929,229	29,040,285	35,008,024	41,970,471	50,088,950	59,552,387	70,582,457	71,182,257
Total Current Liabilities	-	15,820,700	19,556,558	23,929,229	29,040,285	35,008,024	41,970,471	50,088,950	59,552,387	70,582,457	71,182,257
<i>Other liabilities</i>											
Total Long Term Liabilities	-	-	-	-	-	-	-	-	-	-	-
<i>Shareholders' equity</i>											
Paid-up capital	41,703,613	41,703,613	41,703,613	41,703,613	41,703,613	41,703,613	41,703,613	72,956,292	72,956,292	72,956,292	72,956,292
Retained earnings		6,180,056	12,978,030	20,884,906	30,284,181	41,526,958	54,995,665	147,275,387	254,179,985	387,224,712	275,543,106
Total Equity	41,703,613	47,883,669	54,681,643	62,588,519	71,987,795	83,230,571	96,699,279	220,231,679	327,136,277	460,181,005	348,499,399
TOTAL CAPITAL AND LIABILITIES	41,703,613	63,704,368	74,238,201	86,517,749	101,028,080	118,238,596	138,669,749	270,320,630	386,688,664	530,763,462	419,681,656

12.3. Cash Flow Statement

Calculations	SMEDA										
Cash Flow Statement											
	Year 0	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
<i>Operating activities</i>											
Net profit		12,360,111	19,776,005	28,791,782	39,683,457	52,769,735	68,464,373	92,279,722	106,904,598	133,044,727	163,861,500
Add: depreciation expense		4,045,499	4,045,499	4,045,499	4,045,499	4,045,499	4,045,499	2,703,836	7,585,186	7,585,186	7,585,186
amortization of pre-operating costs		71,068	71,068	71,068	71,068	71,068	-	-	-	-	-
Accounts receivable		(15,960,000)	(4,005,960)	(4,703,093)	(5,506,133)	(6,430,058)	(7,491,873)	(8,710,876)	(10,108,959)	(11,710,942)	12,183,770
Equipment inventory	(414,000)	(85,269)	(102,831)	(124,011)	(149,553)	(180,355)	(217,502)	(262,299)	(316,323)	(381,474)	2,233,617
Raw Material Inventory-Salted Popcom	(3,557,647)	(1,291,072)	(1,678,018)	(2,170,883)	(2,797,159)	(3,591,230)	(4,596,057)	(5,865,265)	(7,465,737)	(9,480,818)	42,493,886
Raw Material Inventory-Caramel Popcom	(2,126,729)	(771,791)	(1,003,104)	(1,297,734)	(1,672,116)	(2,146,804)	(2,747,480)	(3,506,201)	(4,462,949)	(5,667,546)	25,402,453
Raw Material Inventory-Sweet Popcom	(2,143,968)	(778,047)	(1,011,235)	(1,308,253)	(1,685,670)	(2,164,206)	(2,769,752)	(3,534,623)	(4,499,126)	(5,713,488)	25,608,368
Raw Material Inventory-Butter Popcom	(2,453,402)	(890,341)	(1,157,184)	(1,497,070)	(1,928,959)	(2,476,561)	(3,169,503)	(4,044,766)	(5,148,473)	(6,538,101)	29,304,359
Raw Material Inventory-Chocolate Popcom	(2,134,168)	(774,491)	(1,006,613)	(1,302,273)	(1,677,965)	(2,154,314)	(2,757,091)	(3,518,466)	(4,478,560)	(5,687,370)	25,491,309
Finished Goods Inventory-Salted Popcom		(272,036)	(56,850)	(65,557)	(75,446)	(86,665)	(99,385)	(113,795)	(130,107)	(148,561)	(169,425)
Finished Goods Inventory-Caramel Popcom		(181,348)	(37,909)	(43,683)	(50,307)	(57,789)	(66,229)	(75,876)	(86,753)	(99,005)	(112,966)
Finished Goods Inventory-Sweet Popcom		(181,348)	(37,909)	(43,683)	(50,307)	(57,789)	(66,229)	(75,876)	(86,753)	(99,005)	(112,966)
Finished Goods Inventory-Butter Popcom		(136,018)	(28,410)	(32,794)	(37,705)	(43,350)	(49,672)	(56,918)	(65,029)	(74,305)	(84,683)
Finished Goods Inventory-Chocolate Popcom		(136,018)	(28,410)	(32,794)	(37,705)	(43,350)	(49,672)	(56,918)	(65,029)	(74,305)	(84,683)
Accounts payable		15,820,700	3,735,858	4,372,672	5,111,055	5,967,739	6,962,446	8,118,480	9,463,437	11,030,070	599,800
Cash provided by operations	(12,829,913)	10,839,601	17,473,996	24,659,191	33,242,055	43,421,570	55,391,872	73,280,158	87,039,422	105,985,063	334,199,527
<i>Financing activities</i>											
Issuance of shares	41,703,613	-	-	-	-	-	-	31,252,679	-	-	-
Cash provided by / (used for) financing activities	41,703,613	-	-	-	-	-	-	31,252,679	-	-	-
<i>Investing activities</i>											
Capital expenditure	(27,873,700)	-	-	-	-	-	-	(50,431,168)	-	-	-
Cash (used for) / provided by investing activities	(27,873,700)	-	-	-	-	-	-	(50,431,168)	-	-	-
NET CASH	1,000,000	10,839,601	17,473,996	24,659,191	33,242,055	43,421,570	55,391,872	54,101,668	87,039,422	105,985,063	334,199,527

13. KEY ASSUMPTIONS

13.1. Operating Cost Assumptions

Table 39: Operating Cost Assumptions

Description	Details
General Inflation rate	10.1%
Communication expenses	30% of management staff expenses
Office expenses (stationery, janitorial, etc.)	30% of management staff expenses
Promotional expense	20% of revenue
Electricity growth rate	9.0% of average rate of last 3 years
Water price growth rate	9.0% of average rate of last 3 years
Gas price growth rate	9.0% of average rate of last 3 years
Wage growth rate	9.7% of average rate of last 3 years
Office equipment price growth rate	9.6% of average rate of last 3 years
Office vehicles price growth rate	6.2% of average rate of last 3 years

13.2. Revenue Assumptions

Table 40: Revenue Assumptions

Description	Details
Sale price growth rate	11.2%
Capacity utilization	40%
Capacity utilization growth rate	5%
Maximum capacity	85%

13.3. Financial Assumptions

Table 41: Financial Assumptions

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

13.4. Cash Flow Assumptions**Table 42 Cash Flow Assumptions**

Description		Days
Accounts receivable cycle		30
Accounts payable cycle		60

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