



**Pre-feasibility Study**

# **ZIP MANUFACTURING UNIT**

**May 2021**

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

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

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## 1 DISCLAIMER

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## 2 EXECUTIVE SUMMARY

This “Pre-feasibility Document” provides details for setting up “Zip Manufacturing Unit”, which has a capacity of manufacturing 2,240,000 meter in a year at a maximum capacity of 100%. The initial starting capacity in “Year One” is calculated at 60%, with 1,344,000-meter production annually. The unit is expected to obtain a maximum capacity of 85% in projected 10 years.

The unit is proposed to be ideally located in any adjoining industrial areas of metropolitan cities like Lahore, Karachi, Faisalabad or Peshawar. These areas are preferred for the proposed unit due to their availability of skilled labor.

“Zip Manufacturing Unit” will be set up in a rented building with area of 1,575 sq. ft. The project requires a total investment of PKR 6.88 million. This includes capital investment of PKR 4.33 million and working capital of PKR 2.55 million. This project is financed through 100% equity. The Net Present Value (NPV) of project is 47.97 million with an Internal Rate of Return (IRR) of 80% and a Payback period of 1.70 years. Further, this project is expected to generate Gross Annual Revenue of PKR 60.48 million during 1<sup>st</sup> year, with Gross Profit (GP) ratio ranging from 19% to 20% and Net Profit (NP) ratio ranging from 9% to 10% during the projection period of ten years. The proposed project will achieve its estimated breakeven point at capacity of 21% at breakeven revenue of PKR 21.42 million during first year.

The proposed project may also be established using leveraged financing. At 50% financing from debt sources bearing cost equal to KIBOR+3%, the proposed zip manufacturing unit provides Net Present Value (NPV) of PKR 56.07 million, Internal Rate of Return (IRR) of 79% and Payback period of 1.73 years after considering the impact of debt financing. Further, this project is expected to generate Net Profit (NP) ratio ranging from 8% to 10% during the projection period of ten years. The proposed project will achieve its estimated breakeven point at capacity of 22% with annual revenue of PKR 22.26 million.

The proposed project will provide employment opportunities to 9 to 10 people including CEO/Operation Manager, 1 Skilled, 2 Semi Skilled and 2 Unskilled workers, Admin & Finance Officer, Security Guards and Office Boy. High return on investment and steady growth of business is expected with the entrepreneur having some prior experience or education in the related field of business.

As evident from the above financial figures the proposed project for Zip Manufacturing Unit shows reasonable profitability and is economically and financially viable. The legal form of this project is proposed as “Private Limited Company”. Further, the proposed project may also be established as “Single Member Company” or a “Partnership Concern”.

### 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 'sectoral 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 "Zip Manufacturing Unit". 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 & PRODUCT**

A metal zip has its binding edges consisting of individual pieces of metal that are molded into shape and set at regular intervals on the zip tape. Metal zips are mainly made of brass, nickel and aluminum, and given their durability, they are mostly used in jeans, work-wear, heavy luggage and heavy-duty garments that must withstand high strength and tough washing.

In Pakistan, the need of zip in large textile and leather sector is increasing rapidly for the past few decades; because of its convenience, efficiency, ease of use and functionality. Zips became highly popular due to the promotions by fashion industry especially in 1930s campaign of kid's clothing with zip played an important role in the popularity of zips. Today, garment industry uses zip in almost all types of products; such as slacks, trousers, jeans, jackets, backpacks, shorts, skirts, dresses. In addition to the garments industry, zip is a regular raw material for bags and shoes industry also. Resultantly, demand for zips has been increasing in local market and for exports.

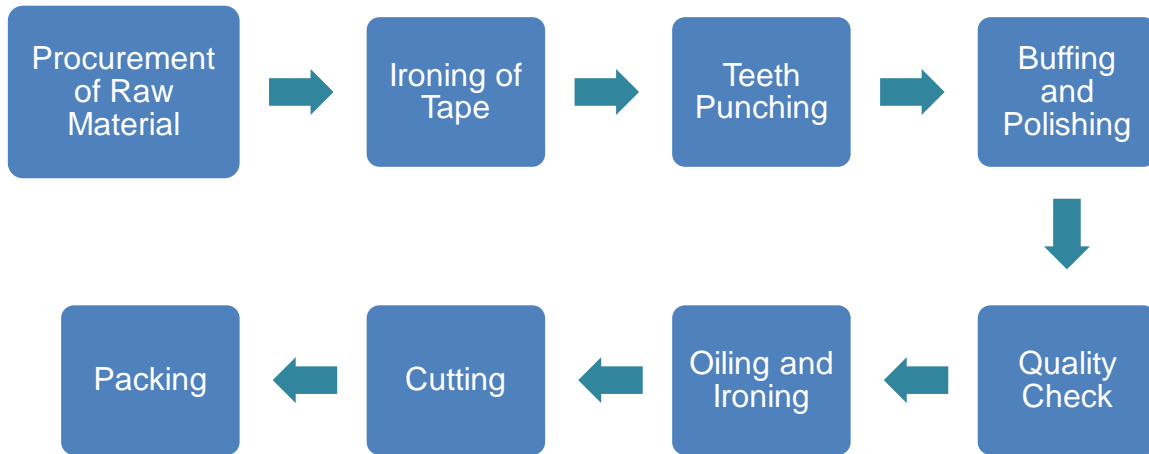
The document provides details for setting up a Zip Manufacturing Unit. A medium sized unit involves purchase of brass strips and zip tapes as the two main raw materials to manufacture metal zips.

The unit is proposed to be set up in a rented building having covered area of 900 sq. ft. The proposed project shall operate at 60% of installed capacity for the initial year of operation with production of 1,344,000 meters of zip. During the projected period of 10 years, the proposed project is expected to attain a maximum capacity of 85%. The proposed business will create employment opportunities for 10 to 12 persons.

### 5.1 Production Process Flow

Zip production process flow is shown in Figure 1.

**Figure 1: Production Process Flow**



Brief description of process flow is as follows:

#### **Procurement of Raw Material**

- **Brass Strip**

Brass strip constitutes the main raw material for zip manufacturing. It is cheap, hard and resistant to corrosion. These characteristics make it suitable for use in zip manufacturing. The zip made of brass is stronger than the one made of plastic. For strength and longevity of zips brass, typically an alloy of copper and zinc having less than 37% zinc content, is commonly used. It is procured from the local market. Figure 2 shows brass foil and strips used in zip manufacturing.

**Figure 2: Brass Strip**



- **Zip Tape**

Zip tape, made of Nylon, is the 'fabric' that runs along the sides of the zip teeth. It is the other major raw material used in Zip manufacturing. It is normally available in the forms of films ranging from 2 to 100 meters in length. Nylon fabric is strong and elastic than polyester. Further it is easy to wash and dye. It provides a smooth and lightweight fabric



of high resilience. Zip tape is procured from the local market. Figure 3 shows Nylon film used in zip manufacturing.

**Figure 3: Nylon Film**



### **Ironing of Tape**

Zip serves as a functional and decorative portion of an item; it may not function properly if it has some wrinkles. To remove the wrinkles the zip tape is through Ironing Machine (also known as Chamber) to iron it for smooth processing. The machine can iron 3 to 10 strips of tape simultaneously at a time. proper ironing of zip tapes is carried out with great care so as to enable the tape to allow proper metal teeth punching.

**Figure 4: Ironing Machine**



### **Teeth Punching**

Nylon film and brass strips are inserted in the punching machine which clamps the brass strips to two parallel nylon films and the two brass strips are punched simultaneously to make teeth on both sides. It further locks both sides of the zip. Figure 5 shows zip rolls after being processed through the punching machine.

**Figure 5: Zip Rolls**



### **Buffing and Polishing**

Zip tape, after being punched and clamped together with brass teeth, is sent for polishing, buffing and polishing. Polishing Buffing helps in making the zip functionality smooth with an improved corrosion resistance. There are different types of polishing. Basic polishing buffing removes imperfections caused by the teeth-stamping machine whereas; paper wheel polishing and diamond polishing are used for super shiny and premium finish. Polishing is a value addition process and only used for fancy products. In the proposed project it has been assumed that only simple zips without polish are produced. Figure 6 shows buffing machine.

**Figure 6: Buffing Machine****Quality Check**

Quality checks are done manually after polishing buffing and /or polishing the brass zip. This includes checking the mechanical working of the zip if added as well the buffing/polishing applied on the brass.

**Oil and Iron**

Oil is sprayed with sprayers to avoid rusting, it also helps in minimizing friction and ensures smooth functioning of the zip. Afterwards, ironing is performed through Steam Ironing machine, to remove wrinkles and chances of malfunctioning of zip. An Ironing Machine has been shown in Figure 4.

**Cutting**

Final stage of the manufacturing process is the cutting of metal zip. After the zips are polished, ironed and properly oiled, the strips are cut by the scissors into lengths of 100 meters and rolled. Different sizes of rolls are also prepared according to customers' requirements.

## **Packing**

Finished metal zips are packed and labeled for final delivery to customers.

**Figure 7: Zip Finished Product**



## **5.2 Installed and Operational Capacities**

The total manufacturing capacity is usually based on the capacity of the Teeth Punching machine. The proposed manufacturing unit shall, at maximum capacity of 100%, produce 2,240,000 meters of Zips annually. However, during initial year of operation, the manufacturing unit is expected to obtain 60% of its installed capacity. The unit would operate in a single shift of 8 hours per day. Based on 280 working days in a year, the unit shall produce 1,344,000 meters of zips during initial year @ 60% capacity. Table 1 depicts the installed and operational capacities of the proposed unit.

**Table 1: Installed and Operational Capacity**

Product	Number of Machines (A)	Teeth Punching Machine Capacity per Day (Meter) (B)	Annual Working Days (C)	Maximum Installed Capacity (meter) $A*B*C=D$	Initial Year Capacity @ 60 % (meter)
Brass Zip	1	8,000	280	2,240,000	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
- Availability of quality raw materials
- Market linkages

- Availability of specialized workforce
- Strict checks on quality standards
- Up to date knowledge of technological innovations
- Rigorous supervision of the production process at every level
- Attractive labeling and packaging and;
- Timely order processing and delivery

## **7 GEOGRAPHICAL POTENTIAL FOR INVESTMENT**

Pakistan is considered one of finest garments and leather products manufacturer and exporter in the region. Target customers for this proposed unit will be the factories or smaller units dealing in garments manufacturing; especially denim garments. It is therefore suitable to establish this production unit in Lahore, Karachi, Sialkot or Faisalabad where textile and leather industry exists. Locating the unit in these cities would provide advantage of being close to buyers which will help in getting consistent orders; followed by increased demand.

However, such units may also be established in other cities where the basic requirements like raw material availability, skilled manpower availability, market access, etc. can be fulfilled.

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

The zips manufactured by the proposed unit shall be used by the local garment manufacturers. As per the Economic Survey of Pakistan 2020-21, export of garments has increased by 4.53% during the period July-March 2021 as compared to that of 2019-20. Since zips are used in manufacturing of garments, it can rightly be assumed that increase in exports of local garments has also increased the demand of zips in the country.

In Pakistan there are many small and medium enterprises engaged in zip manufacturing units which are located in Karachi, Sialkot, Lahore, Faisalabad and Islamabad. For high quality zips and to meet the local demand, zips are imported from different countries as the current local production is insufficient to meet the demand. Moreover, modern zip making technology is only available with major zip manufacturers which are few in numbers.

## 9 PROJECT COST SUMMARY

A detailed financial model has been developed to analyze the commercial viability of Zip Manufacturing Unit. 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 of PKR 6,880,629 is estimated which comprises of capital investment and working capital of PKR 4,329,577 and PKR 2,551,052 respectively.

### 9.1. Project Economics

#### 9.1.1. Financial Feasibility Analysis

The financial feasibility analysis provides the information regarding projected IRR, NPV and payback period of the study, which is shown in Table 2.

**Table 2: Financial Feasibility Analysis**

Description	Project
IRR	80%
NPV (PKR)	47,974,078
Payback Period (years)	1.70
Projection Years	10
Discount rate used for NPV	13%

#### 9.1.2. Financial Feasibility Analysis with 50% Debt

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

**Table 3: Financial Feasibility Analysis with 50% Debt**

Description	Project
IRR	79%
NPV (PKR)	56,065,190
Payback Period (years)	1.73
Discount rate used for NPV	11%

## 9.2. Initial Project Cost Estimates

The details of initial project cost calculated for the Zip Manufacturing unit are shown in Table 4.

**Table 4: Initial Project Cost**

Cost Item	Cost (PKR)
Land	-
Building / Infrastructure	292,750
Machinery & equipment	1,720,000
Furniture & fixtures	245,000
Office vehicles	1,242,300
Office equipment	434,500
Pre-operating costs	202,170
Advance Against Building Rent	192,857
<b>Total Capital Cost</b>	<b>4,329,577</b>
<b>Working Capital</b>	
Equipment spare part inventory	7,167
Raw material inventory	1,979,600
Prepaid Building Rent	75,000
Cash	500,000
<b>Working Capital</b>	<b>2,561,767</b>
<b>Total Project Cost</b>	<b>6,923,487</b>

### 9.2.1. Land

The Zip Manufacturing Unit will be established in a rented building to avoid the high cost of land. Suitable units for setting up a manufacturing business like this can be easily available on rent. Therefore, no land cost has been added to the project cost. The required space breakup is shown in Table 5.

**Table 5: Land Area Breakup**

Description	% Break-Up	Numbers	Size	Area Sq. Ft.
Processing Hall	57%	1	900	900
Office Area	11%	1	170	170
Waiting Area	8%	1	130	130

Raw material Store	10%	1	150	150
Finished Goods Store	11%	1	180	180
Washroom	3%	1	45	45
<b>Total</b>	<b>100%</b>		<b>1,575</b>	<b>1,575</b>

### 9.2.2. Building

There will be no cost of building construction as the proposed business will be started in a rented facility. However, there will be a renovation cost; required to make the building usable for the business. The proposed project requires electricity load of 25KW which for which an electricity connection under the industrial supply tariff B1 will be required. Building rent of PKR 75,000 per month has been included in the operating cost. Building renovation cost is shown in Table 6.

**Table 6: Renovation Cost Details**

Cost Item	Unit of Measurement	Total Liter / Area / Number	Cost/Unit/ Sq. Feet (PKR)	Total Cost (PKR)
Paint Cost	Liter	158	500	78,750
Labor Cost	Feet	15,750	8	126,000
Wall Racks	Units	4	15,000	60,000
Curtains	Units	6	3,000	18,000
Blinds	Units	2	5,000	10,000
<b>Total Renovation Cost</b>				<b>292,750</b>

### 9.2.3. Machinery and Equipment Requirement

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

**Table 7: Machinery and Equipment Requirement**

Cost Item	Unit(s)	Unit Cost (PKR)	Total Cost (PKR)
Teeth Punching Machine	1	750,000	750,000
Buffing Machine	1	500,000	500,000
Chamber	1	450,000	450,000



Tool Kit	1	20,000	20,000
<b>Total Cost</b>			<b>1,720,000</b>

#### 9.2.4. Office Equipment Requirement

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

**Table 8: Office Equipment Requirement**

Cost Item	Units	Unit Cost (PKR)	Total Cost (PKR)
Air Conditioners	2	90,000	180,000
Laptop / Computer	1	80,000	80,000
Printer	1	40,000	40,000
LED/LCD 32 inch	1	40,000	40,000
Water Dispenser	2	20,000	40,000
Ceiling Fan	7	4,500	31,500
Exhaust Fan	3	2,000	6,000
Bracket Fan	3	4,000	12,000
WIFI Router and Connection	1	5,000	5,000
<b>Total</b>			<b>434,500</b>

#### 9.2.5. Furniture and Fixture Requirement

Table 9 gives details of the furniture and fixture required for the project.

**Table 9: Furniture and Fixtures Requirement**

Cost Item	Units	Unit Cost (PKR)	Total Cost (PKR)
Office Tables	2	15,000	30,000
Reception Counter	1	50,000	50,000
Executive Chairs	1	20,000	20,000
Office Tables	2	25,000	50,000
Office Chairs	6	10,000	60,000
Sofa Sets	1	35,000	35,000
<b>Total</b>			<b>245,000</b>

### 9.2.6. Vehicle Requirement

Details of vehicles required for the project is given in Table 10.

**Table 10: Vehicle Requirement**

Cost Item	Unit(s)	Unit Cost (PKR)	Registration fee @ 1%	Total Cost (PKR)
Carry Van	1	1,150,000	11,500	1,161,500
Motorcycle	1	80,000	800	80,800
<b>Total Cost</b>				<b>1,242,300</b>

### 9.2.7. Pre-Operating Cost Requirement

Details of pre operating cost required for the project is given in Table 11.

**Table 11: Pre-Operating Cost Requirement**

Staff	Total (PKR)
Administrative expense	160,000
Telephone	20,000
Electricity	18,170
Water	4,000
<b>Total Cost</b>	<b>202,170</b>

### 9.2.8. Security against Building

Details of advance security against rented building for the project is given in Table 12.

**Table 12: Security against Building**

Cost Item	Months	Unit Cost (PKR)	Total Cost (PKR)
Security against building	3	75,000	225,000
<b>Total Cost</b>			<b>225,000</b>

### 9.3. Breakeven Analysis

Table 13 shows calculation of break-even analysis.

**Table 13: Break-Even Analysis**

Description	Amount First Year (PKR)	Ratios
Sales (PKR) – A	60,480,000	100%
Variable Cost (PKR) – B	50,160,438	83%
Contribution (PKR) (A-B) = C	10,319,562	17%
Fixed Cost (PKR) – D	3,783,379	6%
Contribution Margin	17%	
Breakeven Revenue	22,173,302	
Total Units Sold	1,344,000	
Contribution Margin Per Unit	8	
Breakeven Units	492,740	
Breakeven Capacity	22%	

### 9.4. Revenue Generation

Based on 60% capacity utilization, sales revenue during the first year of operations is shown in Table 14.

**Table 14: Revenue Generation**

Product	Production / Year (Meter)	Capacity Utilization @ 60%	Price/Meter (PKR)	Total Revenue (PKR)
Brass Zips	2,240,000	1,344,000	45	60,480,000

**Table 15: Revenue Generation Assumption**

Particulars	Production / Year
Production Capacity per Day (meters)	8,000
Annual Working Days	280
Initial Capacity Utilization	60%
Capacity Utilization Growth Rate/Year	10%
Maximum Capacity	85%

### 9.5. Cost of Goods Sold Estimates

Based on 60% capacity utilization, the calculation of cost of goods sold during the first year of operations is shown in Table 16.

**Table 16: Cost of Goods Sold Estimate**

Product	Total Cost of Goods Sold (PKR)
Material cost	47,510,400
Electricity cost	130,900
Direct Labor	1,500,000
Machinery Maintenance - Cost	86,000
<b>Total Cost of Goods Sold</b>	<b>49,227,300</b>

**Table 17: Cost of Goods Sold Assumption – Material Cost**

Material	Cost Per meter (PKR)	Initial Year production (Meter)	Total Material Cost (PKR)
Brass Wire Cost	20.25	1,344,000	27,216,000
Nylon Film	15	1,344,000	20,160,000
Sewing Thread	0.1	1,344,000	134,400
<b>Total Material Cost</b>			<b>47,510,400</b>

**Table 18: Cost of Goods Sold Assumption – Cost Per Meter**

Material	Cost per unit (Rs) (A)	Production of final product in meters per Unit of raw material (B)	Cost per Meter of Production (Rs.) $C=(A/B)$
Nylon Film	1500	100	15
Sewing Thread	10	100	0.1

**Table 19: Cost of Goods Sold Assumption – Cost Per Meter**

Material	Cost per KG of Raw material (Rs)	Consumption per meter of final product (Grams)	Brass Wire Cost / meter (Rs.)
Brass Wire Cost	1,350	15	20.25 (15/1,000) *1350

**Table 20: Cost of Goods Sold Assumption – Direct Labor**

Material	Number of Labor	Salary per Month (PKR)	Total Direct Labor Cost (PKR)
Labour-Teeth Punching Machine-Skilled	1	35,000	420,000
Labour-Teeth Punching Machine-Unskilled	2	20,000	480,000
Labour-Buffering Machine	1	25,000	300,000
Labour-Chamber	1	25,000	300,000
<b>Total Direct Labor Cost</b>			<b>1,500,000</b>

**Table 21: Cost of Goods Sold Assumption – Machinery Maintenance**

Particulars	Machinery Cost (PKR)	Rate	Machinery Maintenance (PKR)
Machinery	1,720,000	5%	86,000

### 9.6. Variable Cost Estimate

Variable costs of the project have been provided in Table 22.

**Table 22: Variable Cost Estimate**

Description of Costs	Amount (PKR)
Material cost	47,510,400
Direct Labour	1,500,000
Direct Utilities cost	130,900
Machinery Maintenance cost	86,000
Travelling expense	180,000
Communications expense (phone, fax, mail, internet, etc.)	270,000
Office vehicles running expense	180,000
Office expenses (stationery, entertainment, janitorial services, etc.)	216,000
Indirect Utilities	87,138
<b>Total</b>	<b>50,160,438</b>

### 9.7. Fixed Cost Estimate

Table 23 shows the estimated fixed cost of the project.

**Table 23: Fixed Cost Estimate**

Description of Costs	Amount (PKR)
Management Staff Salary	1,800,000
Administration benefits expense	165,000
Building rental expense	900,000
Promotional expense	302,400
Depreciation expense	575,545
Amortization of pre-operating costs	40,434
<b>Total</b>	<b>3,783,379</b>

**Table 24: Fixed Cost Assumption - Management Staff Salary**

Description of Costs	Number of Labor	Salary per Month (PKR)	Amount (PKR)
Owner/Operational Manager	1	70,000	840,000
Admin & Finance Officer	1	40,000	480,000
Office Boy	1	20,000	240,000
Security Guard	1	20,000	240,000
<b>Total</b>			<b>1,800,000</b>

**Table 25: Fixed Cost Assumption - Other**

Cost Items	Rate	Rationale
Admin Benefit Expenses	5%	% of administration expense
Promotional expense	0.5%	% of Revenue
<b>Depreciation Rate</b>		
Building & infrastructure	10%	% of Cost
Machinery & equipment	15%	% of Cost
Office equipment	15%	% of Cost
Furniture & fixtures	15%	% of Cost
Office vehicles	15%	% of Cost

### 9.8. Human Resource Requirement

For the 1<sup>st</sup> year of operations, the Zip Manufacturing Unit shall require the workforce at a salary cost shown in Table 26.

**Table 26: Human Resource Requirement**

Post	No. of Employees	Monthly Salary (PKR)	Annual Salary (PKR)
Owner/Operational Manager	1	70,000	840,000
Labour-Teeth Punching Machine-Skilled	1	35,000	420,000
Labour-Teeth Punching Machine-Unskilled	2	20,000	480,000
Labour-Buffering Machine	1	25,000	300,000
Labour-Chamber	1	25,000	300,000
Admin & Finance Officer	1	40,000	480,000
Office Boy	1	20,000	240,000
Security Guard	1	20,000	240,000
<b>Total</b>	<b>9</b>	<b>255,000</b>	<b>3,300,000</b>

## 10 CONTACT DETAILS

Names of some relevant suppliers of machinery and equipment are provided in Table 27.

**Table 27: Suppliers of Machinery and Equipment**

Cost Item	Origin	Supplier Name
Web Threading Machine	China	Guangzhou QLQ Enterprise Co. Ltd
Teeth Punching Machine	China	Guangzhou QLQ Enterprise Co. Ltd
Buffing Machine	China	Guangzhou QLQ Enterprise Co. Ltd
Chamber	China	Guangzhou QLQ Enterprise Co. Ltd
Zip Machines		<a href="https://www.zipmachine.com/">https://www.zipmachine.com/</a>
Zip Sewing Supplies		<a href="https://www.zipshipper.com/brass-metal-zips">https://www.zipshipper.com/brass-metal-zips</a>
Global Zip Market		<a href="https://www.marketresearchfuture.com/reports/zip-market-2647">https://www.marketresearchfuture.com/reports/zip-market-2647</a>

Contact details of some suppliers of the relevant machinery and equipment are provided in Table 28.

**Table 28: Contact Details of Suppliers**

Cost Item	Contact Number	E-mail	Web Address
Web Threading Machine	+8613316184685 +8613809668444	<a href="mailto:Cathy@Qlqcompany.Com">Cathy@Qlqcompany.Com</a> <a href="mailto:Ankus@Qlqcompany.Com">Ankus@Qlqcompany.Com</a>	<a href="http://www.Qlqcompany.com">www.Qlqcompany.com</a> <a href="http://www.Qlqcompany.cn">www.Qlqcompany.cn</a>
Teeth Punching Machine	+8613316184685 +8613809668444	<a href="mailto:Cathy@Qlqcompany.Com">Cathy@Qlqcompany.Com</a> <a href="mailto:Ankus@Qlqcompany.Com">Ankus@Qlqcompany.Com</a>	<a href="http://www.Qlqcompany.com">www.Qlqcompany.com</a> <a href="http://www.Qlqcompany.cn">www.Qlqcompany.cn</a>
Buffing Machine	+8613316184685 +8613809668444	<a href="mailto:Cathy@Qlqcompany.Com">Cathy@Qlqcompany.Com</a> <a href="mailto:Ankus@Qlqcompany.Com">Ankus@Qlqcompany.Com</a>	<a href="http://www.Qlqcompany.com">www.Qlqcompany.com</a> <a href="http://www.Qlqcompany.cn">www.Qlqcompany.cn</a>
Chamber	+8613316184685 +8613809668444	<a href="mailto:Cathy@Qlqcompany.Com">Cathy@Qlqcompany.Com</a> <a href="mailto:Ankus@Qlqcompany.Com">Ankus@Qlqcompany.Com</a>	<a href="http://www.Qlqcompany.com">www.Qlqcompany.com</a> <a href="http://www.Qlqcompany.cn">www.Qlqcompany.cn</a>



## 11 USEFUL WEB LINKS

**Table 29: Useful Web Links**

Name of the Organization	Website/Email
Small and Medium Enterprises Development Authority (SMEDA)	<a href="http://www.smeda.org.pk">www.smeda.org.pk</a>
National Business Development Program	<a href="http://www.nbdp.org.pk">www.nbdp.org.pk</a>
Government of Pakistan	<a href="http://www.pakistan.gov.pk">www.pakistan.gov.pk</a>
Ministry of Industries and Production	<a href="http://www.moip.gov.pk">www.moip.gov.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 Khyber Pakhtunkhwa	<a href="http://www.KP.gov.pk">www.KP.gov.pk</a>
Government of Balochistan	<a href="http://www.balochistan.gov.pk">www.balochistan.gov.pk</a>
Trade Development Authority of Pakistan	<a href="http://www.tdap.gov.pk">www.tdap.gov.pk</a>
Security and Exchange Commission of Pakistan	<a href="http://www.secp.gov.pk">www.secp.gov.pk</a>
State Bank of Pakistan	<a href="http://www.sbp.gov.pk">www.sbp.gov.pk</a>
Federation of Pakistan Chambers of Commerce and Industry (FPCCI)	<a href="http://www.fpcci.com.pk">www.fpcci.com.pk</a>
Technical Education and Vocational Training Authority	<a href="http://www.tevta.org">www.tevta.org</a>
Punjab Vocational Training Council (PVTC)	<a href="http://www.pvtc.gop.pk">www.pvtc.gop.pk</a>
Punjab small industries corporation	<a href="http://www.psic.gop.pk">www.psic.gop.pk</a>
Sindh small industries corporation	<a href="http://www.ssic.govs.pk">www.ssic.govs.pk</a>
Khyber Pakhtunkhwa small industries corporation	<a href="https://small_industries_de.kp.gov.pk">https://small_industries_de.kp.gov.pk</a>
Zip Machines	<a href="https://www.zipmachine.com/">https://www.zipmachine.com/</a>
Zip Sewing Supplies	<a href="https://www.zipshipper.com/brass-metal-zips">https://www.zipshipper.com/brass-metal-zips</a>
Global Zip Market	<a href="https://www.marketresearchfuture.com/reports/zip-market-2647">https://www.marketresearchfuture.com/reports/zip-market-2647</a>

## 12 ANNEXURES

### 12.1 Income Statement

Calculations										SMEDA
Income Statement										
	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Revenue	60,480,000	76,416,480	94,581,769	108,834,059	117,867,286	127,650,271	138,245,243	149,719,599	162,146,325	175,604,470
<i>Cost of sales</i>										
Material cost	47,510,400	60,029,390	74,299,234	85,495,200	92,591,301	100,276,380	108,599,319	117,613,062	127,374,947	137,947,067
Direct Utilities cost	130,900	142,363	154,829	168,387	183,132	199,168	216,609	235,577	256,205	278,640
Direct Labor	1,500,000	1,610,000	1,728,067	1,854,792	1,990,810	2,136,802	2,293,501	2,461,691	2,642,215	2,835,978
Machinery Maintenance - Cost	86,000	93,138	100,868	109,241	118,308	128,127	138,762	150,279	162,752	176,260
Total cost of sales	49,227,300	61,874,891	76,282,998	87,627,619	94,883,551	102,740,477	111,248,191	120,460,609	130,436,119	141,237,946
Gross Profit	11,252,700	14,541,589	18,298,771	21,206,440	22,983,735	24,909,794	26,997,053	29,258,989	31,710,206	34,366,525
<i>General administration &amp; selling expenses</i>										
Management Staff	1,800,000	1,932,000	2,073,680	2,225,750	2,388,972	2,564,163	2,752,201	2,954,029	3,170,658	3,403,173
Administration benefits expense	165,000	177,100	190,087	204,027	218,989	235,048	252,285	270,786	290,644	311,958
Building rental expense	900,000	990,000	1,089,000	1,197,900	1,317,690	1,449,459	1,594,405	1,753,845	1,929,230	2,122,153
Indirect Utilities	87,138	94,768	103,067	112,092	121,908	132,583	144,192	156,819	170,551	185,486
Travelling expense	180,000	193,200	207,368	222,575	238,897	256,416	275,220	295,403	317,066	340,317
Communications expense (phone, fax, mail, internet, etc.)	270,000	289,800	311,052	333,862	358,346	384,624	412,830	443,104	475,599	510,476
Office vehicles running expense	180,000	193,200	207,368	222,575	238,897	256,416	275,220	295,403	317,066	340,317
Office expenses (stationery, entertainment, janitorial services, etc)	216,000	231,840	248,842	267,090	286,677	307,700	330,264	354,484	380,479	408,381
Promotional expense	302,400	382,082	472,909	544,170	589,336	638,251	691,226	748,598	810,732	878,022
Depreciation expense	575,545	575,545	575,545	575,545	575,545	1,034,389	852,299	930,286	930,286	930,286
Amortization of pre-operating costs	40,434	40,434	40,434	40,434	40,434	-	-	-	-	-
Subtotal	4,716,517	5,099,970	5,519,352	5,946,021	6,375,690	7,259,050	7,580,144	8,202,757	8,792,310	9,430,569
Operating Income	6,536,183	9,441,619	12,779,419	15,260,420	16,608,045	17,650,744	19,416,909	21,056,232	22,917,897	24,935,956
Gain / (loss) on sale of machinery & equipment	-	-	-	-	-	-	430,000	-	-	-
Gain / (loss) on sale of office equipment	-	-	-	-	173,800	-	-	-	-	-
Gain / (loss) on sale of office vehicles	-	-	-	-	496,920	-	-	-	-	-
Earnings Before Interest & Taxes	6,536,183	9,441,619	12,779,419	15,260,420	17,278,765	17,650,744	19,846,909	21,056,232	22,917,897	24,935,956
Subtotal	-	-	-	-	-	-	-	-	-	-
Earnings Before Tax	6,536,183	9,441,619	12,779,419	15,260,420	17,278,765	17,650,744	19,846,909	21,056,232	22,917,897	24,935,956
Tax	1,407,663	2,424,566	3,592,796	4,461,146	5,167,567	5,297,760	6,066,417	6,489,681	7,141,263	7,847,584
NET PROFIT/(LOSS) AFTER TAX	5,128,519	7,017,053	9,186,623	10,799,273	12,111,198	12,352,984	13,780,492	14,566,552	15,776,633	17,088,372

## 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	2,622,783	3,160,546	3,418,635	3,725,380	11,794,559	23,626,398	33,732,155	47,672,399	62,655,353	86,382,572
Accounts receivable		7,456,438	8,438,824	10,540,988	12,539,332	13,974,740	15,134,644	16,390,819	17,751,257	19,224,612	20,820,255
Raw material inventory	1,979,600	2,321,851	3,177,153	4,258,797	5,307,289	6,224,861	7,301,071	8,563,346	10,043,855	11,780,327	5,747,794
Equipment spare part inventory	7,167	8,382	9,804	11,468	13,413	15,688	18,350	21,463	25,104	29,362	-
Pre-paid building rent	75,000	82,500	90,750	99,825	109,808	120,788	132,867	146,154	160,769	176,846	-
<b>Total Current Assets</b>	<b>2,561,767</b>	<b>12,491,955</b>	<b>14,877,077</b>	<b>18,329,713</b>	<b>21,695,222</b>	<b>32,130,638</b>	<b>46,213,330</b>	<b>58,853,937</b>	<b>75,653,383</b>	<b>93,866,500</b>	<b>112,950,621</b>
<i>Fixed assets</i>											
Land	-	-	-	-	-	-	-	-	-	-	-
Building/Infrastructure	292,750	263,475	234,200	204,925	175,650	146,375	117,100	87,825	58,550	29,275	-
Machinery & equipment	1,720,000	1,462,000	1,204,000	946,000	688,000	430,000	172,000	2,947,778	2,505,611	2,063,444	1,621,278
Furniture & fixtures	245,000	208,250	171,500	134,750	98,000	421,235	330,488	251,990	197,992	143,994	89,996
Office vehicles	1,242,300	1,055,955	869,610	683,265	496,920	2,371,127	1,875,699	1,442,386	1,133,304	824,221	515,138
Office equipment	434,500	369,325	304,150	238,975	173,800	747,048	586,110	446,896	351,133	255,369	159,606
Advance Against Building Rent	225,000	225,000	225,000	225,000	225,000	225,000	225,000	225,000	225,000	225,000	225,000
<b>Total Fixed Assets</b>	<b>4,159,550</b>	<b>3,584,005</b>	<b>3,008,460</b>	<b>2,432,915</b>	<b>1,857,370</b>	<b>4,340,785</b>	<b>3,306,396</b>	<b>5,401,875</b>	<b>4,471,589</b>	<b>3,541,304</b>	<b>2,611,018</b>
<i>Intangible assets</i>											
Pre-operation costs	202,170	161,736	121,302	80,868	40,434	-	-	-	-	-	-
Legal, licensing, & training costs	-	-	-	-	-	-	-	-	-	-	-
<b>Total Intangible Assets</b>	<b>202,170</b>	<b>161,736</b>	<b>121,302</b>	<b>80,868</b>	<b>40,434</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>
<b>TOTAL ASSETS</b>	<b>6,923,487</b>	<b>16,237,696</b>	<b>18,006,839</b>	<b>20,843,496</b>	<b>23,593,026</b>	<b>36,471,423</b>	<b>49,519,726</b>	<b>64,255,812</b>	<b>80,124,973</b>	<b>97,407,803</b>	<b>115,561,639</b>
<b>Liabilities &amp; Shareholders' Equity</b>											
<i>Current liabilities</i>											
Accounts payable		4,715,728	5,896,315	7,331,498	8,502,827	9,280,209	10,096,457	10,988,404	11,963,709	13,030,902	13,536,278
<b>Total Current Liabilities</b>	<b>-</b>	<b>4,715,728</b>	<b>5,896,315</b>	<b>7,331,498</b>	<b>8,502,827</b>	<b>9,280,209</b>	<b>10,096,457</b>	<b>10,988,404</b>	<b>11,963,709</b>	<b>13,030,902</b>	<b>13,536,278</b>
<i>Other liabilities</i>											
Deferred tax		(530,038)	(885,749)	(1,041,193)	(1,047,777)	(1,057,959)	(1,178,888)	(1,115,241)	(787,937)	(348,933)	211,155
<b>Total Long Term Liabilities</b>	<b>-</b>	<b>(530,038)</b>	<b>(885,749)</b>	<b>(1,041,193)</b>	<b>(1,047,777)</b>	<b>(1,057,959)</b>	<b>(1,178,888)</b>	<b>(1,115,241)</b>	<b>(787,937)</b>	<b>(348,933)</b>	<b>211,155</b>
<i>Shareholders' equity</i>											
Paid-up capital	6,923,487	6,923,487	6,923,487	6,923,487	6,923,487	6,923,487	6,923,487	6,923,487	6,923,487	6,923,487	6,923,487
Retained earnings		5,128,519	6,072,786	7,629,705	9,214,489	21,325,687	33,678,672	47,459,163	62,025,715	77,802,348	94,890,720
<b>Total Equity</b>	<b>6,923,487</b>	<b>12,052,006</b>	<b>12,996,273</b>	<b>14,553,191</b>	<b>16,137,976</b>	<b>28,249,174</b>	<b>40,602,158</b>	<b>54,382,650</b>	<b>68,949,201</b>	<b>84,725,835</b>	<b>101,814,207</b>
<b>TOTAL CAPITAL AND LIABILITIES</b>	<b>6,923,487</b>	<b>16,237,696</b>	<b>18,006,839</b>	<b>20,843,496</b>	<b>23,593,026</b>	<b>36,471,423</b>	<b>49,519,726</b>	<b>64,255,812</b>	<b>80,124,973</b>	<b>97,407,803</b>	<b>115,561,639</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
<i>Operating activities</i>											
Net profit		5,128,519	7,017,053	9,186,623	10,799,273	12,111,198	12,352,984	13,780,492	14,566,552	15,776,633	17,088,372
Add: depreciation expense		575,545	575,545	575,545	575,545	575,545	1,034,389	852,299	930,286	930,286	930,286
amortization of pre-operating costs		40,434	40,434	40,434	40,434	40,434	-	-	-	-	-
Deferred income tax		(530,038)	(355,712)	(155,444)	(6,584)	(10,183)	(120,929)	63,647	327,304	439,004	560,088
Accounts receivable		(7,456,438)	(982,386)	(2,102,164)	(1,998,344)	(1,435,409)	(1,159,903)	(1,256,175)	(1,360,438)	(1,473,354)	(1,595,643)
Raw Material Inventory	(1,979,600)	(342,251)	(855,301)	(1,081,644)	(1,048,493)	(917,572)	(1,076,210)	(1,262,275)	(1,480,508)	(1,736,472)	6,032,532
Equipment Spare parts Inventory	(7,167)	(1,216)	(1,422)	(1,663)	(1,945)	(2,275)	(2,661)	(3,113)	(3,641)	(4,259)	29,362
Pre-paid building rent	(75,000)	(7,500)	(8,250)	(9,075)	(9,983)	(10,981)	(12,079)	(13,287)	(14,615)	(16,077)	176,846
Accounts payable		4,715,728	1,180,588	1,435,182	1,171,329	777,382	816,247	891,947	975,305	1,067,193	505,376
Other liabilities		-	-	-	-	-	-	-	-	-	-
Cash provided by operations	(2,061,767)	2,122,783	6,610,549	7,887,794	9,521,234	11,128,140	11,831,838	13,053,535	13,940,244	14,982,955	23,727,219
<i>Financing activities</i>											
Issuance of shares	6,923,487	-	-	-	-	-	-	-	-	-	-
Purchase of (treasury) shares											
Cash provided by / (used for) financing activities	6,923,487	-	-	-	-	-	-	-	-	-	-
<i>Investing activities</i>											
Capital expenditure	(4,361,720)	-	-	-	-	(3,058,960)	-	(2,947,778)	-	-	-
Acquisitions											
Cash (used for) / provided by investing activities	(4,361,720)	-	-	-	-	(3,058,960)	-	(2,947,778)	-	-	-
NET CASH	500,000	2,122,783	6,610,549	7,887,794	9,521,234	8,069,179	11,831,838	10,105,757	13,940,244	14,982,955	23,727,219

## 13 KEY ASSUMPTIONS

### 13.1 Operating Cost Assumptions

**Table 30: Economic Indicators**

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

Source: -Economic Survey of Pakistan

**Table 31: Operating Cost Assumptions**

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

### 13.2 Revenue Assumptions

**Table 32: Revenue Assumptions**

Description	Details
Sale price growth rate	8.3%
Initial year capacity utilization	60%
Capacity growth rate	10%
Maximum capacity utilization	85%

### 13.3 Financial Assumptions

**Table 33: Financial Assumptions**

Description	Details
Project life (Years)	10
Debt: Equity	0:100
Discount Rate	13%
Discount Rate (50:50 Debt: Equity)	11%

### 13.4 Cash Flow Assumptions

**Table 34: Cash Flow Assumptions**

Description	Days
Account Receivable Days	45
Account Payable Days	30

# Small and Medium Enterprises Development Authority

## HEAD OFFICE

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

[www.smeda.org.pk](http://www.smeda.org.pk), [helpdesk@smeda.org.pk](mailto:helpdesk@smeda.org.pk)

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