Pre-feasibility Study

STEEL FURNITURE MANUFACTURING

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, andrevenues can change daily. For accurate financial calculations, utilize financial calculators on SMEDA's website and consult financial experts to stay current with market conditions."

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

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1 DISCLAIMER

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Document Control

Document No.	226
Revision	
Prepared by	SMEDA-Punjab
Revision Date	
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2 EXECUTIVE SUMMARY

Steel furniture making is a well-paid business in Pakistan. This business can be started with simple machinery and raw materials. This business can be easily established with simple setup. Nowadays, products like steel chairs, steel dining tables, steel beds and steel sofas are extensively used in industrial, commercial and household applications. Due to increasing purchasing power, the demand of steel furniture is expected to increase in the coming years.

Steel furniture is suitable for all kinds of interiors; be that housing, industrial, commercial or any other. It is highly durable and can withstand sustained heavy usage. Steel furniture can last for 10-15 years. Up-front cost to buy this furniture is high; however, that is compensated by its less breakdown frequency and low maintenance cost.

This “Pre-feasibility Document” provides details for setting up “Steel Furniture Manufacturing” unit. The unit is proposed to be located in Karachi, Lahore, Islamabad, Peshawar, Rawalpindi, Quetta, Faisalabad, Sialkot, Hyderabad, Gujranwala, Multan or any other major city of Pakistan. These areas are preferred for the proposed unit due to their large populations and presence of majority of private and public sector businesses in these cities. Raw materials and skilled labor required for the manufacturing unit are also easily available in large cities.

The proposed manufacturing unit has a maximum capacity of producing 8,960 units in a year. During the first year of operations, it is assumed that the project will manufacture furniture at 60% of its total production capacity, which is equal to 5,376 units. The capacity utilization is assumed to increase at a rate of 10% per annum with a cap at 95% of total capacity; achieved in fifth year of operations. 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.

The proposed project will be set up on a rented building having an area of 4,500 sq. ft. (1 Kanal). The project requires a total investment of PKR 8.93 million. This includes capital investment of PKR 5.28 million and working capital of PKR 3.65 million. The project will be financing through 100% equity. The Net Present Value (NPV) of project is PKR 81.36 million with an Internal Rate of Return (IRR) of 112% and a Payback period of 1.20 years. Further, the proposed project is expected to generate Gross Annual Revenues of PKR 94.75 million in 1st year of operations, Gross Profit (GP) ratio ranging from 18% to 20% and Net Profit (NP) ratio ranging from 8% to 11% during the projection period of ten years. The proposed project will achieve its estimated breakeven point at capacity of 20% (1,752 units) with gross revenue of PKR 30.87 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 Steel Furniture Manufacturing business provides Net Present Value (NPV) of PKR 90.75 million, Internal Rate of Return (IRR) of

113% and Payback period of 1.18 years. Further, this project is expected to generate Net Profit (NP) ratio ranging from 8% to 11% during the projection period of ten years. The proposed project will achieve its estimated breakeven point at capacity of 21% (1,922 units) with breakeven revenue of PKR 33.87 million.

The proposed project will provide employment opportunities to 19 people. As evident from the above financial figures, the proposed project for Steel Furniture Manufacturing shows reasonable profitability and is economically and financially viable. The legal business status of this project is proposed as “Sole Proprietorship”. Further, the proposed project may also be established as 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 is 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 "Steel Furniture Manufacturing" business. 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

This document provides details for setting up Steel Furniture Manufacturing business. Stainless steel is commonly used in manufacturing of furniture because of many useful properties. It can consistently provide a smooth surface without any stains; it is resistant to rust and it is more durable than materials like wood.

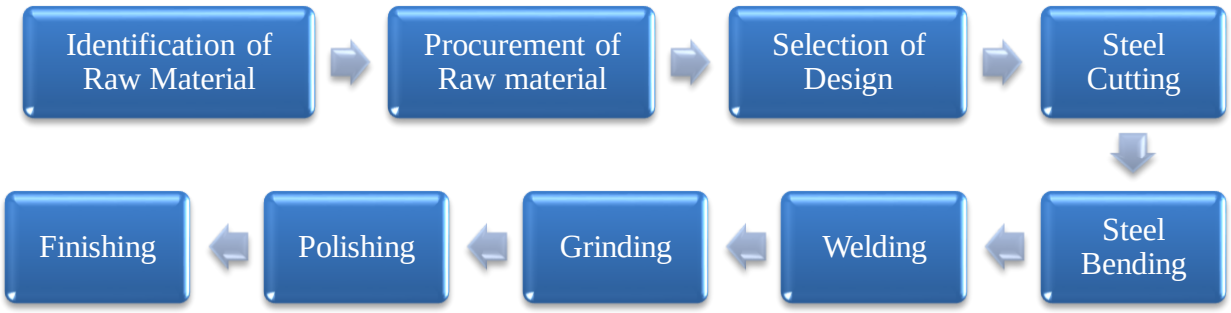
Steel is the world's most important engineering and construction material. It is an alloy of iron, carbon, chromium, nickel and molybdenum; with small amounts of manganese, phosphorus, Sulphur and copper. There are different types of steels such as carbon steel, alloy steel, tool steel and stainless steel. Stainless steels are the steels containing at least 10.5% chromium, less than 1.2% carbon and other alloying elements. Stainless steel is corrosion resistant, therefore it increases the life of the steel furniture and the required maintenance expenses are minimal. In the proposed project, stainless steel (304 grade) is the basic raw material, used to manufacture beds, sofas, dining tables and chairs.

Raw material is the most significant cost of a steel furniture product; going as high as 90% of the total product cost. The success of this project is dependent on use of good quality raw material and availability of skilled labor force.

5.1 Production Process Flow

Steel furniture manufacturing process flow is shown in Figure 1.

Figure 1: Manufacturing Process Flow



Different stages of the production process flow are described in the following paragraphs:

Identification of Raw Material

For manufacturing steel furniture, the required raw materials include stainless steel pipes of different shapes, cloth, wood, leather, foam, glass, furniture polish and other accessories.

As the structure of furniture is made of stainless-steel pipes, therefore steel is main raw material, while the other raw materials are used in small quantities in different products as per the need and design of those products. Wood is generally used as the base of the bed while cloth and crystal buttons are commonly used for decoration of beds. Glass is used as the table top for manufacturing of dining tables, center tables and side tables. Leather and crystal (diamond) buttons are used as in manufacturing of sofas and chairs.

Procurement of Raw Material

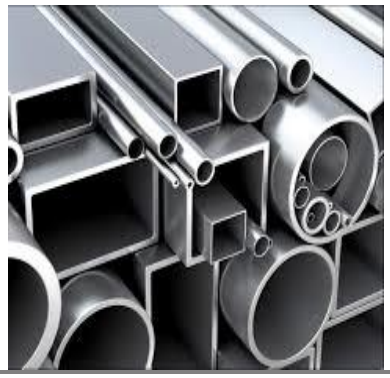
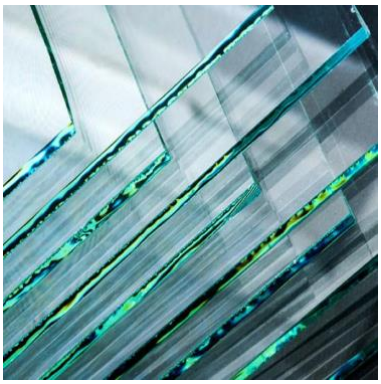
The raw materials for steel furniture manufacturing are easily available and can be procured from any large city or small town of Pakistan. The cities proposed as suitable locations to start this business have well established markets for wood/timber, steel pipes, linen cloth, foam, leather, glass and other required items. Any required accessories can be purchased from the wholesale market and the suppliers in those cities.

Figure 2 shows the main raw materials required in the manufacturing process. Details of major markets in these cities are given in Table 1.

Table 1: Major Raw Material Markets

Particulars	Steel Pipes Market	Wood Market	Glass Sheet Market	Leather Market	Cloth Market
Karachi	Moin Steel Market	Makki Furniture Market	Glass Tower, Khayaban-e-Iqbal Rd	Zainab market karachi	Nzimabad Korangi
	Jodia Bazaar			Leather Bazaar Juna Market	Mehboob Cloth Market
Lahore	Brandreth Road	Allama Iqbal road	Model Town	Zaman Park	Raiwind road
	Railway Road	Ithad colony	Cooper road	Garhi Shahu	Shadman
	Raiwind	Gawalmandi	Kot lakhpat	Gulberg 3	Amanah Mall
Faisalabad	Jhang road motor market	Akbarabad	Zahid Town	Ami por bazar	Tata Bazar
	Main market Dijkot road	Manawala	Railway road/Circular road		Douglass pura
Gujranwala	Gondlanwala road	Kamran Colony	Gondlanwala road	Satellite Town	Grand trunk road
	Ghanta Ghar clock Tower Circular road				Khakwani Cloth Market,
Peshawar	Khybar Bazar	Khybar Bazar	Khybar Bazar	Karkhano market	Saddar bazar
	Ring road	Ring road	Karkhano market	Khybar Bazar	University road

Figure 2: Raw Material

		
Stainless Steel Pipes	**Wooden Planks**	**Cloth Sheets**
		
Leather Sheets	**Glass Sheets**	**Crystal (Diamond) Buttons**

Process of Steel Furniture Manufacturing

Selection of Design

Before manufacturing furniture, a design is selected either by the customer or by the business owner. Selection of an elegant design is important to ensure attraction of the customers. Modern furniture magazines may be used for selecting new, innovative designs or an existing traditional design may be selected. Design selection is driven by the market demand at any given time.

Cutting of Steel Pipes

In the first step, steel pipes are cut into required sizes as per the design of the item being manufactured. Cutting is done using cut-off saw machine; a circular saw (a kind of power tool) which is typically used to cut hard materials, such as metals, tile, and concrete. The cut-off saw machine is shown in Figure 3.

Figure 3: Cut off Saw Machine

Bending of Steel Pipes

In the second step, the pipes are bent in different shapes such as V-shape or U-shape using degree pipe bending machine. Pipe bending is a technique used in various steel forming processes with the aim of increasing the fabrication capabilities of plumbing fixtures. The main objective of a pipe bender is to bend the pipe without any buckling (collapsing under pressure) and with as little crimping and flattening as possible. It is important that the pipe keeps its shape; as deformed pipes can break under pressure, crack and generally start looking less appealing. Machines used for bending pipes is shown in Figure 4.

Figure 4: Bending of Pipes

	
Automatic Pipes Bending Machine	**Manual Pipes Bending Machine**

Welding of Steel Pipes

Welding is a fabrication process whereby two or more parts are fused together by heating, pressure or both; forming a joint as the parts cool. TIG (Tungsten Intert Gas) welding is most commonly used for joining stainless steel pipes. This welding process creates a low heat input, which makes it perfect for thin material. As a part of manufacturing process, the pipes after bending are joined by welding and this forms structures of bed, sofa, dining table or chairs as per the requirement of the deisgn. Welding is carried out using a welding plant.

Figure 5: Welding

Grinding of Welded Structure

Grinding is machining process that is used to remove material from a structure using a grinding wheel. As the grinding wheel rotates at high speed, it cuts off excess material from the structure to create a smooth metal surface. After the welding step, the welded surfaces areground using a grinder to make the surfaces smooth.

Figure 6: Grinding

Polishing of Manufactured Furniture

Polishing is the process of creating a smooth and shiny surface by rubbing it or by applying a chemical, getting a clean surface with a significant shine. While the grinding makes the surface smooth, it also leaves some scratches. For removing those scratches and giving the furniture the required color, polish is applied on the surface to make it further shiny which enhances the appearance of that item.

Figure 7: Polishing

Finishing of Manufactured Furniture

In the end, aaccessories are attached to the basic furniture structure. Wood is attached for making it bearable to lie on. Foam is fixed in the structures of sofas and chairs and leather is used to cover that foam. For tables, glass is placed on the top of the table structure as per the required size and shape. Figure 8 shows the finished steel furniture products.

Figure 8: Finished Products

5.2 Installed and Operational Capacities

The proposed steel furniture manufacturing business will operate in a single shift of 8 hours per day. Based on 280 working days in a year, the proposed unit shall produce 8,960 units of furniture annually (including beds, sofas, dining tables and chairs; depending on the customer order). The total manufacturing capacity of the proposed business is usually dependent on the capacity of the team. However, during first year of operation, the manufacturing unit is expected to attain 60% of its installed capacity and will produce5,376 furniture units.

Table 2 shows the installed and operational capacities of the proposed unit.

Table 2: Installed and Operational Capacity

Particulars	Per team per Day capacity	Number of Teams	Annual Capacity	Annual Production @ 60 % Capacity
Bed	2	2	1,120	672
Sofa	2	2	1,120	672
Dining Table	6	2	3,360	2,016
Chairs	6	2	3,360	2,016
Total			**8,960**	**5,376**

6 CRITICAL FACTORS

Before making the decision to invest in Steel Furniture Manufacturing business, one should carefully analyze the associated risk factors. The important considerations in this regard include:

- Technical know-how and knowledge of the business
- Use of quality raw materials
- Effective market linkages
- Availability of skilled workforce
- Introduction of new designs and styles
- Regular checks on quality standards
- Knowledge of technological innovations

7 GEOGRAPHICAL POTENTIAL FOR INVESTMENT

The steel furniture manufacturing business is proposed to be established in Karachi, Lahore, Islamabad, Peshawar, Rawalpindi, Quetta, Faisalabad, Sialkot, Hyderabad, Gujranwala, Multan or any other major city of Pakistan. The large cities will be suitable for the proposed business due to presence of large customer base. Furthermore, majority of public and private business and offices also exist in those cities; majority of private/public sector hospitals/clinics, public/private sector schools, private sector universities and large number of restaurants and hotels are also located in these cities. These enterprises will provide a big market for the proposed business

In addition to large cities, such units may also be established in small cities/towns where the basic requirements of the business, such as raw material availability, skilled manpower availability, market access, etc. can be adequately fulfilled.

8 POTENTIAL TARGET CUSTOMERS / MARKETS

The growth in the furniture sector is generally driven by construction sector, marriages and growing disposable incomes. The outbreak of the COVID-19 pandemic hampered the global furniture market due to supply chain disruptions and caused a decline in furniture buying due to recurring lockdowns.

Pakistan's furniture industry is unstructured and comprises of many small and medium businesses (SMEs) or even smaller units operating as cottage industry. The furniture industry's size is estimated to be PKR 475 billion in financial year 2020[1]. The improved economic environment, demonstrated by growth in Large Scale Manufacturing Industries output by 8.16% year on year during the first half of financial year 2021, is expected to increase consumers' disposable incomes which can act as a driver to increase the demand for the furniture in the coming years.

The potential target market for steel furniture may be divided into five segments:

- Public sector organizations
- Private businesses
- Newly constructed houses
- Renovated buildings
- Weddings

The weddings and newly constructed houses will be the main sources to generate business for the proposed project. This will be followed by demand from public sector organizations and private businesses, which is directly linked with economic activity and

[1] Furniture & Fixtures-An Overview (Report by The Pakistan Credit Rating Agency Limited).

growth in the country. Growing tourism activity in the country will also lead to increase in furniture demand.

Government of Pakistan has introduced a number of tax incentives for construction industry. These incentives will increase the construction activity, thereby increasing the demand for furniture.

9 PROJECT COST SUMMARY

A detailed financial model has been developed to analyze the commercial viability of Steel Furniture Manufacturing business. 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.

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

9.1 Project Economics

9.1.1. 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 3.

Table 3: Financial Feasibility Analysis

Description	Project
IRR	112%
NPV (PKR)	81,357,993
Payback Period (years)	1.20
Projection Years	10
Discount rate used for NPV	15%

9.1.2. Financial Feasibility Analysis with 50% Debt

The financial feasibility analysis provides information regarding projected IRR, NPV and payback period of the study on the basis of Debt: Equity Model (50:50) at an interest rate of KIBOR+3%, which is shown in Table 4.

Table 4: Financial Feasibility Analysis with 50% Debt

Description	Project
IRR	113%

NPV (PKR)	90,752,098
Payback Period (years)	1.18
Projection Years	10
Discount rate used for NPV	13%

9.2 Project Cost

Table 5 provides fixed and working capital requirements for establishment and operations of the steel furniture manufacturing business.

Table 5: Initial Project Cost

Cost Item	Cost (PKR)
Building / Infrastructure	767,000
Machinery & equipment	1,100,000
Office equipment	598,000
Furniture & fixtures	245,000
Office vehicles	1,898,800
Pre-operating costs	263,031
Advance Against Building Rent	405,000
Total Capital Cost	**5,276,831**
Working Capital	
Raw material inventory	3,016,720
Prepaid Building Rent	135,000
Cash	500,000
Total Working Capital	**3,651,720**
Total Project Cost	**8,928,551**

9.1.3. Land

The steel furniture manufacturing will be established in a rented building to avoid the high cost of land. Suitable location for setting up of the unit like this can be easily found on rent. Therefore, no land cost has been added to the project cost. Total space requirement for the proposed manufacturing unit has been estimated as 4,500 sq. ft. (1 Kanal). The breakup of space requirement is provided in Table 6.

Table 6: Breakup of the Space Requirement

Description	Area Sq. Ft.

Admin Building	600
Factory	2500
Store	520
Washroom	180
Pavement/driveway	300
Grounds	400
Total	**4,500**

9.1.4. Building

There will be no cost of building since the manufacturing unit will be started in the rented building. However, there will be a renovation cost, required to make the building ready to use for the business. The proposed manufacturing unit requires estimated electricity load of 6-8 KW for which an electricity connection under the Industrial Supply Tariff B1 three phase will be required. Cost of such electricity connection has not been included in the capital cost, since electricity connection is generally available in such rented premises. Building rent of PKR 135,000 per month has been included in the operating cost. Table 7 provides details of building renovation cost. 3 months advance are paid to building owner as a security.

Table 7: Renovation Cost

Cost Item	UOM	Total Liter / Area / Number	Cost/Unit/ Sq.feet (PKR)	Total Cost (PKR)
Paint Cost	Ltr	450	500	225,000
Labour Cost	Feet	45,000	8	360,000
Wall Racks	Units	10	15,000	150,000
Curtains	Units	4	3,000	12,000
Blinds	Units	4	5,000	20,000
Total Renovation Cost (PKR)				**767,000**

9.1.5. Machinery and Equipment Requirement

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

Table 8: Machinery and Equipment Requirement

Cost Item	Unit(s)	Unit Cost (PKR)	Total Cost (PKR)
Pillar Drill Machine	3	50,000	150,000
Drill Machine- Manual	2	5,000	10,000

Cut off Saw Machine	3	20,000	60,000
Grinder	2	5,000	10,000
Welding Plant	2	150,000	300,000
Degree Pipe Bending Machine- Manual	2	5,000	10,000
Degree Pipe Bending Machine- Automated	1	250,000	250,000
Angle cutting Machine	1	250,000	250,000
Air compressor	2	30,000	60,000
Total Cost			**1,100,000**

9.1.6. Office Equipment Requirement

Table 9 presents the office equipment requirement proposed for the unit.

Table 9: Office Equipment Requirement

Cost Item	Units	Unit Cost (PKR)	Total Cost (PKR)
Air Conditioners	2	90,000	180,000
Laptop / Computer	2	80,000	160,000
Printer	2	40,000	80,000
LED/LCD 32	1	40,000	40,000
Water Dispenser	2	20,000	40,000
Ceiling Fan	10	4,500	45,000
Exhaust Fan	4	2,000	8,000
Bracket Fan	3	4,000	12,000
Wi-Fi Router and Connection	1	5,000	5,000
Security System	1	28,000	28,000
Total			**598,000**

9.1.7. Furniture and Fixture Requirement

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

Table 10: Furniture and Fixtures Requirement

Cost Item	Units	Unit Cost (PKR)	Total Cost (PKR)
Office Tables	2	25,000	50,000

Reception Counter	1	50,000	50,000
Executive Tables	1	30,000	30,000
Executive Chairs	1	20,000	20,000
Office Chairs	6	10,000	60,000
Sofa Sets	1	35,000	35,000
Total			**245,000**

9.1.8. Vehicle Requirement

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

Table 11: Vehicle Requirement

Cost Item	Unit(s)	Unit Cost (PKR)	Registration fee @ 1%	Total Cost (PKR)
Carrier-Mazda Truck	1	1,800,000	18,000	1,818,000
Motorcycle	1	80,000	800	80,800
Total Cost				**1,898,800**

9.1.9. Pre-Operating Cost Requirement

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

Table 12: Pre-Operating Cost Requirement

Description	Total (PKR)
Administration Cost	235,000
Utilities	28,031
Total (PKR)	**263,031**

9.1.10. Advance against Building Rent

Details of advance against building rent for the project is given in Table 13.

Table 13: Advance against Building Rent

Cost Item	Months	Unit Cost (PKR)	Total Cost (PKR)
Advance	3	135,000	405,000
Total Cost			**405,000**

9.3 Breakeven Analysis

Table 14 shows calculation of break-even analysis.

Table 14: Break-Even Analysis

Description	Amount First Year (PKR)	Ratios
Sales (PKR)	94,752,000	100%
Variable Cost (PKR)	78,808,998	83%
Contribution (PKR)	15,943,002	17%
Fixed Cost (PKR)	5,194,867	5%
Contribution Margin	17%	
Breakeven Revenue	30,873,990	
Total Units Sold	8,960	
Contribution Margin Per Unit	2,966	
Breakeven Units	1,752	
Breakeven Capacity	20%	

9.4 Revenue Generation

Based on 60% capacity utilization, sales revenue during the first year of operations is shown in Table 15.

Table 15: Revenue Generation

Product	Production / Year (units)	Capacity Utilization @ 60%	Selling Price/unit (PKR)	Total Revenue (PKR)
Bed	1,120	672	32,000	21,504,000
Sofa	1,120	672	25,000	16,800,000

Dining Table	3,360	2,016	20,000	40,320,000
Chair	3,360	2,016	8,000	16,128,000
Total	**8,960**	**5,376**		**94,752,000**

9.5 Variable Cost Estimate

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

Table 16: Variable Cost Estimate

Description of Costs	Amount (PKR)
Material Cost- Bed	18,009,600
Material Cost- Sofa	14,011,200
Material Cost- Dining Table	28,667,520
Material Cost- Chairs	11,712,960
Direct Labor	5,280,000
Utilities Cost	241,718
Machinery Maintenance – Cost	22,000
Travelling expense	192,000
Communications expense (phone, mail, internet, etc.)	288,000
Office expenses (stationery, entertainment, janitorial services, etc.)	384,000
Total	**78,808,998**

Table 17: Material Cost

Material	Cost Per unit (PKR)	Units	Total Cost (PKR)
Bed	26,800	672	18,009,600
Sofa	20,850	672	14,011,200
Dining Table	14,220	2,016	28,667,520
Chair	5,810	2,016	11,712,960
Material Cost			**72,401,280**

Table 18: Material Cost – Bed

Cost Item	Unit	Cost per Unit (PKR)	Consumption per Unit	Cost (PKR)
Stainless steel pipe-Square (16 gauge thickness, 2”x2”)	Kg	360	20	7,200
Stainless steel pipe-Rectangular (16 gauge thickness, 1”x3”)	Kg	350	10	3,500
Stainless steel pipe-Round (16 gauge thickness 1” diameter)	Kg	350	20	7,000
Stainless steel pipe-Capsule (16 gauge thickness, 2”x1”)	Kg	360	10	3,600
Wood (Safeda)	Cubic Feet	200	10	2,000
Cloth (Velvet)	Meter	150	10	1,500
Accessories	Units			2,000
Material Cost per unit				**26,800**

Table 19: Material Cost – Sofa

Cost Item	Unit	Cost per Unit (PKR)	Consumption per Unit	Cost (PKR)
Stainless steel pipe-Square (16 gauge thickness, 2”x2”)	Kg	360	15	5,400
Stainless steel pipe-Rectangular (16 gauge thickness, 1”x3”)	Kg	350	5	1,750
Stainless steel pipe-Round (16 gauge thickness 1” diameter)	Kg	350	10	3,500
Stainless steel pipe-Capsule (16 gauge thickness, 2”x1”)	Kg	360	5	1,800
Leather	Sq. Meters	340	10	3,400

Polyurethane foam	Cubic Feet	5	600	3,000
Accessories	Units			2,000
Material Cost units				**20,850**

Table 20: Material Cost – Dining Table

Cost Item	Unit	Cost per Unit (PKR)	Consumption per Unit	Cost (PKR)
Stainless steel pipe-Square (16 gauge thickness, 2”x2”)	Kg	360	10	3,600
Stainless steel pipe-Rectangular (16 gauge thickness, 1”x3”)	Kg	350	4	1,400
Stainless steel pipe-Round (16 gauge thickness 1” diameter)	Kg	350	10	3,500
Stainless steel pipe-Capsule (16 gauge thickness, 2”x1”)	Kg	360	2	720
Glass (12 mm)	Sq. Feet	300	15	4,500
Accessories	Units			500
Material Cost units				**14,220**

Table 21: Material Cost – Chair

Cost Item	Unit	Cost per Unit (PKR)	Consumption per Unit	Cost (PKR)
Stainless steel pipe-Square (16 gauge thickness, 2”x2”)	Kg	360	4	1,440
Stainless steel pipe-Rectangular (16 gauge thickness, 1”x3”)	Kg	350	5	1,750
Stainless steel pipe-Round (16 gauge thickness 1” diameter)	Kg	350	2	700
Stainless steel pipe-	Kg	360	1	360

Capsule (16 gauge thickness, 2”x1”)				
Leather	Sq.meters	340	4	1,360
Accessories	Units			200
Material Cost units				**5,810**

Table 22: Direct Labor

Post	No of Personnel	Monthly Salary (PKR)	Annual Salary (PKR)
Labor- Cutting – Skilled	2	40,000	960,000
Labor-Cutting – Unskilled	2	20,000	480,000
Labor- Bending - Skilled	2	40,000	960,000
Labor- Bending - Unskilled	2	20,000	480,000
Labor- Welding- Skilled	2	40,000	960,000
Labor- Welding- Unskilled	2	20,000	480,000
Labor- Polishing- Skilled	1	40,000	480,000
Labor- Polishing- Unskilled	2	20,000	480,000
Total Direct Labor (PKR)			**5,280,000**

9.6 Human Resource Requirement

For the first year of operations, the Steel Furniture Manufacturing shall require the workforce at a salary cost shown in Table 23.

Table 23: Human Resource Requirement

Post	No. Of Employees	Monthly Salary (PKR)	Annual Salary (PKR)
Owner/ Manager	1	75,000	900,000
Labor- Cutting – Skilled	2	40,000	960,000
Labor-Cutting – Unskilled	2	20,000	480,000
Labor- Bending - Skilled	2	40,000	960,000
Labor- Bending - Unskilled	2	20,000	480,000
Labor- Welding- Skilled	2	40,000	960,000
Labor- Welding- Unskilled	2	20,000	480,000
Labor- Polishing- Skilled	1	40,000	480,000
Labor- Polishing- Unskilled	2	20,000	480,000
Admin & Finance Officer	1	45,000	540,000
Security	1	20,000	240,000
Office Boy	1	20,000	240,000
Total	**19**	**400,000**	**7,200,000**

10 CONTACT DETAILS

Contact details of some suppliers of the relevant machinery and equipment are provided in Table 24.

Table 24: Contact Details

Supplier Name	Origin/City	Contact Number	Email/Website
Almaco Machine Tool Co. Ltd	China	86 051381105907	sale1@al-maco.com
Buttar Enterprises Lahore	Lahore	0321 2220325	
Waqas Group Lahore	Lahore	0308 4444787	www.waqasgroup.biz
Ali Welding House	Lahore	0324 4300024	aliweldinghouse.pk
Praise House Tool Store	China	86 1371 4205716	
Ashiq Sons Steel Mills (Pvt.) Ltd	Sheikhupura	0301 4870970	assteelgroup.com
Saadia Cloth Market	Karachi	021 36615133	
Minhas Pipes And Fittings	Gujranwala	055 111646427	minhaspipe.com
Tager wood & Hardware & Plywood store	Gujranwala	0300 7136366	tager-wood-hardware-store.business.site
Sajjad Glass Traders	Faisalabad	0300 7220228	sajjad-glass-traders.business.site
United Timber Depot	Quetta	0331 8033257	
Khyber Classic Fabric	Peshawar	0311 9037941	
Kfurnitures	Karachi	021 37753729	
Al Wahid Furniture	Karachi	0300 2294573	al-wahid-steel-furniture.business.site
Boss Moulded Furniture	Karachi	0346 3241746	www.bosspakistan.com
Al Rahman Furniture works	Islamabad	0345 3464053	
Furniture Style	Rawalpindi	0312 5351188	

11 USEFUL WEB LINKS

Table 25: Useful Web Links

Name of the Organization	Email/Website
Small and Medium Enterprises Development Authority (SMEDA)	www.smeda.org.pk
National Business Development Program	www.nbdp.org.pk
Government of Punjab	www.punjab.gov.pk/
Government of Khyber Pakhtunkhwa	www.kp.gov.pk/
Government of Balochistan	www.balochistan.gov.pk/
Government of Sindh	www.sindh.gov.pk/
Government of Azad Jammu and Kashmir	www.ajk.gov.pk/
Government of Gilgit Baltistan	www.gilgitbaltistan.gov.pk/
All Pakistan Furniture Exporters Association	www.apfea.com.pk
All Pakistan Furniture Makers Association	www.asb.com.pk
Pakistan Furniture Council	www.pfc.org.pk
Pakistan Steel Melter's Association	www.steelmelters.com
Punjab Small Industries Corporation	www.psic.gop.pk
Sindh Small Industries Corporation	www.ssic.gos.pk
Small Industries Development Board	www.sidbkp.com
Industries & Commerce Department Balochistan	www.balochistan.gov.pk/departments/industries-and-commerce

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	**94,752,000**	**119,719,152**	**148,178,105**	**180,536,498**	**206,383,307**	**223,513,121**	**242,064,711**	**262,156,082**	**283,915,036**	**307,479,984**
Cost of sales										
Material Cost- Bed	18,009,600	22,755,130	28,164,349	34,314,739	39,227,465	42,483,345	46,009,463	49,828,248	53,963,993	58,443,004
Material Cost- Sofa	14,011,200	17,703,151	21,911,443	26,696,355	30,518,383	33,051,408	35,794,675	38,765,633	41,983,181	45,467,785
Material Cost- Dining Table	28,667,520	36,221,412	44,831,758	54,621,894	62,441,928	67,624,608	73,237,451	79,316,159	85,899,400	93,029,051
Material Cost- Chairs	11,712,960	14,799,325	18,317,336	22,317,384	25,512,490	27,630,026	29,923,318	32,406,954	35,096,731	38,009,760
Utilities Cost	241,718	262,885	285,905	310,941	338,169	367,781	399,986	435,012	473,104	514,532
Direct Labor	5,280,000	5,667,200	6,082,795	6,528,866	7,007,650	7,521,544	8,073,124	8,665,153	9,300,598	9,982,642
Machinery Maintenance - Cost	22,000	23,826	25,804	27,945	30,265	32,777	35,497	38,443	41,634	45,090
Total cost of sales	77,944,998	97,432,928	119,619,390	144,818,123	165,076,349	178,711,490	193,473,515	209,455,603	226,758,641	245,491,863
Gross Profit	16,807,002	22,286,224	28,558,715	35,718,375	41,306,958	44,801,632	48,591,196	52,700,479	57,156,395	61,988,121
General administration & selling expenses										
Management Staff	1,920,000	2,060,800	2,211,925	2,374,133	2,548,236	2,735,107	2,935,681	3,150,965	3,382,036	3,630,051
Administration benefits expense	144,000	154,560	165,894	178,060	191,118	205,133	220,176	236,322	253,653	272,254
Building rental expense	1,620,000	1,782,000	1,960,200	2,156,220	2,371,842	2,609,026	2,869,929	3,156,922	3,472,614	3,819,875
Utilities	94,651	102,939	111,954	121,757	132,419	144,014	156,625	170,340	185,256	201,479
Travelling expense	192,000	206,080	221,193	237,413	254,824	273,511	293,568	315,096	338,204	363,005
Communications expense (phone, fax, mail, internet, etc.)	288,000	309,120	331,789	356,120	382,235	410,266	440,352	472,645	507,305	544,508
Office expenses (stationery, entertainment, janitorial services, etc	384,000	412,160	442,385	474,827	509,647	547,021	587,136	630,193	676,407	726,010
Promotional expense	473,760	598,596	740,891	902,682	1,031,917	1,117,566	1,210,324	1,310,780	1,419,575	1,537,400
Depreciation expense	652,970	652,970	652,970	652,970	652,970	652,970	460,880	1,154,597	1,154,597	1,154,597
Amortization of pre-operating costs	52,606	52,606	52,606	52,606	52,606	-	-	-	-	-
Bad debt expense	236,880	299,298	370,445	451,341	515,958	558,783	605,162	655,390	709,788	768,700
Miscellaneous expense 1										
Subtotal	6,058,867	6,631,129	7,262,252	7,958,130	8,643,772	9,253,397	9,779,834	11,253,251	12,099,434	13,017,879
Operating Income	10,748,134	15,655,095	21,296,463	27,760,245	32,663,186	35,548,235	38,811,362	41,447,228	45,056,961	48,970,242
Other income 2										
Gain / (loss) on sale of machinery & equipment	-	-	-	-	-	-	275,000	-	-	
Gain / (loss) on sale of office equipment	-	-	-	-	-	-	149,500	-	-	
Gain / (loss) on sale of office vehicles	-	-	-	-	-	-	474,700	-	-	
Earnings Before Interest & Taxes	10,748,134	15,655,095	21,296,463	27,760,245	32,663,186	35,548,235	39,710,562	41,447,228	45,056,961	48,970,242
Subtotal	-	-	-	-	-	-	-	-	-	-
Earnings Before Tax	10,748,134	15,655,095	21,296,463	27,760,245	32,663,186	35,548,235	39,710,562	41,447,228	45,056,961	48,970,242
Tax	2,881,846	4,599,282	6,573,762	8,836,085	10,552,114	11,561,881	13,018,696	13,626,529	14,889,936	16,259,584
NET PROFIT/(LOSS) AFTER TAX	**7,866,288**	**11,055,812**	**14,722,702**	**18,924,160**	**22,111,072**	**23,986,353**	**26,691,866**	**27,820,699**	**30,167,025**	**32,710,658**

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											
Current assets											
Cash & Bank	500,000	3,309,850	6,994,515	9,486,309	11,848,921	13,577,735	14,669,778	32,481,265	58,957,232	87,378,397	118,225,471
Accounts receivable		7,787,836	8,813,883	11,009,476	13,508,819	15,900,814	17,666,977	19,133,336	20,721,402	22,441,279	24,303,905
Raw material inventory	3,016,720	3,016,720	4,127,991	5,533,343	7,301,246	9,039,304	10,602,101	12,435,087	14,584,977	17,106,559	20,064,095
Equipment spare part inventory	-	-	-	-	-	-	-	-	-	-	-
Pre-paid building rent	135,000	148,500	163,350	179,685	197,654	217,419	239,161	263,077	289,384	318,323	-
Total Current Assets	3,651,720	14,262,906	20,099,739	26,208,813	32,856,640	38,735,272	43,178,016	64,312,764	94,552,996	127,244,558	162,593,471
Fixed assets											
Land	-	-	-	-	-	-	-	-	-	-	-
Building/Infrastructure	767,000	690,300	613,600	536,900	460,200	383,500	306,800	230,100	153,400	76,700	-
Machinery & equipment	1,100,000	935,000	770,000	605,000	440,000	275,000	110,000	1,885,207	1,602,426	1,319,645	1,036,864
Furniture & fixtures	245,000	208,250	171,500	134,750	98,000	61,250	24,500	419,887	356,904	293,921	230,938
Office vehicles	1,898,800	1,613,980	1,329,160	1,044,340	759,520	474,700	189,880	3,856,019	3,277,616	2,699,213	2,120,810
Office equipment	598,000	508,300	418,600	328,900	239,200	149,500	59,800	1,024,867	871,137	717,407	563,677
Advance Against Building Rent	405,000	405,000	405,000	405,000	405,000	405,000	405,000	405,000	405,000	405,000	405,000
Total Fixed Assets	5,013,800	4,360,830	3,707,860	3,054,890	2,401,920	1,748,950	1,095,980	7,821,079	6,666,483	5,511,886	4,357,289
Intangible assets											
Pre-operation costs	263,031	210,425	157,818	105,212	52,606	-	-	-	-	-	-
Total Intangible Assets	263,031	210,425	157,818	105,212	52,606	-	-	-	-	-	-
TOTAL ASSETS	**8,928,551**	**18,834,160**	**23,965,417**	**29,368,916**	**35,311,166**	**40,484,222**	**44,273,996**	**72,133,844**	**101,219,479**	**132,756,444**	**166,950,760**
Liabilities & Shareholders' Equity											
Current liabilities											
Accounts payable		5,972,466	7,542,389	9,331,775	11,366,240	12,991,948	14,070,406	15,238,388	16,503,325	17,873,264	19,356,922
Total Current Liabilities	-	5,972,466	7,542,389	9,331,775	11,366,240	12,991,948	14,070,406	15,238,388	16,503,325	17,873,264	19,356,922
Shareholders' equity											
Paid-up capital	8,928,551	8,928,551	8,928,551	8,928,551	8,928,551	8,928,551	8,928,551	8,928,551	8,928,551	8,928,551	8,928,551
Retained earnings		3,933,144	7,494,478	11,108,590	15,016,375	18,563,723	21,275,038	47,966,905	75,787,604	105,954,629	138,665,287
Total Equity	8,928,551	12,861,695	16,423,029	20,037,141	23,944,926	27,492,274	30,203,589	56,895,455	84,716,154	114,883,180	147,593,838
TOTAL CAPITAL AND LIABILITIES	8,928,551	**18,834,160**	**23,965,417**	**29,368,916**	**35,311,166**	**40,484,222**	**44,273,996**	**72,133,844**	**101,219,479**	**132,756,444**	**166,950,760**

12.3 Cash Flow Statement

Calculations **SMEDA**

Cash Flow Statement

	Year 0	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Operating activities											
Net profit		7,866,288	11,055,812	14,722,702	18,924,160	22,111,072	23,986,353	26,691,866	27,820,699	30,167,025	32,710,658
Add: depreciation expense		652,970	652,970	652,970	652,970	652,970	652,970	460,880	1,154,597	1,154,597	1,154,597
amortization of pre-operating costs		52,606	52,606	52,606	52,606	52,606	-	-	-	-	-
Accounts receivable		(7,787,836)	(1,026,047)	(2,195,593)	(2,499,343)	(2,391,995)	(1,766,163)	(1,466,359)	(1,588,067)	(1,719,876)	(1,862,626)
Finished goods inventory		-	(1,111,271)	(1,405,352)	(1,767,904)	(1,738,058)	(1,562,796)	(1,832,987)	(2,149,890)	(2,521,582)	(2,957,536)
Equipment inventory	(3,016,720)	-	-	-	-	-	-	-	-	-	-
Consumables Iventory	-	-	-	-	-	-	-	-	-	-	-
Pre-paid building rent	(135,000)	(13,500)	(14,850)	(16,335)	(17,969)	(19,765)	(21,742)	(23,916)	(26,308)	(28,938)	318,323
Accounts payable		5,972,466	1,569,923	1,789,386	2,034,465	1,625,708	1,078,459	1,167,982	1,264,936	1,369,939	1,483,658
Cash provided by operations	(3,151,720)	6,742,994	11,179,143	13,600,384	17,378,986	20,292,537	22,367,081	24,997,466	26,475,968	28,421,165	30,847,074
Financing activities											
Issuance of shares	8,928,551	-	-	-	-	-	-	-	-	-	-
Purchase of (treasury) shares											
Cash provided by / (used for) financing activities	8,928,551	-	-	-	-	-	-	-	-	-	-
Investing activities											
Capital expenditure	(5,276,831)	-	-	-	-	-	-	(7,185,979)	-	-	-
Acquisitions											
Cash (used for) / provided by investing activities	(5,276,831)	-	-	-	-	-	-	(7,185,979)	-	-	-
NET CASH	500,000	6,742,994	11,179,143	13,600,384	17,378,986	20,292,537	22,367,081	17,811,487	26,475,968	28,421,165	30,847,074

13 KEY ASSUMPTIONS

13.1 Operating Cost Assumptions

Table 26: 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 Production Cost Assumptions

Table 27: Production Assumptions

Description	Details
Material Cost- Bed	26,800
Material Cost - Sofa	20,850
Material Cost - Dining Table	14,220
Material Cost - Chairs	5,810
Cost of Sale Growth Rate	8.3%
Machinery Maintenance - Cost	2.0%

13.3 Revenue Assumptions

Table 28: Revenue Assumptions

Description	Details
Sale price growth rate	8.3%
Initial year capacity utilization	60%
Capacity growth rate	10%
Maximum capacity utilization	95%

13.4 Financial Assumptions

Table 29: Financial Assumptions

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

13.5 Cash Flow Assumptions

Table 30: Cash Flow Assumptions

Description	Details
Accounts receivable cycle (in days)	30
Accounts payable cycle (in days)	30

13.6 Debt-Related Assumptions

Table 31: Debt-Related Assumptions

Description of Cost	Details
Project Life (Years)	10
Debt: Equity	50:50
Discount Rate	13%
Debt Tenure	5 years
Grace Period	1 Year
Interest Rate (KIBOR+3%)	11.3%

Small and Medium Enterprises Development Authority

HEAD OFFICE

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

www.smeda.org.pk, **helpdesk@smeda.org.pk**

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