Table Of Contents

List Of Tables

List Of Figures

1 Executive Summary

1.1 Objectives Of The Research

The purpose of the study is to help Small and Medium Enterprise Development Authority (SMEDA) achieve its objectives which are

- Revitalize the economy through aggressive launch of S.M.E support program.
- Generate massive employment opportunities at lower costs
- Drive industrial growths towards value added exports.

The objectives of the this research study on Fan Industry are to

- Propose recommendations, which will help SMEDA to propose policies and proposals for development of fan industry.
- To analyze the dynamics of the fan industry, evaluate the value chain of this industry and to study the market forces as to remove if any asymmetry of information are prevailing in the following markets
- Financial market
- Labor force market
- Technological market
- Institutional market

1.2 Research Methodology

- Research methodology for collecting information regarding the domestic industry was composed to two parts
- Primary data collection
- Secondary data collection

In depth interviews were used as primary mode of data collection activity. The reason for choosing in – depth interviews was to collect detailed information from the respondent regarding the practices of the industry. These interviews also helped in gathering minute information

regarding industrial operations and norms, where as highlighting the difficulties faced by these manufacturers.

- The sample size for the in – depth interviews was 5 from each segment of the industry i.e. large scale manufacturers, medium scale manufacturers and small scale manufacturers, whereas from other 3 – 5 interviews were conducted from other members of the value chain i.e. suppliers, distributors and financial institutions.
- Realizing that the sample size in case of medium scale manufacturers and small-scale manufacturers is less a separate drop in questionnaire in urdu was distributed amongst medium scale manufacturers (10) and small-scale manufacturers (10). The purpose of this was not to statistically signify the results of the findings of the interviews rather their significance was to get a broader view of the prevalent practices in the industry.
- The purpose of secondary data was to collect information regarding small and medium enterprises and fan industry. The data gathered helped researchers in understanding the past of the industry and better designing of the research. The secondary data also helped in studying the government regulations and export statistics of the world and local market.
- Information regarding export and potential markets was gathered through PC TAS software proprietary product of United Nations Center for Trade and Development. And through correspondence with major international importers and traders.

1.3 Key Findings Of The Research

- The industry is divided into two major segments Manufacturers/Assemblers and Vendors. The total number of assemblers are 478 (which are operating in the season 1998 – 1999). This segment employs about 10,000 – 11,000 workers (Average No. Of workers/Firm = 250 large scale manufacturers; 75 in medium scale manufacturers and 10 Small scale manufacturers). The total number of vendors in the industry are 1000 employing at an average of 5 workers per assembler.
- Value added by the Manufacturers is Rs. 2 billion whereas the total value added by the vendor segment is Rs. 500 million.

- There are 8 Large-scale manufacturers, 50 Medium scale manufacturers and 420 Small scale manufacturers. The share between these players is divided as 60% with large scale manufacturers and 40% of the rest of the 3.3 million unit (Rs. 3 billion) domestic market is shared by the rest of the players, where in this the medium scale manufacturers dominate the small scale manufacturers.
- The utilized capacity of the industry is estimated to be 37.9%. The total output of the industry in year 1997 – 1998 is 3.3 million units; where as the installed capacity of the industry is 8.7 million units. The total domestic demand for the year 1997 – 1998 according to the 8th Annual Plan by the Government of Pakistan was estimated to be 2.3 million units by new dwellings and 500 thousand units by the industrial sector.
- Domestic industry has been growing at a rate of 10%, whereas the growth rates of different segments are different. The growth of the industry is dependent upon the growth rate of economy and buying power of the consumer. Large scale manufacturers have been growing at a rate of 12% - 13%. The medium scale manufacturers have been loosing market share to large scale manufacturers who have filled the product gap by introducing slightly low quality fans to provide for the price sensitive segment of the industry which was previously catered by the medium scale manufacturers.
- Large scale manufacturers have formed a strong group in the industry and are not threatened by other segments of the industry. Their business is closely held within the family and it is difficult to break or penetrate their strong hold. Their investments in machinery and equipment and brand equity are very much higher than the other segments.
- The total investment in the industry is around Rs. 3 billion. Capital investments by the large scale manufacturers are around Rs. 200 million to Rs. 300 million, whereas in the medium scale manufacturers and small scale manufacturers the capital investments are Rs. 5 to Rs. 10 million and Rs. 200,000 to Rs. 500,000 each.
- The technological capability of the domestic industry at the moment is sufficient to cater for the local market but it can only compete in some of the foreign markets. The average price of exported fan by Pakistan Manufacturers is $22 as compared to prices of fans exported by

China ($ 7.42) and Thailand ($ 16.4). This differential in the price of the fan is mainly due to expensive imported raw material and inefficient manufacturing processes.

- There is evidence of collaborative efforts amongst all segments of the industry. However, these efforts are remain only in utilizing benefits of collective bargaining while importing raw material or distribution of goods within the country. There has been little sharing of information regarding technology and or of collective efforts in exploiting the potential in foreign markets between the players. However, collective efforts are more prevalent in small scale manufacturers and medium scale manufacturers have now realized the potential gains that can be had by such efforts.
- Quality of machinery employed in the industry is better in the upper segments of the industry, where the large segment is using CNC and automatic presses. The medium scale manufacturers and small scale manufacturers, however, commonly use local machinery. This causes the quality variance amongst different segments of the industry. Apart from this the quality of raw material used by large scale manufacturers is of better grade (imported electric sheet and better insulation material and copper wire) as compared to other two segments which cannot use such material because of the high prices.
- The use of financial market is minimum in the industry; even the larger players in the industry have negligible debt financing. Financial intermediaries are used more often for short term capital financing or while doing foreign transactions (only by some of the large scale manufacturers and medium scale manufacturers.). The small scale manufacturers also use these services for short term finances though the use by them is minimal. The growth is internally financed however leasing practices are common in the upper segment of the industry.
- The sub - optimum debt structure employed in the industry is one of the main reasons for the industry not being able to grow to its potential and not allowing the firms in the industry to maximize their value. The main reason for the industry in not being able to benefit from the financial markets is the lack of expertise regarding the utilization of optimum debt structure within the organizations.

- Financial institutes have played a key role in establishment of small and medium enterprise sector in the economy. However, because of lack of formal documentation of business transactions and records and assets for collateral, the financial institutes find it hard to finance the growth of the lower segment of the industry.
- The export efforts have been mostly done by the individual players without much assistance from the government agencies.
- The markets currently suitable for exports are those which have same climatic conditions or have hotter climatic conditions. There has been little exports to European nations, however, the European market if explored can prove to be of major benefits.
- Large scale manufacturers dominate the international market where as the medium scale manufacturers have recently tried to enter this market.
- Vendors are the most fragmented segment in the industry with very little bargaining power. The technological capability of vendors has been not been growing significantly over the years with the industry. The lack of technological skill and financial resources to invest in technology by these vendors has hindered in their growth, forcing large scale manufacturers to have 90% of operations in – house. Large scale manufacturers role in developing their vendors in minimal with regard to transfer of technology when its new.
- Manufacturers have little control over their distribution channels in the industry. Credit lines are established with distributors and retailers who misuse these credit facilities by investing them in their businesses, creating difficulties for the manufacturers in recovering their investments. There is little price control by the manufacturers over their distributors or retailers. However, recently manufacturers (Lahore Fan and Royal Fan) have tried to regain control and implement their policies regarding credit lines and end consumer prices.

1.4 Recommendations

Fan industry has been established in Pakistan for over 40 years and has reached capability where it can export its products to international markets and earn precious foreign exchange. The quality of the product is comparable internationally in some markets. Whereas it has the potential to benefit from other markets the industry at this stage requires support from government

agencies and financial institutions. Countries like Taiwan, Korea, Singapore, Japan and China have been successful in developing competitive advantage over other nations by promoting those industries which were strong domestically. Technological capability of the industry has been improving over the years but now has reached a stage where without help it cannot improve. The industry over these 40 years has developed a strong labor force and support industry along with expertise in the industry. These factors are critical in developing comparative advantage in any industry. The recommendations to improve the overall capability of the industry with special reference to vendors and small scale manufacturers are discussed below

- Government should promote exports of fans to the existing markets by providing the fan manufacturers with the information regarding existing and potential export markets. The role of commercial attaches in providing with the relevant information should be emphasized.
- Government should provide incentives for exports such as rebates and decreasing the duty on imported raw material. Currently the duty on electric sheet is 10%, small scale manufacturers and medium scale manufacturers cannot afford to use this material which is critical to the quality of the fan as the use of metal sheet determines the consumption wattage. Being able to use this these manufacturers stand a better chance to export their products to foreign markets.
- Government already has trade agreements with certain very attractive foreign markets e.g. Russian States (Import market is 112,000 units). Where government can effectively promote the domestic fan market.
- Government should give incentives to promote technological improvements in the process. This will help in being able to reduce costs and to enter markets which are dominated by less expensive international players like China and Taiwan.
- Banks should view SMEs as long term positive cash flow generating entities rather than short term risky investments and should take more active part in their development. The domestic financial sector has in the past been involved in the initial stages of setting up of the SMEs; however, their participation after the initial stage has been negligible. As the vendors. Small scale manufacturers and medium scale manufacturers do not have the financial muscle to

invest in technology; they need this financial assistance from the banks. The development of vendor industry is also important, as it will increase the capability of the industry.

- Banks while dealing with vendors and small scale manufacturers should give more attention to cash flow generation capability of the applicant than the ability of providing with adequate collateral.
- Banks should develop capabilities to do such credit analysis for the SMEs. This will increase the costs of the banks but the quality of loans will also increase and the bank will have a more attractive and diversified portfolio. To avoid such costs banks can also utilize the services of a third part assessment organization e.g. Small and Medium Enterprise Development Authority.
- Banks can also extend finances to small scale manufacturers and vendors through Pakistan Electric Fan Manufacturers Association, whose role can be either act as guarantor for the party applying for the loan or as provider of information regarding the business of the applicant. This will provide for additional security in the form of either a guarantee from PEFMA or information regarding the nature of clients business and overall industry situation. Banks can also as a proof for client's volume of business use clients formal contracts with his buyer, which in case of vendors will be fan manufacturer. This will also help the bank in establishing the clients credit worthiness.
- Pakistan Electric Fan Manufacturers Association should provide for the information regarding technological advancements in manufacturing processes. Apart from this it should provide for training both in management and technical fields.

2 Introduction

2.1 Small And Medium Enterprise Development Authority

The objective of SMEDA's inception is to promote Small and Medium Enterprises by removing asymmetry of information from the market. Government of Pakistan has always realized the role of SMEs in development of economy, in the past it has for this purpose chartered organization like Industrial Development Bank of Pakistan and Small Business Finance Corporation. However, in the past these organizations worked as lending agencies, which used to finance SME projects. The role of SMEDA is different from other such institutes, as its purpose is not to act as a lending agency but rather as an agent between the financial institutes and SME sector to facilitate their dealing.

The objectives of SMEDA are to

- Revitalize economy through aggressive launch of SME support program
- Generate massive employment opportunities at lower costs.
- Drive industrial growth towards value added exports.

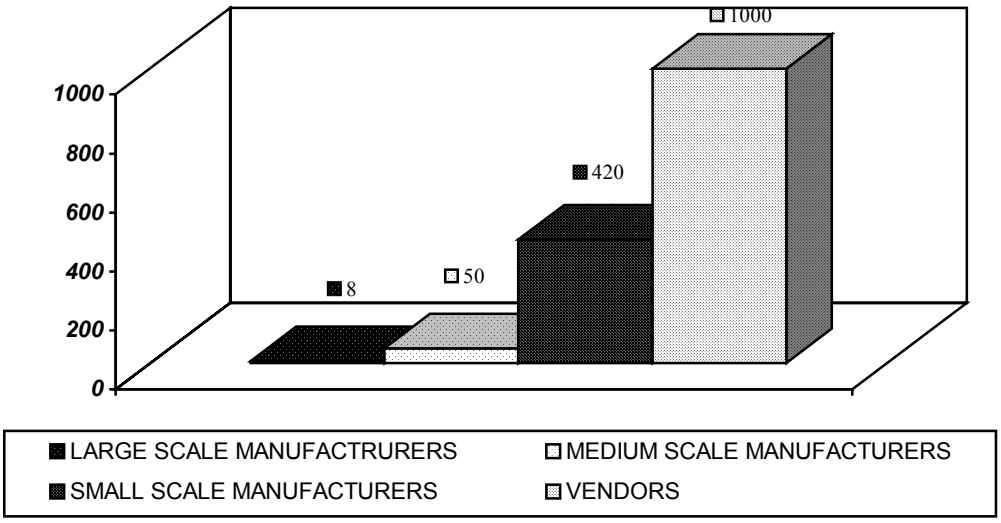
To achieve its objectives SMEDA has commissioned a number of studies on different SME sectors including Textiles, Surgical Goods, Sports Goods and Light and Mechanical Engineering. These research studies are for the purpose of completing the initial phase of collecting information about the current status of each industry. The information collected through these researches will then later be used in recommending policies for promotion of these industries.

2.2 Fan Industry

Fans have been manufacturing in Pakistan since its inception in 1947 and all of the fan manufacturing is in the private sector. The fan industry is mainly clustered in the four major cities namely, Gujrat, Gujranwala, Lahore and Karachi. This cluster meets the entire needs of the country; producing fans with extended product types, models, designs, and colors. The product line includes ceiling, pedestal, table, bracket or circomatic, exhaust, and louver fans. Sales are also fairly concentrated with five large firms in Gujrat and two in Gujranwala, accounting for 40 per cent of total industry sales. The well established larger units are family owned operations, managed by second generation. The Yunas family of Gujrat, with three units account for about

15 per cent of total industry sales. PAK Fans and Royal Fans are other major producers in Gujrat. In

FIGURE 1 NUMBER FIRMS IN FAN INDUSTRY



SOURCE: PAKISTAN ELECTRIC FAN MANUFACTURERS ASSOCIATION

Gujranwala, Asia Fans and Breeze Fans are the dominant players after the collapse of Climax fans due to the management failure. On total there are about 550 fans manufacturing units in Pakistan, with 340 units in Gujrat, 150 in Gujranwala, 25 in Lahore, 15 in Karachi and rest of these units are located in several other cities. Of these units recorded in 1994, according to estimates provided by PEFMA there are 8 operational large scale manufacturers, 50 small scale manufacturers and 420 medium scale manufacturers. For vendors the estimate is about 1000 units.

Supplying a range of components, such as castings, blades, guards, down rods, and accessories including plastic, rubber and electric parts, and sub-assemblies, mainly electrical motors to fan manufacturers in Gujrat and Gujranwala.

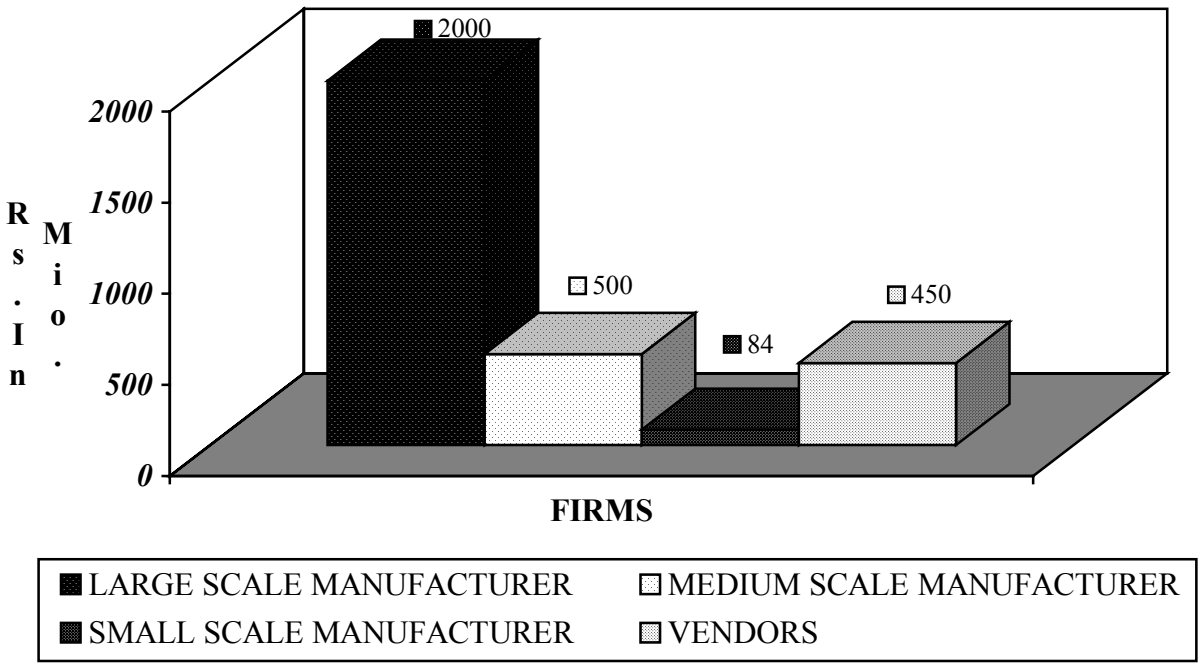
The total investment in the industry is around Rs 3 billion, the individual investment by the industrial players are given in Figure 2. The total employment in the industry is about 15000 workers the break up according to different segments of the industry is given in Figure 3. The total

revenues generated by the industry is around Rs. 4 billion and the annual revenues generated are given in Figure 4 Total Revenues Generated By Fan Industry.

2.2.1 Large Scale Manufacturers

The total investment in the industry by this segment is about Rs. 2 billion. There are about 8 large scale manufacturers. The production of these players is between 60,000 units to 250,000 units annually. The annual revenues are about Rs. 70 million to Rs. 200 million. The average investment in large scale manufacturers is of Rs. 250 million in equipment, plant and building. The employment in these units is about 250 workers on average. Large units use imported raw material and components, including electric steel sheets (ESS), ball bearings, and insulation material. They employ sophisticated foreign equipment including high pressure die casting machines, capstan and programmable turret lathes, universal milling machines, surface grinding machines, automatic

FIGURE 2 TOTAL INVESTMENT IN FAN INDUSTRY.



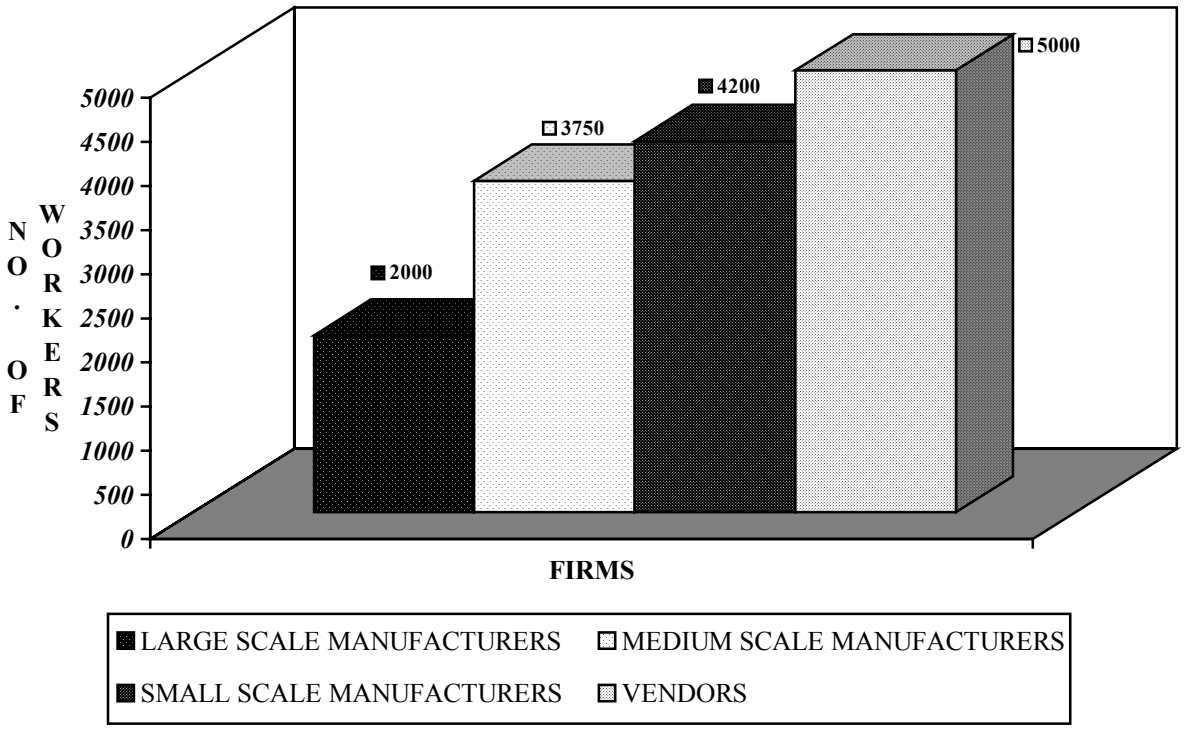
SOURCE: PAKISTAN ELECTRIC FAN MANUFACTURERS ASSOCIATION

Multi spindle drills, and auto coil winding machines. These companies also have a range of testing equipment such as watt meter, ammeter, volt meter, high voltage tester, tachometer (for measuring rpm), and anemometer (for measuring air delivery). Local equipment includes lathes, drilling machines, mechanical and hydraulic presses, and milling machines. However, these units lack major R&D and material testing facilities. This is also the premium price segment, with standard 56" ceiling fan retailing at around Rs. 1,500 to Rs. 1,800. Except for fan blades, guards, dimmers (speed regulator), and few other small components, all other components are manufactured in-house. Some manufacturing processes are subcontracted including aluminum rotor filling and wire winding. For these processes, the contract workers typically worked within the factory premises, using factory production facilities.

2.2.2 Medium Scale Manufacturers

Currently there are very few medium sized firms here in the fan industry in Pakistan. In 1998 there are about 50 operational units This segment is gradually vanishing from the screen, as the large scale manufacturers are moving towards this segment also and eating up there share of the pie. Firms in this segment produce 10,000 to 60,000 units per year. Investment in land, building and equipment ranges from Rs. 5 million to Rs. 10 million. The total investment in this segment is Rs. 500 million. Annual revenues are about Rs. 7 million to Rs. 25 million. These firms employ mostly local machinery including rotary die casting machines, lathes, presses, and drilling machines. Contrary to the large scale manufacturers these manufacturers have somewhat smaller product line, with main focus on ceiling and pedestal fans. The 56" ceiling fan made by this segment is priced at Rs. 1,200 to Rs. 1,500.

FIGURE 3 EMPLOYMENT IN FAN INDUSTRY.

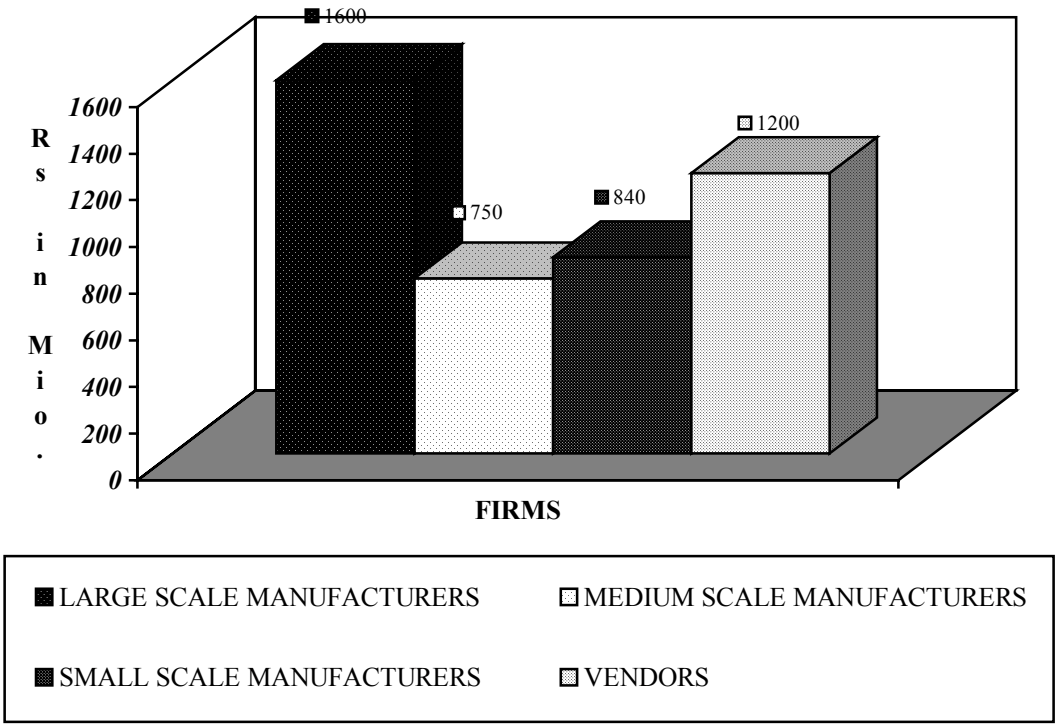


SOURCE: PAKISTAN ELECTRIC FAN MANUFACTURERS ASSOCIATION

2.2.3 Small Scale Manufacturers

There are about 420 small companies in this segment, which rely heavily on the vendors industry. Most of the firms have small premises with very basic machinery such as lathe, drilling machine, and air compressor valued at about Rs. 200,000. The total investment in this segment of the industry is about Rs. 84 Million. Over 90 per cent of manufacturing is done outside the factory premises. The operation done in house are mainly assembly, finishing, and painting, in most of the cases on contract basis. Output of this segment ranges from 1,500 to 10,000 units per year. Sales range from Rs.1.5 million to about Rs. 4 million. A 56" ceiling fan produced by this segment retails at about Rs. 900.

FIGURE 4 TOTAL REVENUES GENERATED BY FAN INDUSTRY



SOURCE: PAKISTAN ELECTRIC FAN MANUFACTURERS ASSOCIATION

2.2.4 Vendors

There are about 1000 vendors in the industry, supplying to assemblers in the industry. The employment by this segment is the highest employing around 5000 people. The average investment in this segment is around Rs. 450,000. The revenues generated by this segment annually are Rs. 1.2 billion. Technological capability of this segment needs to be upgraded as to meet the technological needs of the large scale manufacturers and to better cater for the needs of the medium scale manufacturers.

2.3 The Research

The objectives of the study is to propose recommendations which will help SMEDA to propose policies and proposals for development of the fan industry.

The research is designed to analyze the dynamics of the fan industry, evaluate the value chain of this industry and to study the market forces as to remove any asymmetry of information prevailing in the different markets such as Financial markets, Labor force market, Technological Market and Institutional markets.

To comprehend the dynamics of the industry the research will identify various players of the value chain and will conduct SWOT analysis of these players. The research will also identify different strategic groups within the industry.

The research will also focus on potential export market for this industry by looking at the international trade statistics.

3 Porter's Analysis Of Manufacturers

FIGURE 5PORTERS ANALYSIS OF THE INDUSTRY

Barriers to Entry

Favorable

High sales volumes required to compete effectively. Low volumes result in higher production costs.

Economies of scale low

Many strong brands along with private labels are present in the market.

Leading companies have long ties with them.

Capital requirement is high for efficient production facility.

Bargaining Power of Suppliers

Neutral

The manufacturing technology is commonly available and there is a large number of suppliers.

Vertical integration does not provide any significant cost advantages due to the presence of specialized vendors.

Internal Rivalry

High

Market is dominated by five companies.

Hundreds of small companies are vying for market share.

Major companies are reducing their risk by diversifying in related businesses.

Availability of Substitutes

Depending on the Buyer Segment

Substitutes available for fans are room coolers and air conditioners. Room coolers are ineffective in the monsoons and air conditioners are too expensive for an average user of fans.

Advent of plastic fans pose the greatest threat to the

Bargaining Power of Buyers

Unfavorable

The end customers have a number of brands to choose from.

Consumers from the lower Nome group are price sensitive.

Leading companies have started producing low quality fans hence increasing the price sensitivity.

The unbranded fans have further contributed to price cutting.

No monopsony effect as end users are consumers

After sales service and repairs are important

3.1 Barriers To Entry

Barrier to entry is an important determinant of the attractiveness of an industry. The research revealed low entry barriers, although they varied across different segments of the industry. Factors contributing to low barriers to entry are:

3.1.1 Economies Of Scale

The research revealed little or no evidence of economies of scale in the operations. This is due to the fact that most of the manufacturers in the fan industry do not have the capability of mass production. Their operations are designed for batch production. This production technique inhibits them from realizing any benefits from economies of scale. Other than operations, some of the players have been able to realize lower cost in areas such as procurement and marketing.

3.1.1.1 Large Scale Manufacturers

These players have the volumes, which justifies investment in machinery and allows them to realize lower cost of production. Not only their cost of production is lower but also they are able to negotiate better raw material prices and freight charges. This is due to the fact that they are able to benefit from quantity discounts.

3.1.1.2 Medium Scale Manufacturers

The medium-scale manufacturers have invested in fixed assets such as plant and machinery. These investments translate into high fixed cost. They are unable to reduce per unit fixed cost due to low sales volumes. Also they face higher cost while purchasing raw material etc.

3.1.1.3 Small Scale Manufacturers

The small-scale manufacturers are basically assemblers with negligible investment in fixed assets. Therefore there is little room for them to lower cost as a consequence of increasing volumes. Also they undertake no promotional activities that removes another avenue for lower costs.

3.1.2 Fixed Costs

The fixed costs vary within the three segments depending upon level of vertical integration and nature and type of machinery maintained by different firms. These costs are highest for the large scale manufacturers and lowest for small scale manufacturers. The nature of fixed costs is discussed under each segment.

3.1.2.1 Large Scale Manufacturers

Due to minimal outsourcing of parts, the investment by these players in machinery and facility is relatively more than the industry. Their facility houses about 90% of their operations, where as only less than 10% is out-sourced from the vendors.

Investments in machinery are in second hand imported machines or local top of the line machines. They are also most advanced technologically when compared other players in the industry. Some of the machines installed in the facilities are: automatic winding machines, automatic stamping presses, plastic injection molding machines and CNC machines. These investments in sophisticated machinery are in-line with their strategy of providing quality product.

3.1.2.2 Medium Scale Manufacturers

Investments in fixed assets by this segment are relatively less than the large scale manufacturers. Although medium scale manufacturers own the production facility. But the size of the facility and machinery employed is far less since they only perform 50% to 60% of the total operations. Investments in the equipment are limited to lathe machines, which are used for manufacturing rotors and stators. Most of the winding is performed using manual winding machines. Also most of the machinery is local, which is less expensive than similar imported machinery.

3.1.2.3 Small Scale Manufacturers

This segment has made little investment in either plant or machinery. They are primarily assemblers who outsource 100% of their manufacturing operation from vendors. The facility in which the assembling operation is performed is rented in most cases. Other than assembling, the only other activity carried out in-house is winding of the electric motor. Investment in winding machinery is also limited since they have manual winding machines.

3.1.3 Brand Identity

The large scale manufacturers and to some extent medium scale manufacturers have created brand identity for their products through heavy advertising. The medium scale manufacturers cannot match the promotional budget of the large scale manufacturers, which is evident from theTable 1. Small scale manufacturers have spent their limited budget on trade promotions in the form of higher retail margins, which are around 20% – 30 %.

TABLE 1ADVERTISING AND PROMOTIONAL EXPENDITURE BY DIFFERENT SEGMENTS OF THE INDUSTRY.

INDUSTRIAL SEGMENT	ADVERTISING AND PROMOTION			
	MEDIA PRINT/TV	HOARDING	TRADE PROMOTIONS	CONSUMER PROMOTIONS
LARGE SCALE MANUFACTURERS	RS 5 TO 10 MIO	RS. 1 TO 3 MIO	RS. 2.5 TO 5 MIO	RS 1 TO 2 MIO
MEDIUM SCALE MANUFACTURERS	RS. 500,000 TO 1 MIO.	RS. 200,000 TO RS.500,000	RS. 300,000 TO RS. 500,000	RS. 30,000 TO 70,000
SMALL SCALE MANUFACTURERS	-	RS. 10,000 TO 25,000	RS. 75,000 TO RS. 1 MIO.	-

SOURCE: INDUSTRIAL SURVEY

3.1.3.1 Large Scale Manufacturers

Brand equity has been developed through advertising and sponsoring sports and other activities. Advertisements on television are primarily spots that describe the product benefits. Frequency of advertising increases during the summer season and in the reaming year there is not much activity by the fan manufacturers. Promotional activities on radio comprise program sponsorship. In addition to these, large manufactures also sponsor sports like golf and other local melas etc. Other than these activities this segment does not pursue any other trade or consumer promotional activity.

Over the years the investments in brand identity has resulted in high brand awareness among the end-users. This increased awareness allows the large manufactures to charge premium for its product.

3.1.3.2 Medium Scale Manufacturers

Although this segment of the fan manufacturers invest in building brand identity but their efforts are limited to billboards. They spend very little on television advertisement. Due to this low expenditure on brand development, awareness among the end-users is lower as compared to the large manufacturers. Since they have not been able to generate the pull for their products, they have to rely on the distributors to push the products. For this purpose they offer slightly hire margins than the large-scale manufacturers.

3.1.3.3 Small Scale Manufacturers

The small manufacturer do not undertake any promotional activity to develop the brand since it is contradictory to their low cost strategy. They sell unbranded fans and since they have no brand awareness they have to rely on the distributor to push their products. They offer the distributors exorbitant margins in the ranging between 30%-40%.

3.1.4 Switching Costs

Switching costs within the industry are high for all segments in the industry. This is attributed mainly to high capital locked into trade channels in form of trade credit. In addition very few alternative business opportunities exist in Gujranwala and Gujrat hence increasing switching costs for the manufacturers.

3.1.4.1 Large Scale Manufacturers

Switching costs of large scale manufacturers are high because of their investments in fixed assets. Although these assets are not highly specialized; the magnitude of investment in them by the manufacturers raises barriers to exit for them. Similarly, the investments made by these large scale manufacturers into developing brand equity adds to their switching costs.

3.1.4.2 Medium And Small Scale Manufacturers

Although switching costs for these segments as compared to large scale manufacturers are low but are still considerably high. Though machines employed by them are general purpose e.g. lathe machines. The magnitude of investments in the trade channels for each segment is considerable, which increase the switching costs.

3.2 Rivalry amongst competitors

The intensity of rivalry in the fan industry has increased over the years. As a consequence of increased competition the profitability of the player has decreased. Factors contributing to rivalry are discussed below:

3.2.1 Industry Growth

The fan industry has been growing at 8-10% for the past few years. This decline in growth is due to deteriorating economic condition of the country. Growth of the industry is driven by development activities related to housing etc. The growth pattern of different segments in the industry is discussed below.

3.2.1.1 Large Scale Manufacturers

The average growth experienced by the large-scale manufacturers is between 10-12%. Their growth exceeds the growth of the industry. This growth has not been achieved by developing new markets rather the large-scale manufacturers have grown at the expense of medium-scale manufacturers. The large-scale manufacturers have driven the medium-scale manufacturers out of the market by introducing low-priced fans for price sensitive consumers. The medium scale manufacturers were previously catering to this price sensitive segment.

3.2.1.2 Medium Scale Manufacturers

This segment is shrinking because of pressure from the large-scale manufacturers. According to a rough estimate provided by the Chairman of Pakistan Electric Fan Manufacturer Association the firms in this segment are operating at 7%–8% lesser capacity as compared to last year.

3.2.1.3 Small Scale Manufacturers

The growth rate of this segment is minimal, about 2%–3%. These players are catering for price sensitive rural consumers. The low growth experienced by this segment is due to cutbacks in rural electrification budgets by the present government

3.2.2 Over-capacity

According to an estimate the industry currently working at 40% of its capacity this is based on the following findings about the industry, which the study uncovered

3.2.2.1 Economic Downturn

The industry flourished between 1960–1980 due to supportive government policies and rapid development in the country. Many medium and small enterprises mushroomed to cater to the unmet demand. However, 90's heralded the beginning of a recession, as a consequence the growth in fan industry declined, and the market has become more competitive. The growth in the capacity during the two decades and subsequent decline in the demand has resulted in idle capacity in the industry.

3.2.2.2 Increased Competition

In 1990s the large scale manufacturers faced difficulties as the demand for quality fans declined because of the deterioration in purchasing power of consumer. Large scale manufacturers in order to broaden their customer base introduced low quality fans, which catered for the customers that were previously being supplied by medium scale manufacturers. The large scale manufacturers not only have more resources available to them and but also wider market coverage. Therefore they were able to drive out medium scale manufacturers. Increased competition in the low priced segment led to close down of medium scale firms.

3.2.2.3 Large Scale Manufacturers

This segment has invested in fixed assets: plant and equipment. Their capacity to supply metal fans exceeds the demand. The estimated idle capacity experienced by this segment in metal fans is around 30% - 40%. Although the natural consequence of excess capacity are price wars to secure more market share. But there has been no downward pressure on prices. The players have

been able to evade price war by colluding among themselves. They have divided the markets and by restricting the access to competition they have been able to maintain prices.

The plague of excess capacity is limited to the metal fans, however plastic fans are in the growth phase. The industry began investing in this category in the early 90's and up-till now demand exceeds supply.

3.2.2.4 Medium and Small Scale Manufacturers

These two segments primarily comprise assemblers. They out source (60% - 90% of total operations) various operations and latter assemble parts in their facility. The facility where they assemble is rented and most of the laborers they employ are temporary. Due to these factors small scale manufactures are not troubled by the problems of idle capacity. Rather they are in a position to adjust capacity to meet demand due to readily available labor and vendors. But the medium scale manufacturers are experiencing severe excess capacity due to the introduction of low quality fans by the large scale manufacturers.

3.2.3 Diversity of Competitors

There is little diversity within the industry and at present only seen amongst the large scale manufacturers. Large scale manufacturers have diversified into production of washing machines and water geysers in order to minimize the seasonal nature of their fan business. However, the medium scale manufacturers also copy this trend to some extent.

3.2.3.1 Large Scale Manufacturers

Within the large scale manufacturers there is little diversity. Some of large scale manufacturers have diversified into other products such as washing machines (G.F.C Fans, Asia Fans) and hot geysers. The reason for this diversification in to these products is to reduce exposure to cyclical nature of fan business.

3.2.3.2 Medium and Small Scale Manufacturers

This segment has not been able to diversify its businesses to related products. This lack of diversity exposes them to seasonality of the fan industry. The reasons for lack of diversity is due to financial constraints faced by this segment for investments.

3.2.4 CONCENTRATION AND BALANCE AMONGST COMPETITORS

The fan industry is fairly concentrated with large scale manufacturers accounting for over 50% of the market share. The remaining market share is distributed among a number of medium to small players.

3.2.4.1 Large Scale Manufacturers

Market share at national level is evenly distributed between the major players; however, there is marked difference in the regional market shares. In Lahore, the market leader is Pak Fans with 35% share, followed by 30% share with Royal Fans. GFC Fans are dominant in the northern regions of the country, whereas Millat Fans dominate the southern region (Karachi, Hyederabad and other areas of Sind). An estimate of their share is given in Table 2.

TABLE 2 SHARE IN DIFFERENT SEGMENTS OF THE REGIONAL MARKET.

PLAYERS	REGIONAL MARKETS			
	PUNJAB	SIND	NORTHERN AREAS	BALUCHISTAN
PAK FANS	60%	30%	10%	
ASIA FANS	80%	15%	>5%	
ROYAL	<80%	>20%		
CLIMAX	95%	5%		
YUNAS	95%	5%		

SOURCE: INDUSTRIAL SURVEY

3.2.4.2 Medium Scale Manufacturers

This segment of manufacturers closely follows the industry leaders in terms of product design and innovations. Since their product line is positioned for price sensitive end users therefore the quality of the fans is inferior. This middle of the road strategy is difficult to sustain. The industry leaders bridged the product gap by introducing fans, which fit the demand of the particular

segment previously catered by the medium scale manufacturers, under different brand names. This strategic move has wiped out the middle segment fan manufacturer.

3.2.4.3 Small scale manufacturers

This segment is highly fragmented as compared to the other two segments. The players in this segment are catering to lowest segment of the market, which is highly price sensitive. These players are dominant in the rural areas of the country. There is little rivalry amongst the competitors, as much of the resources are shared amongst the players. At times if a manufacturer is short on some parts, it can borrow it from its neighbor manufacturer.

3.2.5 Product Differentiation

There is limited product differentiation in the industry. Lack of differentiation is due to the fact that it takes very short while for the manufacturers to imitate and introduce new products under their brand name.

3.2.5.1 Large Manufacturers

Fan manufacturers in this segment produce similar fans even the warranty and after sale services are same. Due to better quality of material such as enameled copper wire and electric steel sheets, manufacturers of this segment are able to provide better quality fan to the end consumer as compared to other two segments. Not only the fan produced by the large manufacturer is more durable but it also consumes low power (wattage/hr) for a given speed. The comparison of wattage consumed by the fans manufactured in the three segments of the manufacturers is given in Table 3.

TABLE 3 POWER CONSUMPTION (WATTS/HOUR)

INDUSTRIAL SEGMENT	POWER CONSUMPTION
LARGE SCALE MANUFACTURER	LESS THAN 90 WATTS/HR
LARGE SCALE MANUFACTURER	90 – 100 WATTS/HR
SMALL SCALE MANUFACTURER	MORE THAN 100 WATTS/HR

SOURCE: INDUSTRIAL SURVEY

Another factor that differentiates this segment from the others is that they are more innovative. Introduction of plastic fans and remote control fans has been the initiative taken by large players.

3.2.5.2 Medium and small scale manufacturers

These segments of the fan industry exhibit very little product differentiation. Their main competitive edge is cost leadership. They are able to maintain low cost because of lower investment in machinery and use of lower quality raw material like local enameled copper wire and drum/metal sheets. Limited product line offered by them also helps to realize lower cost.

3.2.6 Barriers To Exit

The exit barriers in the industry are unfavorable mainly because of two reasons i.e. heavy investments made into trade channel and due to emotional barriers. Exit barrier increases with the scale of manufacturing.

3.2.6.1 Large Scale Manufacturers

The exit barriers for large scale manufacturers are relatively higher than the other two segments.

3.2.6.1.1 Vertical Integration

One of the major reasons for relatively higher exit barriers in this segment is due to the company's commitment to the production of quality products hence the production strategy of limiting outsourcing. This strategy requires heavy investments in plant and machinery. These investments are a deterrent for these players to exit the industry.

3.2.6.1.2 High Brand Equity

They have not only made heavy investments in plant and machinery but they have also spent heavily on advertising and promotion. This has led to high brand equity for their products. Due to this investment the players are reluctant to exit the industry.

3.2.6.1.3 Strategic Interlinkages

Most of the large scale manufacturers are not only producing electric fans, but also some other related products. These products include washing machines, electric motors, milk blenders and desert coolers. Divestment of their fans division will have high impact on the production and sales of these related products. Major reason, being the loss of ability for an exiting company to

capitalize on the economies of scope as these products are manufactured along with the electric fans. Another reason is that these companies are capitalizing the repute gained through sales of fans and divestment of the flagship would make it harder to sell related products.

3.2.6.1.4 Emotional Barriers

In addition to the above-mentioned tangible factors, large-scale manufacturers have been in the business of making fans for three generations or so. Therefore, due to emotional attachment to the family businesses impedes their decision to exit even in the face of losses. Due to the expertise and skills that these manufacturers and their families have developed over the extended period of time, they have no other alternative businesses in which they can enter and compete successfully.

3.2.6.2 Medium And Small Scale Manufacturers

We already established that exit barriers tend to rise with the scale of manufacturer, so the exit barriers for medium scale manufacturer are less than the large scale manufacturers, but slightly higher than the small scale manufacturers. There are several reasons for the lower exit barriers for the medium/small scale manufacturers. One reason is the low investment in the specialized assets and equipment.

There are very large number of small players in the market, which help in establishing the very powerful second hand/used manufacturing machines market. Medium/small scale manufacturers used these markets for the sale of second hand machines. Most of the owners of these small manufacturers are the previous employees of large companies, who after getting the necessary experience start their own production with the help of number of vendors. So the question of emotions doesn't arise in the case of small scale manufacturers, because these people are more interested in the profitable running of the company and the adequate earnings for their family rather than the emotions. Profitability is the only critical factor, which drive the decision of exiting the industry for these small scale players. Exiting costs are not very significant due to the low investment, small size, single product, limited market and heavy reliance on outsourcing.

3.3 Bargaining Power Of Suppliers

Bargaining power of vendors is favorable, since the industry is highly fragmented as compared to the fan manufactures. The vendor industry also is experiencing low capacity utilization. In addition treat of plastic parts has further deteriorated the power of suppliers.

3.3.1 Number Of Important Suppliers

There are a number of alternative vendors available for individual parts of fan. Due to large number of choices available to the fan manufacturers, the bargaining power of the vendor is greatly reduced.

3.3.1.1 Large Scale Manufacturers

The large manufacturers' product line can be broadly categorized as metal and plastic fans. The metal fans include ceiling and pedestal fans. Whereas the plastic fans include bracket fans, louver fans and exhaust fans. Different vendors supply plastic and metal parts. There are a large number of metal parts vendors but any single vendor is unable to fulfill the demand of the large fan manufacturers. Therefore these players out source a single part from a number of vendors.

As for the plastic parts some of the bigger players have in-house plastic injection molding machines fulfilling their demand. Where as the remaining players rely on the plastic industry vendors located in Gujranwala to satisfy their demand.

3.3.1.2 Medium Scale Manufacturers

The main product line of the medium segment are metal fans. They include ceiling fans, pedestal fans, table fans, exhaust fans and bracket fans. Individual vendors have the capacity to fulfil demand of medium scale manufacturers. These players have wide choice of vendors of desired quality. Most of them are located in Gujrat close to the medium size segment of the industry.

3.3.1.3 Small Scale Manufacturers

The operations of the small scale manufactures are limited to assembling. The product line comprises metal fans. Because of this they have greater reliance on the metal parts vendors. This segment also has a number of choices available to them regarding the selection of vendors. There

are on average 30 vendors available for main metal parts like fan blades, metal stalk, lock nuts and fan guards.

3.3.2 Availability of substitutes

Although traditionally substitutes of metal parts vendors were non-existent but now the industry is moving towards plastic fan. As a consequence of this emergent trend the importance of metal parts vendors has decreased and plastic parts vendor has gained importance.

3.3.2.1 Large Scale Manufacturers

The trend is towards the lightweight plastic fans, therefore metal parts currently being used in the production of ceiling fans and pedestal fans will be replaced by plastic fans. The large scale manufacturers have introduced plastic models. Increasing number of plastic models will wipe out the metal parts vendors.

3.3.2.2 Medium Scale Manufacturers

The firms in this segment have not yet entered the plastic fan fully. They have introduced a couple of models of plastic fans. This includes bracket fans, which have some plastic parts. They are out sourcing plastic parts from Gujranwala plastic industry.

3.3.2.3 Small Scale Manufacturers

These fan manufacturers have j limited product line. They presently have no plans of introducing the plastic fans. Cost of the plastic injection molding machines and low availability of plastic parts is the reason for delay in the introduction of plastic fans.

3.3.3 Switching Cost Of Suppliers Products

Due to large number of equally competent vendors, the switching cost for the fan manufacturers is very low. The degree of switching cost varies with the three segments. But the switching cost for the vendors is relatively high since the industry is currently experiencing a slump.

3.3.3.1 Large Scale Manufacturers

The large size segment has very low reliance on the suppliers. They have outsourced very small number of parts. Because of the low reliance and wide variety of suppliers available they have

low switching costs. They can switch to a number of players and their high volumes will give them greater bargaining power. They also supply the designs of the products, which further lowers the switching costs for them. However, on the other hand the risk for the supplier loosing a big player is high because replacing the volumes lost will be difficult. The number of large size players is small thereby increasing the switching costs for vendors.

3.3.3.2 Medium Scale Manufacturers

The medium size segment have greater reliance on the vendors products but here again the availability of 10-20 alternatives available for each part and since the manufacturers make no contribution towards development of the vendors therefore the medium size manufacturers have very low switching cost. On contrary the switching cost for the vendors is high because of the trust and confidence developed which is necessary in case of credit sales. This blocked working capital is also one of the reasons which increases the switching cost for the vendors.

3.3.3.3 Small Scale Manufacturers

The players in this segment of the industry have greatest dependence on the vendors, as they are the ones who have out sourced majority of the parts, production processes is limited to assembling. Due to supply demand gap have low switching costs. Whereas from the perspective of the supplier with existing over capacity they are not in a position to loose customers and also in order to recover the blocked cash they have higher switching costs as compared to the manufacturer sides.

3.3.4 Suppliers Threat Of Forward Integration

Overall threat of the vendors integrating forward is low. The reason being that the vendor industry is very fragmented. Vendors exclusively manufacture individual part of the fans. For example the vendor of fan guards has facility specially designed to manufacture fan guards. Due to little experience of manufacturing vendors have limited prospects regarding integration.

3.3.4.1 Large Scale Manufacturers

There are no chances of the existing vendors integrating forward and coming in competition with the big players, which already have captured a big share of the market. The reason that the threat

of forward integration from the vendors is non-existent is high barriers to entry. The barriers to their entry include technology, high capital investments and managerial skills and infrastructure.

3.3.4.2 Medium Scale Manufacturers

In the case of medium scale segment also the investments in the case of production facility are high and the vendors here also lack financial resources and technical knowledge, which raises the barriers to entry for them.

3.3.4.3 Small Scale Manufacturers

The small scale manufacturers face a threat of forward integration from well-established vendors. The reason being that the barriers to entry and exit in this segment of the industry are very low. They have installed 2-3 second hand general-purpose lathe machines and are producing very low volumes. Another reason for the low barriers as their machinery is housed in the rental facilities, which can be easily, is acquired. During the survey of the industry two three such examples were seen. The names are Alcon Fans, which were initially making fan guards and now are producing fans.

3.3.5 Industry Threat Of Backward Integration

Different segment of the industry exhibit varying degree of vertical integration. Analysis of the threat of backward integration is as follows:

3.3.5.1 Large Scale Manufacturers

The large scale manufacturers already have high degree of vertical integration. The are out sourcing metal parts which have very low impact on the quality of their finished product. Threat of further vertical integration is very low from their side. It is expected that with the development of the plastic and metal parts vendors, the bigger players will out source higher volumes to the suppliers. This idea they have bought from the Korean and Thai markets where the fan manufacturers are only the assembling and are enjoying economies of scale, which reduces their cost of manufacturing.

3.3.5.2 Medium Scale Manufacturers

The players in this segment follow the big players. Presently they do not have financial resources to vertical integrate but they intent to increase in house operation so as to have more control over the product quality.

3.3.5.3 Small Scale Manufacturers

The players in this segment have very low volumes. The have outsourced all parts of the fan. They neither have financial resources nor the sale volumes to justify the backward integration. Hence they pose no threat of vertical integration from small size manufacturers. This strategy allows them to realize low cost also want to keep there stakes low due to the threat of bigger player entering into the lower segment of the market as they have previously entered into the medium segment market.

3.4 Bargaining Powers Of Buyers

The bargaining power of the buyers in the industry is unfavorable and it increases as we go down the segments i.e. from large scale manufacturers to small scale manufacturers. The factors, which influence this bargaining power within the three segments, are as follows.

3.4.1 Number Of Important Buyers

The numbers of dealers employed by various segments of the fan industry are given in the following table. Since the number of influential distributors are limited therefore the fan manufacturers are highly dependent on them to push their products.

TABLE 4 DISTRIBUTION CHANNEL

	LARGE SCALE MANUFACTURERS		MEDIUM SCALE MANUFACTURERS		SMALL SCALE MANUFACTURERS	
	URBAN	RURAL	URBAN	RURAL	URBAN	RURAL
DISTRIBUTORS	2 - 3	-	-	-	-	-
DEALERS/RETAILERS	> 50	10 – 15	40 – 50	10 – 15	1 – 5	10 – 15

SOURCE: INDUSTRIAL SURVEY

3.4.1.1 Large Scale Manufacture

Since the large scale manufactures have developed brand equity for their products through heavy advertising and promotional activities. Investment in brand awareness results in consumers demanding their products from the distributors. Since distributors play little role in generating demand for their products therefore their power over the manufacturers is limited

3.4.1.2 Medium And Small Scale manufacturer

End consumers have little awareness regarding the products of these segments. They rely on the distributors to push their products. Due to this important role played by the distributors to generate demand, the medium and small scale manufacture are relatively less powerful.

3.4.2 Availability Of Substitutes

The bargaining power of distributors is enhanced by the fact that their experience and network developed to push fan can easily be used to distribute any other similar electrical appliances. Also the location of the distributors is such that they have access to the electrical appliance thereby increasing alternative to fans.

3.4.3 Buyer's Switching Costs

Distributors' switching costs varies across the three segments of manufacturers. Large scale manufacturers are indispensable since there are few substitutes for their products. But for the other two segments the switching cost is very low.

3.4.3.1 Large Scale Manufacturers

Since there are only 8 firms in this segment is limited to only 8; therefore distributors have limited access to high quality fans. The only other substitutes available to buyers are the imported fans. However, due to high prices imported fans are not much in demand. Furthermore, as these players are actively engaged in advertising, they have the highest level of awareness amongst the consumers. Therefore, retailers/dealers use leading brands as traffic builders. These factors contribute to lower bargaining power of the buyers when dealing with large scale manufacturers.

3.4.3.2 Medium And Small Scale Manufacturers

There are a large numbers of firms in these two segments, manufacturing similar products. Therefore there is little benefit associated with buying from any particular player except association developed due to long ties.

3.4.4 Buyer's Threat Of Backward Integration

There has been little incentive for the buyer to vertically integrate and there has been no example of such practice in the industry in recent decades. The threat of buyer's backward integration is also minimal, as buyers do not have problems in researching the product from the manufacturers at their terms.

3.4.5 Industry Threat Of Forward Integration

Overall, the industry has not tried to integrate forward. There has been recent attempts from players in the middle segment to integrate forward e.g. Beeta Fans is operating a company owned distributorship and repair center in Lahore from past three years and has plans to further open these outlets in major cities of Punjab.

3.5 Availability Of Substitutes

Substitute products not only limit profits in normal times but they also reduce the bonanza an industry can mine in boom times. Substitutes also temper the industry's ability to raise prices and to play at their own. As fans do not have complete substitutes, fan manufacturers in Pakistan are not worried from the competition outside the fan industry. Fans do have substitutes, but these substitutes are not very close to fans, e.g. desert cooler, air conditioners etc.

The threat of substitutes depends on two conditions. Manifestly, the more attractive the price-performance trade-off offered by substitute products, the more firmly the lid is placed on the industry's profit potential. Switching costs from the industry's product to the substitute also modifies the threat of substitutes. In fan industry the switching costs are high, the very first substitute to fans costs almost four times the cost of a fan. Keeping in consideration the state of economy of Pakistan and the purchasing power of the people, we can generalized that switching from fan to its nearest substitute desert coolers, is somewhat difficult and costly. Although there

is a wide difference in the performance of fans and desert coolers, but the question is, A person who can hardly afford an electric fan, would he be willing to invest four times to go for a high performance substitute of a fan?

The other product, which is considered to be a substitute of fan, is air conditioner. Similarly to desert coolers the switching cost from fan to air conditioner is very high, which is almost twenty times the cost of fan. Another major problem with this substitute is the running cost, in the shape of electricity bill. Rapidly rising energy prices in Pakistan, keep on discouraging people to utilize electricity. Currently, the electricity prices are not affordable for middle and lower middle class population, which is the major target market for fans.

Fan industry does have a threat from desert coolers but very little, whereas the air conditioner industry is not a big problem for fan manufacturers. Because, the lowering purchasing power and the declining per capita income do not allow customers to switch from fans to air conditioners. So in our view, fans do have substitutes but here in Pakistan these substitutes are not a potential threat to fan industry.

3.6 Conclusion

The detail analysis of the fan manufacturers has shown that presently the fan industry is pretty unattractive for new entrants. The reasons for unattractiveness of the fan industry are: 1) Industry rivalry is high contributing to low profitability of the manufacturers because of declining demand as a result of reduced purchasing power of the consumer, low switching costs, low product differentiation. 2) The barriers to entry are low caused by low economies of scale, as only large-scale manufacturers are able to enjoy high economies of scale, low capital requirement as second hand machinery is available at half the rates. 3) Threat of substitutes is low, as the only viable substitutes are imported fans, which are discouraged by high import duties. 4) Buyer bargaining power is moderately high mainly because of weak implementation of law regarding claim of credit. 5) The supplier power is low as the vendor industry is fragmented and over ridden with idle capacity.

.

4 Porter's Analysis Of Vendors

The overall vendor industry has been analyzed using Michael E. Porter five forces model. The detail analysis and findings of the vendor industry are given as follows:

4.1 Entry Barriers

Though investments in machinery, raw material (as mostly supplied by the manufacturer) and labor are minimal, which makes the industry lucrative; the excess capacity prevalent in the industry and developed relationships between the buyers and sellers, make it difficult for the new entrants. The existence of *"baradari"* circles also adds to entry barriers. Furthermore, as the industry is highly concentrated around Gujrat and Gujaranwala cities there is little chance and opportunity for entrepreneurs from other cities to enter into this market. The details about he other factors contributing to entry barriers are explained as follows:

4.1.1 Economies Of Scale

There are insignificant economies of scale amongst the vendors of the industry. Vendors in the industry have been able to achieve to some extent economies of scale; however, they have not been able to successfully exploit this opportunity. The reasons for not being able to do this are as follows;

4.1.2 Sales Tax Rule And Its Impact

The vendors in the industry fall into fixed sales tax bracket i.e. the sales tax is charged on the basis of numbers of lathe machines employed in the firm. The structure of taxation is given in the Table 5

TABLE 5 SALES TAX STRUCTURE

S. NO.	CATEGORY OF FACTORIES	LIABILITIES OF SALES TAX PER ANNUM
1	NOT MORE THAN 4 LATHES	RS.13,500 PER LATHE.
2	5 TO 7 LATHES	Rs.54,500 for the first 4 lathes plus Rs.27,000 per additional lathe.
3	8 TO 10 LATHES	Rs.135,000 for the first 7 lathes plus Rs.40,500 per additional lathe.
4	11 TO 15 LATHES	Rs.256,500 for the first 10 lathes plus Rs.67,500 per additional lathe.
5	ABOVE 15 LATHES	Rs.594,000 for the first 15 lathes plus Rs.108,000 per additional lathe.

Source: Industrial survey and PEFMA

This has led to the practice of not having a certain number of machines under the same shed, usually not greater than 4. This also has been the reason for greater fragmentation within the industry and not encouraging consolidation.

However, the practice common amongst vendors is to achieve economies of scale by the phenomenon known as "pseudo consolidation". When demand increases the current capability of the vendor. He waits to a point where it is feasible for him to set up another firm having a minimum number of machines which cares for his increase in demand. The control of this set up is either maintained by him or delegated to his next of kin.

Under this practice the benefits achieved by the vendors are as follows:

4.1.2.1 Greater Control Over The Business

As the control of the firm remains within the family, the owners have more control over the utilization of resources across the firms.

4.1.2.2 Increased Purchasing Power

Purchasing of the raw material, wherever the raw material is common; is central. Which enables the firm in exercising influence over their suppliers.

However, as mentioned above the benefits of economies of scale are not materialized completely by the vendor. The areas in which the current practices are not letting the vendors use benefits completely are as follows:

4.1.2.3 Increase In Overhead Costs

By establishing separate facilities for expansion, vendors are incurring unnecessary over heads in the shape of rents and maintenance of another facility. These costs could have been easily avoided by expanding under the same facilities.

4.1.2.4 Forgone Revenues

As vendors wait for the demand to increase to that extent where they can cover the expenses of a separate facility, they loose out on the revenues which could have been achieved by expanding the capacity by one or two machines.

4.1.2.5 Lesser Benefits Of Learning Curve

Though there are certain benefits along the learning curve because of the experience of the owners in the same industry. However, as the information sharing is not greatly facilitated because of the physical separation between the firms, the benefits are not fully utilized.

4.1.3 Proprietary Product Differentiation

Vendors have been not been able to achieve high proprietary product differentiation because of the following reasons:

4.1.3.1 Lesser Technological Innovations

Over the years the fan industry has been dominated by the use metals (metal sheet, aluminum and other metals) as their components. This processes employed in manufacturing operations amongst the vendors are much simpler and employ general-purpose machinery (e.g. lathe machines) that do not offer much improvement in the processes. Therefore, there has been less technological innovations amongst the vendors.

However, with increasing demand of plastic fans in the urban areas there has been also increasing numbers of vendors providing plastic parts to the industry. However, the expertise and machinery required to be the supplier of plastic parts is completely different from the metal parts suppliers and thus there has been little evidence of diversification amongst the establish suppliers. As there is considerable capital investment required for plastic molding operations, the new vendors which are dealing in plastic parts are those who already have some roots in the plastic industry. Furthermore, the demand plastic body fans have not yet reached that level as to attract attention of many players. Another factor inhibiting the growth of this segment is the development of in house plastic injection molding capabilities by the major players in the industry (e.g. Pak Fans).

4.1.3.2 Specifications Of Products Supplied By The Buyer

Since the buyer supplies the specifications of the product, which also imparts greater bargaining power over the supplier; there has been less initiative and flexibility on the part of supplier to improve on the product's specifications.

4.1.4 Brand Identity

There is low brand identity in this segment of the industry. The reasons for this are as follows:

4.1.4.1 Low Capacity Of Individual Vendors

Low capacity of individual vendors has caused higher fragmentation within this segment. The reason of low capacity is the restricted financial resources, which also restrict their ability to develop brand identity.

4.1.4.2 Lesser Product Differentiation

Similarly, lesser latitude in innovations in product or process lends lesser bargaining power in the hands of vendors. This incapability of the vendors in product designing and development limits product differentiation, which constraint them from product branding.

4.1.4.3 Willingness To Pay

Because of simplicity in the product and process, and some control over the raw material supply by the buyers; there is lesser degree of contribution from the vendors towards ensuring quality of the product. Thus, the quality demanded by the buyer is catered easily by market, leaving lesser control in the hands of vendors to distinguish their product and create brand identity. The factors on which brand identity can be maintained by the vendors in this situation is by the service and delivery commitments. But because of greater fragmentation win the segment and low capacity of individuals does not allow capitalizing on these factors.

4.1.5 Switching Costs

Switching costs in the vendor segment of fan industry are high because of the following reasons:

4.1.5.1 Capital Requirements

Low capital requirements in the industry are attributed to the following characteristics:

4.1.5.1.1 Machinery

The machines employed in the operations are mostly cheap second hand or locally manufactured (about Rs. 40,000 to 60,000 per lathe machine).As the operations are also on smaller scale,

further reducing the capital requirements. Also as the technology employed in the operations has been stable over the years, there is little threat of obsolescence.

However, the requirements for the plastic vendors are different where the investment in the machinery is considerably higher (upto Rs. 500,000)

4.1.5.1.2 Raw Material

The general practice in the industry is that buyers provide vendors with the raw material and buy the finished product at a pre fixed piece rate.

4.1.5.2 Access To Distribution

As there is excess capacity and choices available to buyers are greater, many of the main buyers have long relationships with their suppliers. Though there are no formal contracts between the vendors and buyers, most of the big buyers are tied up with their existing vendors. This reduces new business prospects. The other factors contributing to difficulty in accessing distribution are lesser product differentiation and failure to create brand identity.

In case of plastic parts manufactures, the scenario is slightly better as there are not many players yet catering in this segment of the industry for the fan industry. However, the market size of plastic fans as yet does not offer much incentive. The potential export market and growing urban demand of the product can provide incentive for this segment.

4.1.6 Absolute Cost Advantage

The nature of equipment and processes employed in the operation provide with the absolute cost advantage to vendors.

4.1.7 Government Policies

The current government policy as to implementation of sales tax, does contribute to obstruction of consolidation and fully benefiting from consolidation and economies of scale as mentioned earlier. The practice though easy to execute, a study has to be conducted in establishing whether its losses outweigh its benefits.

4.1.8 Expected Retaliation

Because of higher fragmentation, lower bargaining power and absence of a platform, vendors are not able to present and defend their point of view. This further reduces their bargaining power.

4.2 Industrial Rivalry

Industry rivalry is high in case of vendor industry. The industry rivalry is high because declining industry growth because of recession in the fan industry and economy as a whole. The other factors contributing to high industry rivalry are low brand identity, low product differentiation and high degree of fragmentation. The detail of the factors contributing to the high industry rivalry are elaborated as follows:

4.2.1 Industry Growth

The demand of the spare parts depends on the growth of the fan industry. As highlighted by the manufacturers the growth in industry or demand of the fan depends on the following factors:

- Rural electrification plans
- Construction of house holds/offices in public as well as private segment
- Cash crops

In past few years the industry has been growing at the rate of 15%. But now with increase in construction costs and reduced budget spending on construction of household and offices will result in the decline of the fan industry growth. As the industry will experience lower growth the impact will be transferred to the growth of the vendor industry.

4.2.2 Fixed Costs/Value Added

The vendor operations are labor intensive and require low capital investment. The initial investment required for starting up average size vendor operations is between Rs. 500,000 to 100,000. The reasons for low capital investment are use of second hand local machinery by the vendors and low investment in factory building, as the facilities are rented.

4.2.3 Over-Capacity

Due to over optimism about the growth estimates of the industry in the early stages (1960s to 1970s), the vendor segment of the industry mushroomed. But, the demand estimates did not materialize, hence it left vendors with excessive capacity.

As the technology employed by the vendors over the years has not undergone major changes, therefore the natural process of weeding out did not occur. In addition to low barriers to entry, the older players continued to operate and new entrants continued to enter in the segment.

In addition to the above mention reasons the trend of vertical integration among the large-scale manufacturers and the closing down of the medium-scale segment has also contributed to this over capacity situation in the vendor industry.

4.2.4 Product Differences

There is little product differentiation along the vendors of the fan industry. The reasons that can be attributed to this includes, little technological innovation, vendors' inability to contribute in the product design or process design; as the specifications of the product are provided by the buyers.

The only differentiation is related to minimum customization regarding the shape of certain parts as to the specification of the individual fan manufactures.

4.2.5 Brand Identity

The products supplied by vendors are not branded. One reason for low brand identity is the vendor's inability of designing and product differentiation. Another reason for not branding the product is that manufacturers fulfill their demand from a number of vendors to reduce their dependency on one supplier and hence promoting all those as different brands is not feasible. However because of the reliability and quality certain manufacturers have developed their firms as the quality supplier in the industry and are known by their name. But the brand identity is low as the brand repute is limited to the manufacturer..

4.2.6 Switching Costs

The vendors industry is currently experiencing acute capacity problems. As a consequence of this excess capacity, changing customers is not very easy. Since the competition among vendors for supplying parts is very intense, leaving vendors with little choice regarding customers.

The vendors also have to invest in dies specifically designed for fan manufacturers. This investment also adds to the switching cost of the vendors, as the die change with the change in design, which is obvious if you change the manufacturer. The cost for dies range from Rs.10,000 to Rs 20,000.

In addition to this vendors provide over 30-day credit to the fan manufacturers. This requires that the vendor to have knowledge regarding the credibility of the manufacturers. And since they have limited skills to analyze the payment capability of the customers, therefore they rely on reputation and long term relations.

4.2.7 Concentration And Balances

The vendor industry is highly fragmented. The reason for high degree of fragmentation is low barriers to entry, low capital requirement and the initial boom in the fan industry, which made this business attractive for small entrepreneurs. Another reason for fragmentation is the low financial resources of the players and lack of support on the manufacturers part. The trend of vertical integration in order to gain more control has also contributed to the fragmentation of the vendor industry.

4.2.8 Informational Complexity

The flow of information regarding the technology and processes is available to all the players. The reason for this information flow efficiency is the contract labor, which is temporary, has high turn over and can be switched between different vendors. The other reason attributing this information efficiency is that all these vendors are located in the same area. Mostly the machinery used in their processes is the general-purpose local machinery and there is an easy access to this process technology. It is run of a mill kind of thing and no high-tech idea involved in this business, which reduces the information complexity.

4.2.9 Diversity Of Competitors

In the industry there are some indications of both vertical and horizontal integration by the vendors. Some of the established vendors have endeavored into fan assembling, however, the number of successful integration are few. Similarly, established vendors have backward integrated into the operations like wire sizing that is used in the manufacturing of fan guards. This has kept their focus and stakes with the fan industry. Hence, diversity of competitors is low.

4.2.10 Exit Barriers

The machinery employed in the vendor industry is mainly general purpose (Lathe machines, wire cutting, spot welding etc.). Due to the nature of machinery the vendor can easily dispose the machinery or utilize it to serve clients in other industries.

However, since most of the vendors have extended credit to fan manufactures. Therefore this investment serves as hindrance for the vendors to exit the industry.

4.3 Buyers Bargaining Power

In the industry the bargaining power is in favor of buyers. The reason for higher buyer bargaining power is that there is high number of vendors catering to the needs of highly concentrated industry. High Buyer volumes as the proportion of the total vendor's output and lower buyer switching costs because of a number of choices available contributes to the higher buyer bargaining power.

4.3.1 *Concentration*

The industry is dominated by the 5 fan-manufacturing firms, which represent 50% of the fans in the country. As a consequence of this fragmentation they have little bargaining power over the fan manufacturers. Exacerbating this power balance is the fact that five players dominate the fan industry. Hence, suppliers/vendors, which are fragmented have to negotiate with the buyers who are more concentrated. Buyer volume

In the industry 80 – 20 rule holds, as 30% of the buyers purchase 70% of a vendors output, which further enhance the balance of power in favor of the buyers. the leading firms sometimes account for the entire production of vendors. Therefore the vendors depend entirely on one

customer for its sales. This dependence is like a double edge sword. If the vendor and buyers have cordial relationship then the manufacturer will take the initiative to improve the capabilities of the vendors. But in case of hands of relationship manufacturer will take little initiative to develop vendors. However, during the survey it has been found that the advancement in technology has been done in house by the larger firms. A case that can be sighted is the use of computer numeric controlled machines by Pak Fans, this technology is not being extended to vendors.

4.3.2 Switching Cost

Due to the greater number of choices of vendors available to manufacturers and their low involvement in the development of their operations, their reliance on vendors is minimal. In the sense that they are a number of substitute suppliers available, which will be willing to provide them their needs, leaving them with greater latitude in their switching their vendors.

4.3.3 Buyer's Information

The vendor industry is developed around the close vicinity of the manufacturers, hence there are no barriers for dissemination of information between the manufacturer and vendors. . There are no formal written long-term supply contracts, however, the average duration a vendor has been supplying a particular industry is 8 years in case of large scale manufacturers; 5 years in case of medium scale manufacturers and 2.5 years in case of small scale manufacturers. The detailed information regarding their location can be acquired from the Pakistan Electric Fan Manufacturer Association. However, the information regarding their designs and demand of different products can be easily available from the manufacturer in case of large size manufacturers. In case of medium and small size manufacturers the demands for the out source products are not scheduled. They are pretty much demand driven and no formal forecasting or advance ordering is done by the medium and lower segment of the industry.

TABLE 6 AVERAGE NUMBER OF YEARS FOR THE VENDORS

MANUFACTURER	NUMBER OF YEARS
LARGE SCALE MANUFACTURER	MORE THAN 1O YRS
MEDIUM SCALE MANUFACTURER	6 YRS
SMALL SCALE MANUFACTURER	LESS THAN 5 YRS

SOURCES: INDUSTRIAL SURVEY

4.3.4 Backward Integration

They just have a strategy to produce low quality, low cost product catering to the demand of the lower segment. As they perform very subjective quality test they don't want to enter into the hassle of in-house manufacturing of the spare parts, which will give them control over product quality. The reasons for not having vertical integration include: 1) Low- volumes do not justify investment into machinery. 2) Advantage of vertical integration is reliability in terms of timely delivery and reduced dependability. This advantage is also lost as the vendors offer timely delivery because they have been developed in close vicinity of the manufacturers. The high dependence is also reduced as a number of vendors are available for each part. Hence, manufacturers can reduce their reliance on single vendor by distributing orders among a number of suppliers. 3) The other reason that will not allow this industry to have vertical integration, is the heavy investment in terms of working capital, which at this moment is being shared between the suppliers and manufacturers. According to one of the manufacturers if somebody starts 100% in house manufacturing then the investments just in working capital will be in the proximity of 10 million. It has been a practice in the industry that a large scale manufacturer introduces the technology, however, as the knowledge of the technology grew within the industry, the technology was transferred to the vendors. The example sighted in the industry is spot welding, which was introduced by GFC fan for guard manufacturing and later the technology was adopted by the vendor industry. However, this practice has been significantly reduced, as the bigger players who have the muscle to develop vendors do not want to share their technological edge with medium and small segment of the industry.

4.3.5 Substitute Products

The only substitute available to buyers currently is to import the spare parts provided by the vendors. But this option is not very feasible due to the heavy duties imposed by the government on imported spare parts. This indispensable position commanded by the vendor will not continue for long as the demand for plastic fans is increasing especially in the urban areas and the fan manufactures are increasing their production of plastic fans to meet the changing demand. The existing vendors do not posses the capability to cater for this upcoming threat posed by the changing trends. This threat will weed out the metal spare parts vendors and replace them with the plastic spare parts vendors. Plastic injection molding facilities already exist in Gujranwala and Gujrat, therefore this threat will serve as an opportunity for this group.

4.3.6 Price/Total Purchases

The buyers in the industry are relatively more powerful than the vendors, hence, the prices in the industry are controlled by them. The rates seldom vary among the suppliers of the product. However, recognition to quality, reliability and long term relationships are considered while negotiating prices. Since the difference in the quality gap of the products produced by the traditional vendors (i.e. dealing in metal parts) is not wide, the opportunity to charge premium for their products is not much. The characteristic, which is given the most importance by the manufacturers, is the trust, which stems from long standing business relationship with a particular vendor. When studied further one reason which came out clearly was that, the raw material to some of the vendors is provided by the particular manufacturer (This has already been mentioned that large and some medium manufacturers provide most of their vendors with raw material). The raw material includes materials like hollow steel pipes for manufacturing of stalk for pedestal, electric sheet, metal sheet or drum sheet for the manufacturing of fan blades. Manufacturers want to sure that the material provided by them will be properly utilized and they will get what they have invested in. the supply of raw material is also among the reasons of lower bargaining power.

4.3.7 Impact On Quality

Although vendor supply more than 60% (on average) of the parts to the fan manufacturers, but the nature of the parts are such that they have little impact on the quality of the end product. Only fan blades can be categorized as the most critical part but even here the impact is minimal because the final shape is given at the in-house facility of the manufactures. This process determines the performance of the fan and by bringing this process in-house the manufactures have increased their bargaining power. But this is true only for the large manufacturers.

Also the manufacturers have in-house facilities for painting of the spare parts. This further reduces the reliance of the manufactures, since they control the final appearance of the fan.

4.3.8 Brand Identity

Fan industry can be segmented into two categories. One the large and medium-scale segment and the second are the small-scale segment. The large and medium-scale segment is catering to the more quality conscious consumer. While the small-scale segment assemble products, which are low quality and low price. The leading manufacturers have invested in developing their brands of fan through advertising and promotion, which give them edge over smaller players competing on price. This lack of brand recognition on part of the consumer forces the manufactures to compete on the bases of price. This pressure on prices of fan result in manufactures patronizing low cost vendors.

4.3.9 Buyer Profit

The manufactures catering to the high end command a 20% profit margin on the average, whereas the margins of low quality fan manufacturers is around 10%. The pressure on fan prices has increased over the years due to the decrease in the buying power of the consumer and more low priced fans are being introduced. As a consequence increasing the price sensitivity of the end consumer. Low profitability of buyers has resulted in increasing their cost consciousness, which translates into pressure on the vendor to reduce the prices of the spare parts. The reason for the downward pressure on the buyer profit is the increasing number of brands. This increased competition has resulted into the price wars and increased cost consciousness. It was also

highlighted that the reduced buying power of the end consumer has resulted in the price sensitivity of this market.

4.4 Substitution Threat

The trend toward increasing usage of plastic fans is an imminent threat to the existing vendors. Since their production capabilities cannot cater to this changing trend of the industry. The only way these vendors can retain their customers is to invest in new machinery for plastic injection molding. In addition to this new machinery, vendors will have to replace existing labor with people familiar to new processes.

Also the competition will intensify among vendors since the bigger players have the in-house capacity for plastic injection molding, which are the major players going into the plastic fans. The above mentioned reasons raises the switching cost for the vendors

4.4.1 Relative Price Performance Of Substitutes

Imports of spare parts from abroad is the only available substitute to fan manufactures. Although this option is satisfactory on the dimension of performance but infeasible when evaluated on the basis of price. This is due to the fact that heavy import duties are imposed on the import of spare parts. The. government in it's attempts to curb imports and facilitate the development of home industry has reduced the available options to the fan manufactures.

Other than imported spare parts, the manufacturers can also increase the production of plastic fans. This will be no less than a revolution for the industry since this will mean that exist capabilities of the industry will transformed to meet the new needs. Substituting plastic for metal are competitive on the bases of price but the performance of plastic fan will not suit our climatic condition. Hence due to these constraint manufacturers are unable to substitute plastic for metal.

4.4.2 Switching Costs

As discussed above the switching costs for the buyers are low, which gives them more bargaining power. This is because of the demand supply gap that translates into more number of buyers (Fan manufacturers) in the market as compared to the number of sellers (Vendors). This demand supply gap offers a number of choices to each manufacturer for each part supplied. This

presents a high substitution threat for the vendors. The other threat of substitution is the changing trends towards the plastic body fans. As the present vendor industry does not have capability to produce plastic body parts.

4.4.3 Buyers Propensity To Substitute

The manufactures of fan are under increasing pressure to introduce plastic fans because the Chinese plastic fans are eating market share of the local manufactures. Due to the threat of being wiped out of the market the local manufactures have responded by introducing plastic fan in the local market. This has been able to stop the Chinese products from making inroads in the local market.

In addition to defend local market share, introduction of plastic fans will also help in exporting. Since the foreign customers demand plastic fans.

4.5 Conclusion

The detail analysis of the vendors of fan manufacturers has highlighted the fact that this industry is unattractive. The important factors contributing to the unattractiveness of the vendor industry includes: 1) high barriers to entry that are high only because of the existence of the "baradari" circle, otherwise the factors like low economies of scale, low capital requirement and low brand identity makes the industry unattractive. 2) high industry rivalry because of low industry growth, lower product differentiation. 3) high threat of substitute from plastic parts. 4) higher bargaining power of the manufacturers as a result of high buyer volumes, industry fragmentation and lower switching cost of the buyers.

5 Strategic Groups In Fan Industry

Strategic groups comprises business units or firms that pursue similar strategies with similar resources. This mapping is useful in better understanding the competitive environment in the industry. A corporation's structure and culture tend to reflect the kinds of strategies it follows , companies belonging to a particular strategic group within the same industry tend to be strong rivals and more similar to each other than to competitors in other strategic groups within the same industry.

5.1 Strategic Groups Based Upon Price And Quality

When firms in the industry are plotted against the variables price and quality, three distinct groups emerge which are representative of the three manufacturing segments in the industry i.e. large scale manufacturers, medium scale manufacturers and small scale manufacturers.

The quality of the fan is depicted in its power consumption, strength of wind blown and level of noise, here consumption by wattage is used as a proxy for quality. The price of 56 inch ceiling fan is considered to be the standard and is used here.

5.1.1 Strategic Group Comprising Large Scale Manufacturers

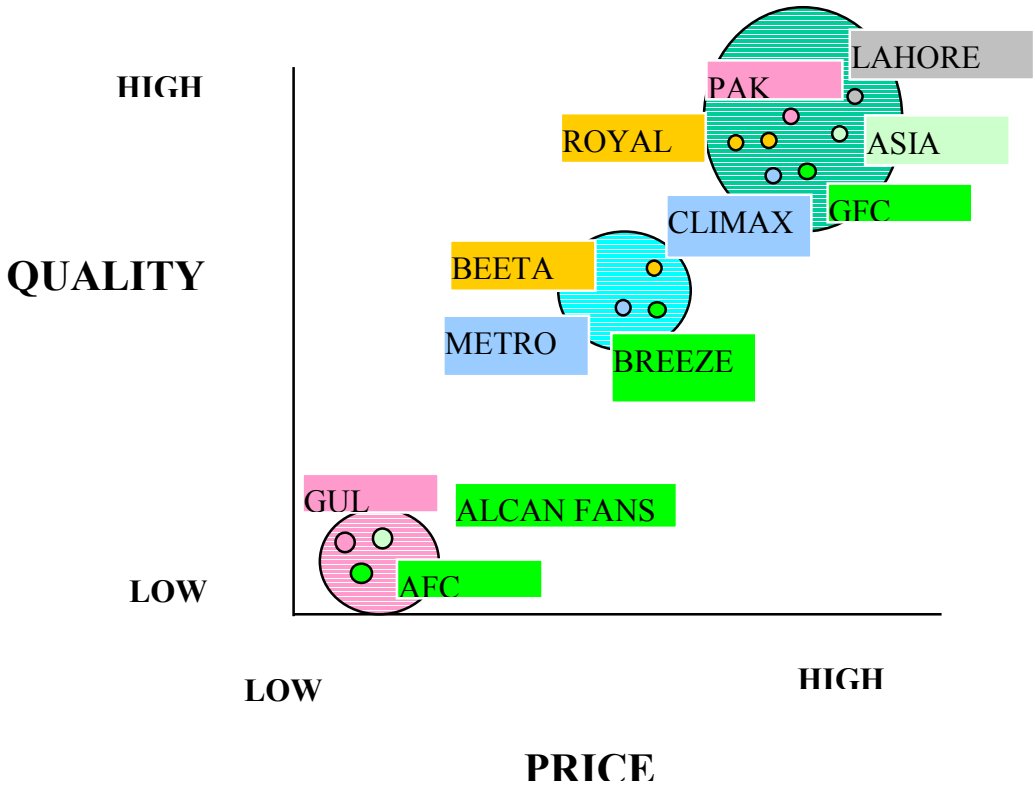
The large scale manufacturers by using high quality raw material (electric sheet and copper wire) are able to reduce the wattage consumption. Furthermore, their better machining and tooling and finishing add to the quality of the fan, for which they charge premium prices. These large scale manufacturers collectively import electric sheet in bulk and are able to get quantity discounts. They used to import electric copper wire but now almost all of them have developed in house facilities for enameling copper wire. The use of ovens in drying of the wet paint is common and the technique employed in painting also varies. The average price of 56 inch ceiling fan by this segment is Rs. 1,800.

5.1.2 Strategic Group Comprising Medium Scale Manufacturers

The medium scale manufacturers have been using electric sheet but due to foreign exchange risks have discontinued the practice as they can not any longer afford the use of it in manufacturing. The quality of machining and tooling in their product is also of lesser quality as compared to the large scale manufacturers. The use of low grade material enables them to sell

FIGURE 6 STRATEGIC GROUPS BASED ON PRICE AND QUALITY

their fan at Rs. 200 to Rs. 300 lesser than the large scale manufacturers. The average price in this



segment is about Rs. 1,500.

5.1.3 Strategic Group Comprising Small Scale Manufacturers

The small scale manufacturers are merely assemblers who purchase almost 90% of their parts from vendors. The only functions, which are done in house, are assembling and painting. The material used are for insulation and winding are of the lowest grade which reduces the over all

quality of the product. The finishing of the product is also done by spray painting and drying it under sun. The average price of similar fan in this segment is Rs. 1,000.

5.1.4 Mobility Barriers

The mobility barriers across this segment are discussed below

5.1.4.1 Technological Capability

The large scale manufacturers are utilizing the better or higher grade machinery within the industry, this includes better lathe machines, computer pneumatic control lathes automatic presses ovens and others. The other two segments have to invest heavily in these areas before they can be pose a challenge to large scale manufacturers. The capital investments of the large scale manufacturers are about Rs. 200 Mio to Rs. 250 Mio. This prohibitive investments reduces the other segment to threat large scale manufacturers.

5.1.4.2 High Brand Equity

Large scale manufacturers have invested heavily in advertising and promotion. They have been successful in creating high brand recognition for their products. Though the middle scale manufacturers have also tried to achieve that, but because of lack of financial resources their efforts have not been as effective.

5.1.4.3 Financial Resources

The lower two segments in the industry lack the financial resources as to enable them with better machines or resourcing of better grade raw material.

5.2 Strategic Groups Based Upon Product Line And Distribution Channel

When the firms in the industry are plotted against the variables mode of distribution and product line; three strategic groups appear. Two of these groups are using the mode of distribution which is the common practice in the industry, whereas, the third group has diverged from the industrial trend in an attempt to benefit from the opportunities in the market.

5.2.1 Strategic Group Using Retailers/Dealers

The firms in this group belong to small scale manufacturers, who have restricted reach and a more regional focus. They directly use retailers or dealers, bypassing the distributors in order to reach the customers, as their volumes do not justify the use of distributors.

5.2.2 Strategic Group Using General Mass Distribution

The firms in this group belong to both large scale manufacturers and medium scale manufacturers. These players are using general (mass) distribution channels, which is the common practice of the industry. The members of this group have little control over the retailer and don't have control over the final prices offered by the retailers.

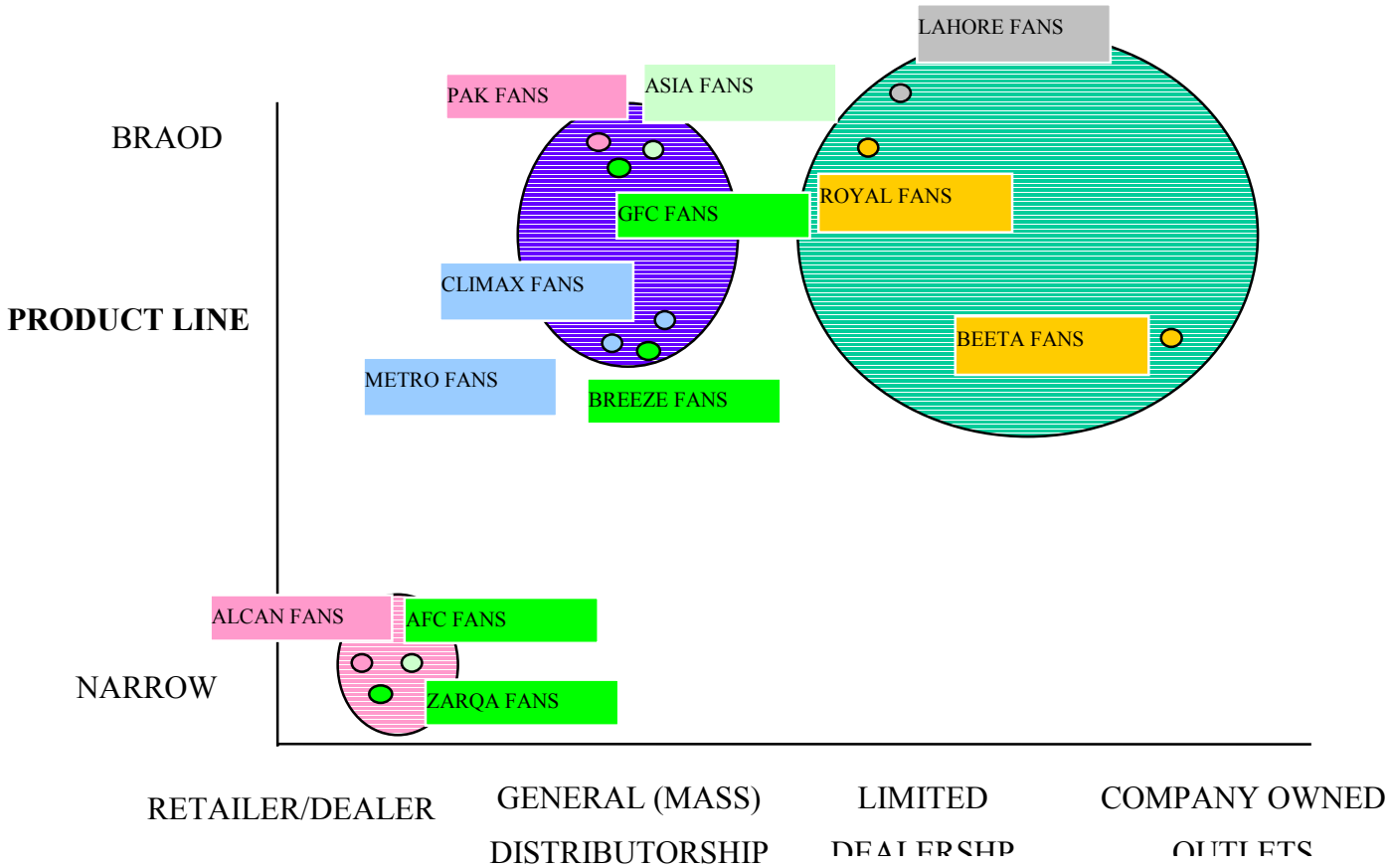
5.2.3 Strategic Group Using Limited Dealership And Company Owned Outlets

The firms in this group have in an attempt to reduce the control of the trade channel over the prices and credit tried to utilize selective dealership (Lahore Fans and Royal Fans) and company owned outlets (Beeta Fans). They belong to both large scale and medium scale manufacturers having medium to broad product line.

The firms in this group have diverted from the normal industrial practices. Lahore fans have opted for limited dealership whereas Beeta Fans have opened company owned outlets and repair centers providing three year free home service to its customers.

Beeta and Lahore Fans have tried to reduce the power of the trade channel and to improve the service to the end customer. A similar attempt in the same direction has been made by Royal fans, which scrutinized their distributors and set tight controls over their dealers in returning of credit and following price policies.

FIGURE 7 STRATEGIC GROUPS BASED ON PRODUCT LINE AND DISTRIBUTION CHANNEL



5.2.4 Mobility Barriers

5.2.4.1.1 VOLUMES

The small scale manufacturers do not have that much of volumes to be able to fully utilize the benefits of distributors. Their volumes justify the use of retailers who pick their required orders from these manufacturers as the demand arises in the season.

5.2.4.1.2 Managerial Capability

Only the management of certain players such as Lahore Fans, Beeta Fans and Royal Fans have tried to take differentiate their services by using alternate trade channels. This strategy is used in attempt to attack the industrial leaders and try to gain market share by distinguishing the product.

5.2.4.1.3 Financial resources

As we move along the use of high level of trade channels the involvement of finances increases, small scale manufacturers do not have that much of financial resources to involve in trade. Whereas the medium scale manufacturers and most of the large scale manufacturers cannot invest in exclusive/limited dealerships of company owned outlets.

However, the industrial players in an attempt to reduce the bargaining power of the trade has to vertically integrate or have more stringent working conditions with traders, by changing the structure of the trade channel.

5.3 Strategic Groups Based On Market Penetration And Product Line

The industry can be grouped into four groups with respect to their penetration in four identified market i.e. rural, regional (urban and provincial), national and international. Strategic groups are discussed below

5.3.1 Strategic Group Comprising Firms With Rural Presence

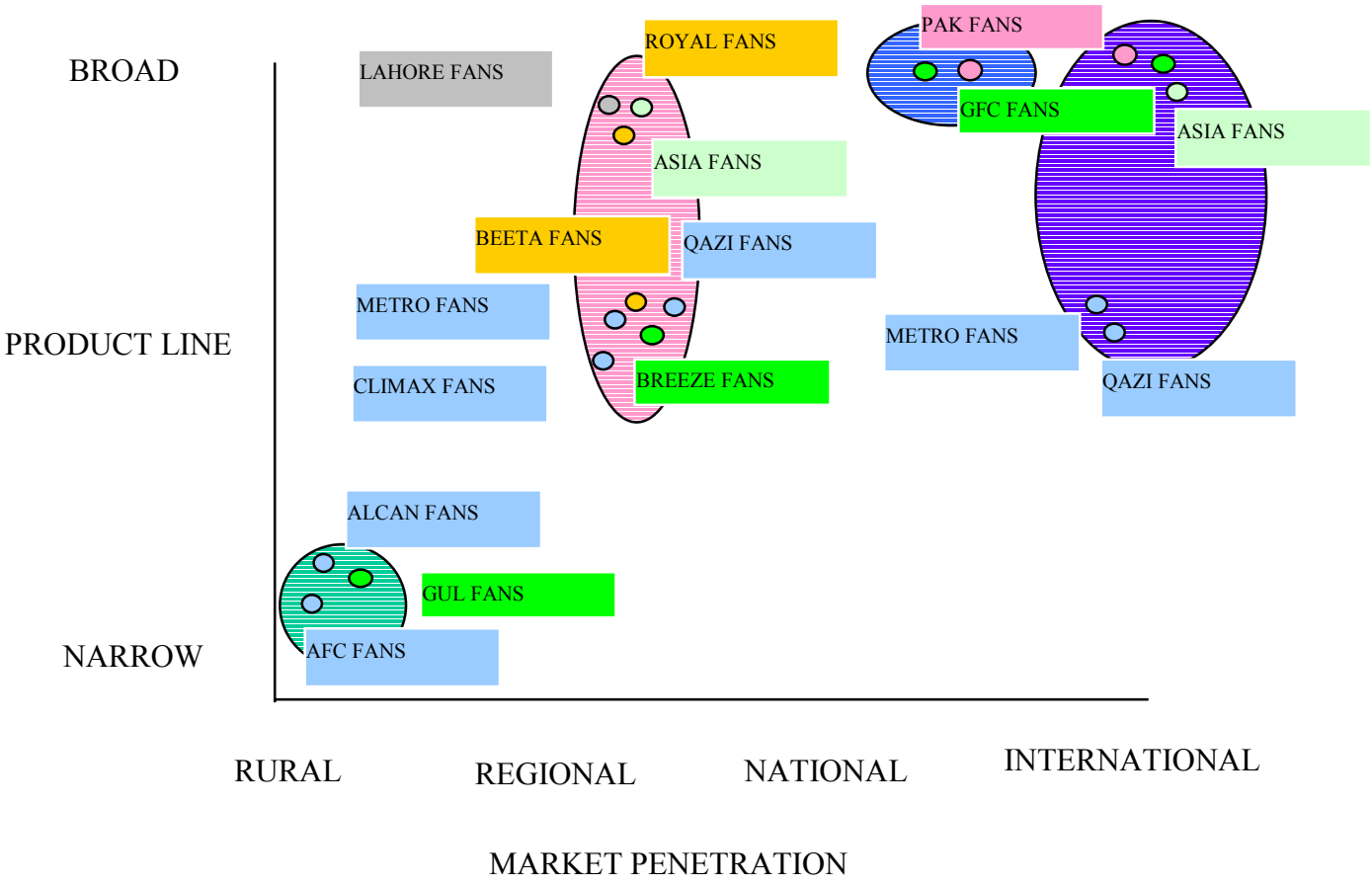
The firms in this group belong to small scale manufacturers, they offer narrow product line mainly comprising of ceiling and pedestal fans. Their marketing operations are restricted to near their facilities or the suburbs around them. They neither have the volumes nor the financial resources to increase their penetration in the market. Thus they sell their product with minimum selling expense in marketing and logistics to the villages around them.

5.3.2 Strategic Group Comprising Firms With Regional Presence

The firms in this segment belongs to both large scale and medium scale manufacturers, the product range of this group differs depending upon to which segment the manufacturers belongs

to. The medium players as compared to large scale manufacturers have more of regional presence. However, they are dominated by the large scale manufacturers in their respective regions. Large scale manufacturers have distributed amongst themselves different regions so as to prevent price wars. The medium scale manufacturers in this segment can pool in their

FIGURE 8 STRATEGIC GROUPS BASED ON MARKET PENETRATION AND PRODUCT LINE.



resources to have more efficient operations in distributions, similarly these players can also collectively import raw material, which can improve their quality. And can help them tap into national and international markets.

5.3.3 Strategic Group Comprising Firms With National Presence

Only some of the large scale manufacturers in the industry has national presence. These players have made high investments in national media promotions and advertising and have high brand

recognition and equity. They are the quality leaders and have ventured into export markets as well. The medium and small scale manufacturers do not have the

resources to have a national presence. Though quality of medium players is comparable to large scale manufacturers but they lack in brand recognition through media spending.

5.3.4 Strategic Group Comprising Firms With International Presence

Within this group there are two sub groups consisting of large scale manufacturers and the of medium scale manufacturers.

Though the large scale manufacturers dominate this segment, the medium scale manufacturers have been able to seize some share in this lucrative market. Though they cannot compete with larger players they feast on the left over orders. Their entrance into this market is a healthy sign and will help them in their survival. There are also chances of collaborative efforts within these players as to prospect international markets by sharing the expenses.

5.3.5 Mobility Barriers

5.3.5.1 Financial Resources

Mobility barriers include availability of financial resources as to enter into higher markets. With small scale manufacturers the entrance into national markets require investments in distribution channel, where as entrance by the medium scale manufacturers into international markets require prospecting for the potential markets.

5.3.5.2 Technological Capability

The technological capability of medium scale manufacturer is enough for them to enter into the current foreign markets available to the fan industry, however, the small scale manufacturers will require heavy investments in machining and product broadening if they want to enter into export markets.

6 SWOT Analysis Of Strategic Groups

6.1 SWOT of Large Scale Manufacturers

6.2 Manufacturing

6.2.1 Strength

6.2.1.1 Technology

The large-scale manufactures had the foresight to invest in technology. Early adoption of better technology has helped them to build competitive advantage. As a consequence of early movers these players have the learned how to incorporate new technologies in their operation.

6.2.1.1.1 VERTICAL INTEGRATION

Also these players have tried to reduce their reliance on vendors for critical parts like enameled copper wire and capacitors by producing them in-house. Although producing in-house has disadvantages in terms of time spend on coordination etc but it ensures quality, which is the key differentiating factor for these players.

6.2.1.1.2 Raw Material

Due to the scale of their operation these players have access to better quality and low cost raw material. The local suppliers offer discounts to the large scale manufacturers. This is practice is prevalent since these player offer steady orders over the year. In addition, they import raw material such as Electric Steel Sheet, which is of better quality than the local ESS.

6.2.1.1.3 Vendor Relations

The large-scale manufacturers have over the years have taken the pains to improve the capabilities of their vendors. These players assist their vendors in the application of new machinery. This practice of transferring technology has helped to develop better relations with the vendors. Consequently the vendors not only supply them with better quality but also low priced parts.

6.2.1.1.4 Quality

The large-scale manufacturing have invested in the quality control department. This department has developed stringent measure to ensure quality of the end product. The investment in quality has helped these players to earn the excellent reputation in the market, which allows them to charge premium prices for their products.

6.2.1.2 Weakness

6.2.1.2.1 High Production Cost

The large-scale manufacturers have higher cost of production. Factor attributing to these costs is usage of imported raw material like ESS, which is far more expensive than metal and drum sheets, which are used by other industry players.

In addition to high cost of material, these players also have higher maintenance costs. These players have invested in machinery, which requires regular maintenance. Not only the plant and machinery require regular maintenance but also for one month there is a complete shutdown of the plant. During this period repair and maintenance is carried out on all the machines.

6.2.1.2.2 Flexibility

Vertical integration is a common characteristic present in all the large-scale manufacturers. This production strategy allows more control over the quality of the production. But this control is achieved at the expense of flexibility. Due to investments in the upstream activities the large-scale manufacturers are at a disadvantage when the environment takes a negative turn and demand for the fan decrease. Also this strategy is very expensive to implement since it has high obsolescence cost. Heavy expenditure has to be incurred to keep abreast with the changing technology.

6.2.1.3 Opportunity

6.2.1.3.1 Technology

Although the players in this segment have the most advanced technology. But compared to the world standard the technology is quite outdated. The operations can be improved further if the

state of the art machinery is utilized. This would help them to lower labor and material content in their cost of production.

6.2.1.3.2 Mass Production

Currently the fans produced using job shop techniques. Since there are limited fan models and little or no customization therefore batch production is ineffective method of producing fan. All the international fan players have assembly line for the production of fans. By adopting mass manufacturing techniques, local players will be able to lower the cost of production, which will increase their competitiveness in the international arena.

6.2.1.4 Threat

6.2.1.4.1 CONSOLIDATION

Most of the strengths of firms belonging to this segment is due to their scale of production. Therefore, consolidation of the small-scale manufacturers into a cooperative like organization is the major threat faced by them. Such an organization will be able to combine scale from economies of large-scale manufacturers and agility to adapt to new market condition of small-scale manufacturers

6.2.1.4.2 Vendor Capability

The large-scale manufacturer vertically integrated in terms of in-house capabilities but they also pursue pseudo-vertical integration by developing their vendors. The execution of this strategy requires high capital outlay. If the current capability of the vendors improves such that there remain no difference between the vendors. In such an environment the strength of the large-scale manufacturers will turn into a weakness, since they will be tied with less efficient vendors.

6.2.2 Marketing

6.2.2.1 Strength

6.2.2.1.1 Broad Product Range

The large-scale manufacturers have a diverse product range. The broad categories of fans include ceiling, bracket, exhaust, table and pedestal. None of the other players of the industry are able to

match their product range. Lack of gaps in the product range serves as an effective defensive strategy.

6.2.2.1.2 Innovative

Over the years the large-scale players have been first to introduce many new types of fans. This ability to introduce new products has been successful deterrent for new entrant. In the early 90's the Chinese introduced plastic table fans which became very popular in the cities. The large-scale manufactures were quick to stop the inroads being made by these Chinese fans by introducing plastic fans under their own brand.

6.2.2.1.3 Branding

The leading players of the fan industry have been able to establish the quality image of their fans by investing in developing brands. Branding allows them to charge premium for their products. This has been achieved through heavy spending in advertising and promotion.

6.2.2.1.4 Distributor Network

Another strength of the large-scale manufacturers is their extensive distribution network. This network facilitates the reach of their fan in the far-flung areas of the country. Also the distributors of the leading players have a strong presence in the market and hence they are in the position to push products better.

6.2.2.1.5 Exports

The major players of the fan industry are exporting about 15% of their total sales. Although exports are not lucrative in terms of margins but the mode of payment is cash which makes this a worthwhile proposition. Also penetration of the international markets has helped to utilize excess capacity of the manufacturers and reduce dependence on the stagnant local markets.

6.2.2.2 Weakness

6.2.2.2.1 Lack Of Control

Distributors select by dealers and manufacturers role in the selection process is bare minimum. Dealers are independent entities, hence manufacturers are able to exert little control over the

activities of the dealers. This lack of control can be harmful if the dealers' activities are inconsistent with the image of the fan being promoted by the manufacturers.

6.2.2.2.2 Low Margin

Margin offered by the large-scale manufacturers to their distributor are by far the lowest in the industry. Low margin can lead to discontent among the distributors and they might be enticed to switch manufacturers by higher margins.

6.2.2.2.3 Feedback

Manufacturers rely on the distributors to provide them on information regarding changing market trends and customer feedback regarding their products. This feedback process is not very effective since it is very time consuming. And the follow up on the complaints is also delayed due to lack of any direct contact with the retailers.

6.2.2.3 Opportunity

6.2.2.3.1 Electricity Prices

Pakistan is faced with the problem of ever increasing prices of electricity. Since fan produced by the large-scale manufactures consumes less electricity therefore increasing prices electricity is an opportunity for them.

6.2.2.3.2 Export

Although large-scale manufacturer have been exporting but as yet the penetration is limited to Bangladesh, U.A.E., Saudi Arabia, South Africa, Iran and Iraq. They can increase their presence in other international markets by developing relations with the trade agencies of other countries.

6.2.2.4 Threat

6.2.2.4.1 Imports

Fans from the neighboring countries like China and India pose the greatest threat to the large-scale manufacturers. The imported fans are of comparable quality but are sold at a lower price due to which they will be able to drive out the large-scale manufactures from the market.

6.2.3 Finance

6.2.3.1 Strength

6.2.3.1.1 Relation With Banks

Over the years large-scale manufacturers have taken debt from the banks to provide for their working capital requirement and letter of credit. The prompt payments by the players have led to development of cordial relationship with the banks. This relationship can assist them in negotiating lower interest rates on their loans.

6.2.3.1.2 Management Control System

The large-scale manufacturers have developed systems to track costs of manufacturing. The cost data cannot be tracked to individual model of the fans. But this system allows them to understand the expenses incurred which leads to efforts by the manufacturers to cost control.

6.2.3.2 Weakness

6.2.3.2.1 Sub-Optimal Capital Structure

The industry players are hesitant to take on debt. They prefer to use equity for expansion of the business. This aversion to use of debt is contrary to optimal capital theory, which endorses combination of debt and equity to fulfill financial needs of the company. As a consequence of excessive use of equity their the cost of capital is very high.

6.2.3.2.2 Rudimentary Tools

The large-scale manufacturers practice rudimentary financial evaluation tools. Lack of sophisticated financial practices can lead to wrong decision while evaluating new proposals.

6.2.3.3 Opportunity

6.2.3.3.1 Capital Market

The growth of the large-scale manufacturers is constraint by limited resources. These players have limited know how to access the capital markets. If they are able to understand the financial intricacies than they will be able to tap the capital markets to finance their growth.

6.2.3.4 Threat

6.2.3.4.1 Stringent Credit Policies

Currently the banks have lax credit policy while lending to large-scale manufacturers. Therefore these players have been able to obtain credit without any formal financial documentation. If the policies become more stringent then it will become difficult to secure loans.

6.2.4 Human Resource

6.2.4.1 Strength

6.2.4.1.1 Skilled Management

It is difficult for the fan manufacturers to solicit applicants to work in Gujrat/Gujranwala. But large-scale manufacturers have been overcome this difficulty by offering competitive compensation. Currently there are few qualified people in middle management level. Skilled management gives them edge over the rest of the industry, as the others do not have resources to offer competitive package and attract the professional managers.

6.2.4.1.2 Labor Relationship

The management of the large-scale manufacturers has long term relationship with the labor contractors. Strong ties with the labor contractor not only allow these players to access to more skilled labor and also help to foster cordial relation

6.2.4.2 Weakness

6.2.4.2.1 Decision Making

These are the family owned businesses with the top management comprised of family members. The family members make most of the decisions without consulting the managers. Due to lack of professional input the decision making process is not very effective.

6.2.4.3 Opportunity

6.2.4.3.1 Consolidate

The large-scale manufactures are using imported machinery and have to invest in initial training of the labor. Now if they consolidate their resources for training and development, this will reduce the cost of training for each player.

6.2.4.3.2 International Presence

In order to boost their exports they need to develop offices in the markets where they are exporting. This will give them feedback about the market needs and customization of the product to these markets.

6.2.4.4 Threat

6.2.4.4.1 Training Institution

Currently the large-scale manufacturers have skills to operate latest technology. With the development of training institute the skill level of the labor will improve as for whole industry. This will eliminate their competitive advantage.

6.3 SWOT Of Medium Scale Manufacturers

6.3.1 Manufacturing

6.3.1.1 Strength

6.3.1.1.1 Indigenous Machinery

Machinery utilized at the medium-scale facilities has been developed indigenously. Local machinery is less expensive compared to imported machinery. Also in case of machine breakdown technical assistance and spare parts for repairs are easily available.

6.3.1.1.2 Raw Material

These players purchase raw material from the local suppliers. Although the quality of the local raw material is inferior as compared to imported raw material. But local sourcing of raw material

allows the small-scale manufacturers to reduce the inventory level since the lead times are shorter.

6.3.1.2 Weakness

6.3.1.2.1 Technology

The medium-scale manufactures have invested in general purpose, labor intensive machinery. Usage of such a technology causes production inefficiencies. Also the rejection rate increase due to higher labor involvement in the production.

6.3.1.2.2 Vertical Integration

Although this segment is relatively less vertically integrated than the large-scale manufacturers. Presently, they are out sourcing only 30% of the parts from the vendors. This production strategy allows them greater control on the quality of the end product but as the volumes do not justify backward integration therefore their cost of production increases.

6.3.1.3 Opportunity

6.3.1.3.1 Vendor Capability

The medium-scale manufacturer have backward integrated since the quality of spare parts provided by the vendors is not of the desired quality. Improvement in the capability of the vendors in terms of the quality of their products will be an opportunity for the small-scale vendors to divest from the downstream activities.

6.3.1.4 Threat

6.3.1.4.1 Consolidation

Most of the strengths of firms belonging to this segment is due to their scale of production. Therefore, consolidation of the small-scale manufacturers into a cooperative like organization is the major threat faced by them. Such an organization will be able to combine scale from economies of large-scale manufacturers and agility to adapt to new market condition of small-scale manufacturers.

6.3.1.4.2 Vendor Relations

Medium-scale manufacturers out source parts from the vendors developed by the large-scale manufacturers. This preference is due to better quality of supplies from these vendors. If the leading players limit the access to these vendors then the medium-scale vendors will be faced with problem of finding quality vendors.

6.3.2 Marketing

6.3.2.1 Strength

6.3.2.1.1 Regional Focus

The medium-scale segment has a narrow geographical focus. The players in Gujaranwala and Gujrat are supplying fans just to Punjab and some parts of N.W.F.P. This is optimal utilization of their limited resources, which if divided across national markets will dilute the effect.

6.3.2.2 Weakness

6.3.2.2.1 Product

The players in the medium-scale segment of the industry have middle of the road kind of strategy. They are neither the low cost nor the high quality producers. This lack of focus makes them susceptible to open competition from both large and small-scale segment.

6.3.2.2.2 Innovation

The medium-scale manufacturers have not taken the initiative of introducing new products. Due to this complaisance they were unable to maintain there product differentiation, which were copied by the small-scale manufacturers. In addition to this they were also unable to carve new market niche.

6.3.2.3 Opportunity

6.3.2.3.1 Exports

Only small numbers of medium-scale manufacturers are currently exporting fans and also the volumes exported are under private brands. In future the development of export markets will

give them opportunity to export their products and use the excess installed capacity. This will reduce their dependence on the local market, which is currently under slum. Moreover their low-cost will give them advantage over the large-scale manufacturers in export market.

6.3.2.4 Threat

6.3.2.4.1 Competition

Recently two of the large-scale manufacturers have moved into low cost, low quality products. If this trend continues then the small-scale manufacturers will be facing intense competition in their market. In this competition they will be at weaker position compare to the large manufacturers because of their deep pockets.

6.3.2.4.2 Forward Integration

Currently there was only one example found regarding the integration of the manufacturers into up stream activities like distribution. If in future there is a trend to move into distribution then their financial resources will not allow them to follow this trend. This will reduce their price advantage.

6.3.3 Finance

6.3.3.1 Strength

6.3.3.1.1 Relation With Bank

These players have had long-standing relation with the local banks. Most of the credit extended to medium-scale manufacturers was for the purpose of financing working capital. Regular payments of the loans have further developed the relationship with the banks. This assists them in negotiating better terms for loan facility.

6.3.3.2 Weakness

6.3.3.2.1 Financial Practices

Lack of sophisticated financial practices is one of the weaknesses of the small-scale manufacturers. Since they are unable to objectively evaluate any investment proposal. Also they are unable to effectively manage working capital i.e. receivables and payables.

6.3.3.2.2 Management Control Systems

The medium-scale manufacturers have not established any management control system. As a consequence of they have only rough estimation regarding the cost of production. Lack of precise cost data leads to difficulty in determining profitability of the various models. Also, these players are unable to price their products, which render them un-competitive in the market.

6.3.3.3 Opportunity

6.3.3.3.1 Subsidized Loan

The medium-scale fan manufacturers will benefit if the government extends subsidized loans in order to develop this industry. These low cost loans will assist the firms to streamline operations.

6.3.3.4 Threat

6.3.3.4.1 Stringent Credit Policy

Currently, these players have been able to obtain loans due to their cordial relation with the banks. If the banks become more stringent regarding credit disbursement than medium-scale manufacturers will find it difficult to obtain loans.

6.3.4 Human Resource

6.3.4.1 Strengths

6.3.4.1.1 Labor Relationship

Over the period the manufacturers have developed close relationship with the labor. This close relationship helped them improve their bargaining power with the labor contractors during contract negotiation.

6.3.4.2 Weaknesses

6.3.4.2.1 Low Wages

The wage rate offered by the medium-scale manufacturers is lower than the large-scale manufacturers. This causes difficulty in attracting skilled labor. Also it causes high turnover of skilled labor.

6.3.4.2.2 Skilled Management

It is difficult for the fan industry to request applicants to work in Gujrat/Gujaranwala. However, the large players to some extent solve this problem by offering attractive compensation package. But the inadequacy of the medium segment has restricted them from gaining management proficiency.

6.3.4.2.3 Lack Of Supervision

The medium-scale segments have no middle management. They are completely controlled by an individual. This causes lack of supervision and ineffective decision making.

6.3.4.3 Opportunities

6.3.4.3.1 Training Institute

There is an extensive need for a training institute for the fan industry. The present institute has very old technology and very basic kind of training is provided. If in future the government build a training institute for the fan industry, it will increase the supply of skilled labor. This will improve the skill level of the medium-scale segment.

6.3.4.4 Threats

6.3.4.4.1 Shifting Of Technical Labor Employed On Contract

If the industry does not remain lucrative enough for the labor force, these medium players will have difficulty in hiring people in contract. It can happen if the cities in which they are located become hub of other lucrative industries.

6.4 SWOT Small-Scale Manufacturer

6.4.1 Manufacturing

6.4.1.1 Strength

6.4.1.1.1 Low-Cost

The small-scale manufacturers are catering to the low quality, low-cost segment of the market. Their operations are labor intensive and because of cheap their cost of production is low. Another reason for low cost of production is the purchase of local raw material. Because of limited operations and availability of rental facilities their fixed manufacturing overheads are also low, which further reduces their production costs.

6.4.1.1.2 Flexibility

The firms in the small-scale segment of the industry are basically the assembly units. The major portions of their operations are out source. This high degree of outsourcing gives them greater volume flexibility. As they are just the assemblers they can quickly respond to the changing demands of different type of products.

6.4.1.1.3 Lead Time

The small-scale manufacturers use local raw material, which reduces the lead-time for raw material purchase. This reduces their response time to the changing demands. As the lead times are low they do not have to have high inventory levels, which reduces their inventory holding costs.

6.4.1.1.4 Capital Outlay

The manufacturing operations of the small-scale manufacturers are not capital intensive. They are using locally manufactured machinery, which reduces the initial capital investment required to set up a production facility. This also helps in reducing the fixed costs. The purchase of local machinery also reduces the maintenance costs for them, as the spare parts and technical assistance is locally available.

6.4.1.2 Weakness

6.4.1.2.1 Quality

The reliance of the small-scale segment on local raw material and greater outsourcing is hampering their quality. They do not have any quality control department. Because of not having stringent quality measures they do not have any product consistency. This is restricting their entrance into the urban market as consumer her is more literate and quality conscious.

6.4.1.2.2 Dependence

Nearly 70%-80% of their cost of production is the purchases from the suppliers. This high degree of outsourcing increases their reliance on the vendors. This also increases the need of coordination and planning between the two.

6.4.1.2.3 Economies Of Scale

The small-scale manufacturers have low volumes. Because of these low volumes they can not have bulk purchase discounts in purchase of raw material and spare parts purchase from local vendors. This also ceases the opportunity of further lowering of manufacturing costs.

6.4.1.2.4 Technology

They have not invested in technology and because of this they have lower production efficiencies and quality is more prone to the human error. This also reduces control over quality.

6.4.1.3 Opportunity

6.4.1.3.1 Consolidation

Currently they have low volumes and no economies of scale. If in future they consolidate their operations with other small players, this will help them get higher volumes and get higher savings through bulk purchases and longer production runs. The consolidation will also justify higher capital outlay in latest technology.

6.4.1.3.2 Vendor Capability

If the current capability of vendors is improved then the large-scale manufacturers will loose their competitive advantage of backward integration. This will strengthen the position of the

small-scale manufacturers and they will be able to match the higher quality of large-scale manufacturers at comparatively lower cost.

6.4.1.3.3 Mass Production

Currently the manufacturers are using job shop production techniques. If they switch to mass production as followed by the international players then it will lower their cost of production and make them more competitive in local market.

6.4.1.4 Threat

6.4.1.4.1 Vendor Relations

The large-scale manufacturers have invested time and money in developing the technical competence of the vendors. This has helped them develop long-term relationship with the vendors. Now based on these close ties with vendors they might be able to limit the access to quality suppliers for the small-scale manufacturers. This will create the problem for the players in this segment, which are highly dependent on the vendor's products.

6.4.2 Marketing

6.4.2.1 Strength

6.4.2.1.1 Higher Margins

The small-scale manufacturers are presently offering higher margins as compared to the large and medium-scale segment. The reason for these high margins is the push strategy followed by this segment.

6.4.2.1.2 Rural Markets

The rural market in Pakistan is more prices sensitive and the quality consciousness in this market is also low. Currently the existence of this market is the strength for the small-scale segment.

6.4.2.2 Weakness

6.4.2.2.1 Reach

The small-scale segment does not have extensive distribution network, which limits their reach. This in turn has effect on the sales of the product. Their market is in far-flung rural areas, which further increases the need of having formal distribution channel.

6.4.2.3 Brand Awareness

They are not spending on advertising because of which they have low brand awareness with the customer. They are following the push strategy, which requires high promotional budget, targeted to the trade channel. Hence they are in a weaker position because of their low promotional budget.

6.4.2.3.1 Product Range

The small-scale manufacturers have narrow product focus. Product innovation is low. Over the period they have not been able to introduced new models and sizes. These limited product offerings have constrained their growth. The market is shifting towards plastic molding fans and their inability to respond to this changing need of the market will negatively effect their sales and future existence.

6.4.2.4 Opportunity

6.4.2.4.1 Exports

If in future the large-scale manufacturers become successful in the international markets then this will shift their focus to the exports and the local market will be available to the small-scale segment and the demand for their products can increase.

6.4.2.4.2 Buying Power

The high price sensitivity of the consumer is because of the lower buying power. If the buying power of the consumer further decreases or the market size of this segment increases, this will have a positive impact on their sales.

6.4.2.5 Threat

6.4.2.5.1 Quality Awareness

As the consumer segment becomes more aware of quality and if the large-scale segment is successful in projecting the cost savings because of using high quality, low wattage fans. This will cause a shift of consumer to high quality fans with lower running cost and higher electricity saving.

6.4.2.5.1.1 Innovative Products

If these new fan models like plastic body and remote control fans become popular then the segment for the metal body and high wattage fans will diminish. This will be a threat for the small-scale manufacturers, as this will replace their niche.

6.4.2.5.1.2 Energy Prices

In the past the energy prices have increased. If the trend continues in the future then the demand for the high wattage fans produced by the small-scale vendors will further decline and the low power fans produced by the large-scale manufacturers will capture their market share.

6.4.3 Finance

6.4.3.1 Strengths

6.4.3.1.1 Low Stakes

The small-scale manufacturers have low capital investment in plant and machinery. This reduces the barriers to exit for them. Except for locked in working capital they have low financial stakes and can respond quickly to the recession without loosing much money.

6.4.3.2 Weaknesses

6.4.3.2.1 Access To Banks

The small-scale manufacturers have no financial department. The absence of the financial function and proper documentation of the financial reports has weakened their bargaining position with the banks. This has limited their access to the banks and has placed financial constraints on the small-scale manufacturers.

6.4.3.2.2 Management Control Systems

The small-scale manufacturers have no control systems. Despite of their limited product range they are unable to track down the expenses to the specific products. This makes the product pricing difficult and wrong pricing directly effects their profitability.

6.4.3.2.3 Financial Practices

The small-scale manufacturers are not using any financial evaluation tools. This low financial understanding have restricted their ability of introducing new technology and models. They are basically followers relying on the successful experience of the large-scale manufacturers. Hence they are always the late entrants in the markets.

6.4.3.3 Opportunities

6.4.3.3.1 Government Support

In future government has plans to boost the small and medium enterprises. As a result of the steps taken the small-scale segment will get subsidized loans, which will help them in developing their technological capabilities and solve the problem due to scarce financial resources.

6.4.3.4 Threats

6.4.3.4.1 Tax Structure

Presently the small-scale segment is operating in fixed tax bracket and the filing of tax return is simple. In future if the tax structure is changed then and they come under open tax bracket then the absence of financial and accounting skills will make them rely on the mercy of tax department, and they will not be able to properly file their tax returns.

6.4.4 Human Resource

6.4.4.1 Strength

6.4.4.1.1 Temporary Labor

In small-scale segment all the labor is temporary and there are no long-term contracts with the labor contractors. This helps them to keep their fixed costs low, which is exactly in line with their current strategy of cost leadership.

6.4.4.2 Weakness

6.4.4.2.1 Skill Level

The skill level of the labor in small-scale segment is low. The reason for this low skill level is the lower wage rate offered by the manufacturers in this segment. This low skill level results into low production efficiency and low product quality.

6.4.4.2.2 Weak Management

The small-scale manufacturers have low profitability and hence are unable to pay competitive salaries to the management staff. Because of their financial constraints they are not able to attract professional managers. Hence lack management skills.

6.4.4.3 Opportunity

6.4.4.3.1 Training Institute

Currently there is no training institute catering to the needs of fan industry. In future if a training institute is established, it will improve the technical skills of the labor. This will help the small-scale manufacturers to have

6.4.4.4 Threats

Lack of trained employee contribute to the inferior quality of the final product. Though the quality of the product can be improved by imparting minimum training to these employees. If the overall lucrativeness of the industry decreases these manufacturers will face difficulty in hiring and retaining good workers. They might loose this good mechanist to other industries or firms.

7 Value Chain Analysis Of Fan Industry

FIGURE 9 VALUE CHAIN ANALYSIS OF LARGE SCALE MANUFACTURERS

MANAGERIAL INFRASTRUCTURE 1.Competent, educated and experienced management. 2. Centralized decision making 3. Cordial relationship with labor 4. Lean structure.				MARGINS
HUMAN RESOURCE MANAGEMENT 1. Most experienced and best-trained workforce. 2. Good on job training and development environment. 3. Job security highest in the industry. 4. Best compensation, fringe benefits and reward systems in the industry.				
TECHNOLOGICAL DEVELOPMENT Technology leaders in the market Little expenditure on in house R &D. Designs mostly imitated.				
PROCUREMENT 1. 90% of the operations are done in house. 2. High volumes enable them to have quantity discounts.				
INBOUND LOGISTICS Sufficient material storing facilities. These warehouses enable them to purchase in bulk and get quantity discounts.	MANUFACTURING Use of better machinery. Stress on material saving and quality products.	OUT BOUND LOGISTICS Sufficient storing/warehousing capacity for the finished good. Detailed order processing and scheduling systems	MARKETING AND SALES Better credit collection systems, highlighting the bad trade debts. Heavy spending on advertisement and consumer promotion, creating pull for their products.	SERVICE Offer life time guarantees. Provide the members of the trade with spare parts.

FIGURE 10 VALUE CHAIN ANALYSIS OF MEDIUM SCALE MANUFACTURERS

MANAGERIAL INFRASTRUCTURE 1.Competent, educated and experienced management. 2. Low autonomy. 3. Lean structure.					MARGINS
HUMAN RESOURCE MANAGEMENT 1. Better workforce long standing relations with contractors. 2. On job training and development. 3. 60% - 70% contractual labor.					
TECHNOLOGICAL DEVELOPMENT Negligible R&D copy the models introduced by the large scale manufacturers..					
PROCUREMENT 1. 30% - 40% operations vertically integrated. 2. High volume purchases of raw material enables them to get better rates. 3. Close relationships with vendors					
INBOUND LOGISTICS No large storing facilities as material are not procured in bulk.	MANUFACTURING Use of better local manufactured machines to give minimum quality and finish to the product.	OUT BOUND LOGISTICS Producing to demand levels as storing facilities are not as big as large scale manufacturers and not much cash available to be stuck in finished goods	MARKETING AND SALES. Marketing and advertisements of the product is done through less expensive media. Minimal spending of electronic media	SERVICE Spare parts provided to the distribution channel.	

FIGURE 11 VALUE CHAIN ANALYSIS OF SMALL SCALE MANUFACTURERS

MANAGERIAL INFRASTRUCTURE 1. One to two person management team. 2. Experienced in the related business.					MARGINS
HUMAN RESOURCE MANAGEMENT 1. 100% contractual labor.					
TECHNOLOGICAL DEVELOPMENT No R&D expenses.					
PROCUREMENT 100% of the operations outsourced. Procurement is done when demand arises.					
INBOUND LOGISTICS No storage facilities required as purchases are done when demand arises.	MANUFACTURING Only winding and painting is done in house. No specialized machinery required	OUT BOUND LOGISTICS Mode of transportation is outsourced. No warehouse facilities.	MARKETING AND SALES Minimum marketing and sales expenditure. Advertisement efforts are concentrated on small banners and boards	SERVICE No support services provided to the distribution channel.	

7.1 Primary Activities

7.1.1 In Bound Logistics

7.1.1.1 RECEIVING

In order to have quantity discounts by having bulk purchases the large-scale manufacturers place consolidated order for the imported Raw material. When the raw material reaches the port then one of them contact with the custom and port authorities for the clearance of the shipment. After getting the clearance the clearing agent arranges for the transportation and delivery to the manufacturer's factory. The manufacturers share the transportation and clearance costs. After receiving the shipment at the factory the quality control department along with the store personnel check the quality and quantity of the material supplied and then book it in the inventory register. The shipment is by sea and can take about a month or two. In case of purchases from the local spare parts vendors the transportation is the responsibility of the supplier. As all the vendor industry is located close to the industry the transportation costs are low. Small vans or donkey carts are used for transportation. The reason for daily delivery is that the vendors do not have proper warehouse facility and the unpainted parts are vulnerable to corrosion, which effect the finish and quality of the parts.

However the medium and small-scale manufacturers buy Mild Steel Sheet or drum Sheet from local importers. In this case the transportation to the factory gate is borne by the importer. They do not purchase large orders as they have limited free cash and do not have storage facility to store the large rolls of sheet. Other difference is that they do not perform quality checks on the material supplied. In case of local vendors they rely on the name and long term relation ship with the supplier.

7.1.1.2 Warehousing/Inventory Control

The large-scale manufacturers do have adequate storage facilities. The raw material like Electric Steel Sheets (ESS) is stored in the open yard. However, for the material supplied by the local vendors they have covered stores. The large scale and some members of the medium scale manufacturers have divided the stores according to the size and type of the material. This makes the inventory record keeping easy and also is the requirement of ISO

9000, for which these players are going. This also saves the time of material handler when the requirement for specific part type is made. The medium scale and small-scale manufacturers do have limited storage capacity but the record keeping is very informal, which results in pilferage.

7.1.1.3 Vehicle Scheduling

The clearance agent schedules the delivery of imported raw material from Karachi port to the large-scale manufacturers after the custom clearance. The exporter of the material also informs the tentative arrival of the shipment through fax, so that the receiving party can make desired arrangements.

In case of medium and small scale manufacturers the delivery to the factory is scheduled by the supplier and the dates are conveyed to the purchase personnel through telephone call.

7.1.1.4 Returns To Suppliers

In the fan industry, the large-scale manufacturers are very conscious of quality. This is due to the fact that they have invested heavily in building the image of their respective brands and quality inputs ensure that they maintain their hard-earned repute. The quality control department samples all the inputs. In case of imported raw material, the sample results are compared with the specification reports sent with the shipment. If there is any divergence between the sample results and specification than the manufacturers return the shipment. To date the manufacturers did not have to return shipments to the exporters. Similar process of quality checks is performed on local inputs. The sample is compared against company standards of weight, thickness and finish. Shipments are returned if they fail to meet these standards. But due to stringent selection of the suppliers, returns are not common.

The medium scale manufacturers have similar process to determine if the shipment has to be returned. But they lack quality control department and follow less sophisticated procedures to determine the quality of the inputs.

Due to the lack of quality consciousness on the part of the small-scale manufacturers, they do not perform quality control check on the raw material. Returns to the suppliers are unheard of in this segment.

7.1.2 Operations

The level of labor or capital involvement in the operations varies among the different segments of the fan industry. In case of the large-scale manufacturers the production operations are more capital intensive as compared to the medium scale manufacturers. It is the case with the skill level and compensation for the workers in the fan industry. Large-scale manufacturers have heavy investment in machinery, which not only increases the production efficiency but also gives a considerable amount of material saving. The production stages involved in the production of ceiling fans and the machinery required to perform the function are as follows:

7.1.2.1 Production Stages For Ceiling Fan

The reason for studying the production stages of the ceiling fan is that about 60% of the installed capacity of the manufacturer are dedicated to the ceiling fan production.

7.1.2.1.1Sheet Cutting

The raw material involved in this process is Electric Steel Sheet or Mild Steel Sheet or Drum Sheet. The material used in this process also varies across the three segments of the industry. The large scale manufacturers use imported Electric Steel Sheet. The medium scale manufacturers are using Mild Steel Sheet and the whole of the small-scale manufacturers is using Drum Sheet. The reason that different manufacturers are using different types of sheet for the manufacturing of Rotor and stator armature is the high price differential among the three different types of steel sheets. Among the three different types of sheets the, Electric Steel sheet is the most costly then comes Metal Sheet. The Drum Sheet is the cheapest of the three types. The use of Electric Steel Sheet has a positive effect on the power consumption of the fan. But the small and medium scale manufacturers are not pushed to use this high quality steel sheet as their target customers are not literate enough to realize the one time high price of the fan as compared to high running expenditure.

In this section, the laminated Electric Steel Sheets (ESS) or any other type for rotor and stator armature (in which copper wire is wound) are cut to sizes in circular form. They are perforated to accommodate the windings in them and are aligned and riveted together to the required thickness.

7.1.2.1.1.1 Machines Involved

The machines involved for this process also vary across the three segments. The large-scale manufacturers are using Automatic Hydraulic Press (Imported) as well as shearing machines, power press and cutting dies, which are local machines. The Automatic Hydraulic Press gives high production efficiency as well as savings in material and labor costs. The reason for not using this press is the lower production volumes of the medium and small-scale manufacturers, which do not justify the high capital outlay of the Automatic Hydraulic Press.

7.1.2.1.2 Rotor Casting Or Filling

The rotor is then taken to the rotor casting section where it is filled with molten aluminum metal to form squirrel cage winding. The interaction of the rotor (aluminum) winding and stator copper winding causes rotation of fan).

7.1.2.1.2.1 Machines Involved

Furnace, hydraulic presses and dies. All of these are locally manufactured machines.

7.1.2.1.3 Rotor Roughing

This is also called machining. After rotor casting, the external diameter and upper edges of the rings of the rotor are finished on a lathe machine to make it fit easily in the grooves of the fan body. This gives the finish to the part.

7.1.2.1.3.1 Machines Involved

Local lathe is being used for this process. The number of machines used for this process depends upon the production capacity of the manufacturer. Some large-scale manufacturers are using automatic lathe for this process, which gives high degree of precision.

7.1.2.1.4 Stator Turning

In the ceiling fan the part bearing the copper winding is known as the stator. Commonly called armature. The rotor bearing the squirrel winding rotates around the stator. In case of pedestal fan, the rotor having the squirrel winding rotates inside (as opposed to outside in case of ceiling fan) the stator, bearing copper windings. A pre-sized fabricated iron axle is pushed into the center of the stator. Both sides of axle are ground to fit bearings.

7.1.2.1.4.1 Machines Involved

Hydraulic power press, grinding machines. Both local and imported machines are used for this process.

7.1.2.2 Winding Section

Winding can be done on automatic machines or manually. The large-scale manufacturers use automatic winding machines, where as small and some of the medium scale manufacturers are using manual winding processes for rotor/stator winding. The use of automatic machines give high speed as well as more precession. It is estimated that the annual production level of sixty thousand units justifies the use of automatic winding machines.

7.1.2.2.1 Machines Involved

Imported automatic winding machines, oven, and local winding machines.

7.1.2.3 Lathe Or Turning Section

First the rotor is pushed into the groove of pre-casted aluminum body. Then on the "Capstan Lathe" the bearing sizes are made in the body (lower) and the plate (upper). The machining process is performed on the inside of the rotor to clean it. After this process, the body and the plates go to the other machines for external turning and finishing (turning is first step in finishing and involves using turning tools on a lathe; finishing is done with file and emery cloth

7.1.2.3.1 Machines Involved

Hydraulic Press to push the rotor inside the body, capstan lathe machine, and common lathe machine. Capstan lathe is a special lathe, which performs a number of functions simultaneously. It has a head, which can take a number of tools to perform different functions simultaneously. By turning the lever various functions can be performed. For example internal boring, external boring, bearing size making, internal cleaning of rotor and seat for upper plate fitting.

7.1.2.4 Drilling And Tapping Section

After the completion of drilling and machining process the body and the plate is brought to this section. Here different sizes of holes and threads are made for the fitting body and plate, blades and other parts.

7.1.2.4.1 Machines Involved

The machines involved in this process are drilling and tapping machines. These machines are locally manufactured.

7.1.2.5 Fitting And Assembling

The finished body, plate, stator, connection box (nakka), in which capacitor is housed and other components are brought in this section. Here they are properly washed with petrol, flushed with air blow and cleaned to remove the metal chips, oil and dust, which stick to the parts during different processes.

7.1.2.5.1 Machines Involved

The only machine involved here is the hand press, which is locally manufactured machine. The other functions in this section are performed manually.

7.1.2.6 Painting

The fan body, blades and ceiling rods are first washed with petrol to remove oil stains and grease and flushed with air blow to remove dust. Two coatings are done using wet spray.

Body, blades and ceiling rods are then baked in the furnace. Baking temperature are controlled so as to protect internal winding and bearing grease from heat.

7.1.2.6.1 Machines Involved

Air compressor, spray guns and furnaces are used for this process. The finishing of the fan very much depends on the painting process. The log life of the paint depends on the quality of the paint as well as baking process. The small-scale manufacturers are not using baking furnace.

7.1.2.7 Final Testing And Packaging

After painting the fan goes for final testing and packaging. The blades are weighed and the difference is adjusted so as to have balance. The differential is because of the uneven application of spray paint, which can effect the uniform thickness of the blades. This weight difference or unbalance causes vibrations while running. Blades and grease cups are then attached again. The fan is then hooked again and is supplied with power for checking power consumption, current, r.p.m, and air delivery, noise (this can be because of blade bends). Blade bends are then manually adjusted to improve air delivery and reduce noise. Variation of speed at different voltages is also checked. After testing, the blades are detached, capacitor and power connectors installed, and name [plates are fitted. Fan is then packed for storing and marketing.

7.1.2.7.1 Machines Involved

Testing equipment involved is local as well as foreign manufactured.

7.1.2.8 Blade Making

All the large, medium and small-scale manufacturers are purchasing required sizes of the fan blades from spare parts vendors. The two different types of blades available are aluminum blades and recycled aluminum blades. Blades made with recycled aluminum are heavy for same thickness levels because of high level of impurities that increases the density of the finished product. The use of the recycled aluminum raises the price of the blades as manufacturers pay by weight of the blade. The difference can be some where

between Rs 30 to Rs 35 per set. The set has three blades in case of ceiling fan and five in case of pedestal fans. The large-scale manufacturers give the bend themselves.

7.1.2.8.1 Machines Involved

Machines involved in this process are local power press, and drilling machines.

7.1.2.9 Quality Checks

In order to have a high quality output the quality checks are performed during the process flow after the specific job is completed. Finally the checks are performed before painting is done. The standards followed here are the Pakistan Standards of Industry (PSI). These standards have been revised in order to facilitate exports after 1996.

7.1.2.9.1 High Voltage Test

It is also called as high pot test. It is done to check the insulation of the winding at high voltage. The voltage level is a 1500 volts. The insulation material used is paper leathered between the coils. The two tests performed here are as follows:

- Coil to coil
- Coil to body

The equipment used is high voltage transformer. Rejection rate is very low for large-scale segment less than 1% as automatic winding machine and high quality insulation material is used. In case of table fans the rejection rate is little higher as the winding process is manual. The rejections are sent for rework if it is possible.

7.1.2.9.2 Final Quality Checks

After assembling and before painting is done, a detailed quality checks are performed. The whole day production lot is checked. The tests performed include the following:

7.1.2.9.3 Power Consumption test

The power consumption standards are different for different sizes of fans. In case of 56 inch ceiling fans the value is 80 watts, with 10% tolerance level. The rejection rate not very high. It is between 2% to 3%. The reasons for higher power consumption are as follows:

- Bearing friction
- Axle alignment
- Bushing
- Loose or number of winding turns

7.1.2.9.4 Current

The amount of current drawn at different voltage levels and speeds is also checked it is the part of the power consumption test. An ampere meter is used to check the current. The readings are noted against different speed levels.

7.1.2.9.5 Revolutions Per Minute Checked

The test is performed for horizontal types. The standard for Revolutions per minute is 1475 r.p.m. This test is performed before painting with standard blade set. The fan is run for 6 to 8 hours at full speed before the quality control engineer clears the lot.

7.1.2.9.6 Air Delivery

There is separate room to perform this check the sample of five fans are passed through this test from the whole day production lot and the results are entered on a quality check report given in Appendix.

7.1.2.9.7 Staff

The quality control department has a staff level of ten employees. They are full time salaried staff. The break down by there responsibility is given in

Table 7.

TABLE 7 QUALITY CONTROL DEPARTMENT

Number of employees	Responsibility	Qualification
Four	To perform the test on Ceiling Fans	One engineer (QCE) and the rest are diploma holders called as quality inspector
Two	To perform the checks on the Pedestal Fans	Two diploma holders called as quality inspector
One	To check the quality of the Bracket Fans	One diploma holder called as quality inspector
One	To check the quality of the Exhaust Fans	One diploma holder called as quality inspector

SOURCE: INDUSTRIAL SURVEY

7.1.3 Outbound Logistics

7.1.3.1 Warehousing

The large-scale manufacturers' production is schedule such that they produce the entire year. The advantage of level production is that they save on hiring and training of labor each year. But as a consequence of their production strategy they have inventory in the off-season. In order to store this inventory, the leading players have invested in the warehouse facilities. The storage capacity of the warehouse is sufficient for over two weeks of production.

The medium and small-scale manufacturers' production are scheduled after receiving order. Therefore they have no inventory hence there is no need for a warehouse. Despite the medium scale manufacturers have small warehouse with the storage capacity of two days production.

7.1.3.2 Delivery

Fan manufacturers have not invested in trucks or vans for the delivery of fans from the factory to the distributors' warehouse. This is due to the fact that the network of distributors is extended to far-flung areas. The demand of some of the smaller cities and towns do not justify company owned trucks. Therefore, manufacturers have arrangements with the local transport companies for the delivery. This is a more cost-effective method to ensure delivery to even the remotest corners of the country. The manufacturers pay the freight and octori.

Exports are delivered via sea, the leading manufacturers arrange for containers, which transport the goods to the Karachi port.

7.1.3.3 Order Processing

The dealer/retailers place orders with the distributors, who in turn forward the orders to the manufacturers. In case of exports of fans, foreign distributors contact the manufacturers, open letter of credit and place order. Order processing is similar at the large and medium scale manufacturers, they only differ in the degree of paperwork. The marketing/sales department receives these orders from the distributors. The manager consolidates the orders and transfers them to the factory store of finished goods. On receiving the order, the store in-charge tries to fulfill the orders with the existing inventory. In case the required model and size of fan is not available in stock than the store in-charge reports the inventory levels to the production department. The production is scheduled so as to meet the demand of the particular fans. Once the order is complete, the store in-charge prepares a gate pass and sales receipt for the order. The gate pass is used to validate at the factory gate as to what is being shipped. While the receipt is a confirmation that the client has received the order. The original is sent with the order, where as the copy is faxed to the customer.

The distributors directly place orders with the small-scale manufacturers. They schedule production only after receiving the orders since they have no warehouse facility. Also due to the small scale of their production they require little or no paperwork for order processing.

7.1.3.4 Scheduling

The large-scale manufacturers have to schedule the delivery of the fans for the local as well as the foreign markets. In order to achieve lower cost of transportation, the leading players have an agreement among themselves. Under this agreement if two members have order of fans less than a truckload than they consolidate their orders and deliver by one truck. Hence, save on the transportation costs. This requires frequent communication of schedule among the parties. Also, deliveries have to be scheduled, so that there are no shortages of the fans during the peak season. On average they send a truckload to different

regions on alternate days during the season. The normal practice in case of large-scale manufacturers is that they supply for the entire season by May.

In case of medium scale manufacturers the scheduling practices are similar to that of the large-scale manufacturers. Only the order sizes are smaller and the deliveries are frequent. The reason for frequent deliveries is that they schedule delivery at the convenience of the distributor.

There is minimum scheduling by the small-scale manufacturers. The orders are taken on telephone and the delivery date is promised. Deliveries cannot be scheduled due to the fact that they only manufacture after receiving the orders.

7.1.4 Marketing And Sales

7.1.4.1 Advertising

Expenditure on advertising and promotion is very insignificant. This is due to the fact that most of the manufacturers sell unbranded fans and only few players have had the foresight to invest in branding their products. The industry leaders advertising budget is around Rs.20-30 million. More than 75% of the advertising and promotional budget is spent on television. They employ advertising agency to design advertisements that are aired on the national and satellite television. The advertisement focus is on the cost benefit of the high quality fans. The large-scale manufactures also advertise in Urdu and English newspapers. Here, too the consumer is educated regarding the benefits of using better quality fans. In addition to advertising on television and newspaper, these manufacturers also sponsor various sports events like the World Cup 1999. Other than the consumer promotions the large-scale manufacturers also undertake trade promotion. They give the distributors gifts such as company wall clocks and key-chains.

The medium scale manufactures spend about 50-75 thousand on advertising and promotion. Most of the advertising budget is spent on Urdu daily papers. Other than advertising through newspaper they also promote their products on national television. But limited budget is set aside for television advertisement.

The small-scale manufacturers do not undertake any promotional activities due to the fact that they compete in the lower end of the fan. In this segment brand equity has no meaning and most of the products are unbranded.

7.1.4.2 Channel Selection

The fan manufacturers rely on the distributors for the supply of fan to the retailers. Distributors are selected on the bases of their reach/contacts with retailer and for dealers the criterion is their reputation regarding their credit-worthiness. The only difference between the three segments is that large and medium-scale manufactures have exclusive distributors, which is not true for the small-scale manufacturers. The large-scale manufacturers have developed distributors in all the cities irrespective of the size of the city. The distributor network of the medium scale manufacturers is limited to the major cities of Pakistan.

7.1.4.3 Pricing

Due to lack of sophistication, pricing policy practiced in the fan industry is not based on any fancy models. Rather price of the fans is based on cost plus. The norm in the industry is to supply the distributor at a fixed factory price. There are no price limits imposed on the retailers or distributors. Only one large-scale manufacturer by the name of Royal has deviated from this norm, he has fixed the retail price.

7.1.4.4 Repairs And Services

Major fan manufacturers offer lifetime guaranty, which covers replacement of any malfunctioning part. Other manufacturers offer a warranty for over 10 years to replace parts. These guaranty schemes have been introduced in the last five years. Since the life of a fan is over 10 years therefore as yet fan manufacturers did not have to fulfill any claims. The distributors were apprehensive about the response of the manufacturers once these claims start. In addition to this distributors of large-scale manufacturers have employed electrician. Although, in case of installing a new fan, customers usually arrange for their own electrician. However, when some repair work needs to be done than customers avail the distributor's electricians.

7.2 Support Activities

7.2.1 Procurement

The large-scale manufacturers obtain raw material from local and foreign sources. They purchase pig iron and recycled aluminum from Karachi, whereas electric sheet and paper insulation rolls are imported from Korea and Germany. Other than external suppliers of raw material, the large-scale manufacturers have also integrated backward to provide for their demand of copper wire. Raw material is purchased for manufacturers own consumption and also on the behalf of their vendors. By providing the vendors with the raw material, the manufacturers ensure quality of the end product. The purchasing department is responsible for the procurement.

The medium and small-scale manufacturers do not supply their vendors with raw material. Medium-scale manufacturer's purchases are limited to copper wire for winding from the leading fan manufacturers. Since small-scale manufacturers are assembly units therefore they do not procure any raw material.

7.2.2 Technology Development

The technology employed in the fan industry has not changed over the years. Most of the machinery utilized by the manufacturers is second hand bought from countries in the Far East. Whereas, other leading fan manufacturing countries like China, Taiwan, Japan and Korea have fully automated plants geared toward mass production. This investment in process technology has led to lowering the cost of production for these countries.

Of the three segments, the large-scale manufactures have been open to accepting new technology in their operations. The leading five players were the first ones to adopt Computerized Numerical Control (CNC) machines. Also they initiated the new range of plastic fans. This required investment in the plastic injection machines. Presently, these players have installed the required machinery for plastic fans in their own facility, and in the near future they plan to transfer this technology to the vendors. In addition, they are working toward continuous improvement to reduce labor content and material saving.

They have also initiated projects to increase capacity through importing high-speed automated machinery like automatic press.

The medium-scale manufacturers are laggards as far as accepting new technology is concerned. They usually wait for the large-scale manufacturers to adopt new technology and only after they are sure about the benefits then they implement in their facilities. The main hindrance in adopting new technology is their low volumes.

The small-scale manufactures have little initiative to adopt new technology, since their operations comprise of assembling parts received from vendors.

7.2.3 Human Resource

7.2.3.1 Selection

Educated managers are hired by only the large scale manufacturers. They advertise for the vacancies in the newspaper. But not many applicants are keen on working in Gujranwala/Gujrat. Due to this reluctance of the prospective applicants, the fan manufacturers usually appoint local people with relevant experience. Since the other two segments do not hire people for the management position therefore they have no criteria for selection.

As for the hiring of the labor the norm in the fan industry is to delegate to contractors. The companies have had long relationships with the contractors and contractors are seldom changed. This is due to the fact that management develops an understanding with the contractor, which makes it difficult to sever relationship with them. Contractor, on the other hand are not in the position to call off the relations because fan manufacturers have informal collusion. Therefore if one contractor leaves any manufacturer than the other player of the industry refuse to work with that contractors. This pressure of being ostracized by the fan community is a deterrent for the contractor to leave a manufacturer. Other than the close ties with the contractors, the manufacturers have a hands-off relation with the labor.

7.2.3.2 Compensation

The management is offered competitive remuneration package by the fan industry. The package consists of housing facility, transport, education and medical benefits. This package is designed so as to attract applicants with better skills. Inspite of the competitive package the fan manufacturers are unable to entice the applicant of the required expertise. This is due to the fact that working in Gujranwala/Gujrat is seen to be very unappealing since prospective applicants are unwilling to move from the nearby city.

The labor is paid on piece rate. The rational for piece rate is that the demand for fans is seasonal and hence a production is scheduled accordingly. Due to the seasonality of production, manufacturers employ mostly temporary labor force with the exception of few. In order to ensure productivity and motivate the temporary labor is paid on piece rate. The rate varies according to the complexity and proficiency required for the job. However, the permanent employees are paid fixed salary and bonuses.

7.2.3.3 Appraisal

Due to the presence of glass ceiling the managers employed by the large-scale manufacturers have no scope of promotion. Their designation and control span does not change over the years. Managers with good track record are rewarded through increase in basic salary and other benefits. In case of the labor salary/piece rate is increased with experience and proficiency.

7.2.3.4 Labor Relations

The labor of the large-scale manufacturers is unionized. The union often raises their concerns and issues to the management. The management has handled such concerns very tactfully. As a consequence of this, management relation with the labor is very cordial.

The medium and small-scale manufactures have non-unionized labor force. But the laborers are members of external unions. The management has to comply with the demands raised by these unions. Generally the relation between the management and labor force can be characterized as amicable.

7.2.4 Firm Infrastructure

7.2.4.1 General Management

Firms in the fan industry can be categorized as a typical 'seth companies' with the top management comprising of the family members. The educational background and skills of the owners is inadequate for running a professional organization. The management relies on experience and relationships built over the years to manage their businesses.

Inspite of the fact that all the firms are family run the quality of general management varies within the industry. The founding members in the leading organizations have over the years delegated the responsibilities of managing finance and marketing departments. The need to hire professionals was a consequence of delegation. The large-scale manufactures have more professional mangers that are not only better educated but also have the relevant experience.

In case of the medium scale manufactures the management is still dominated by the family members. The strength of the managerial staff in these organizations is limited to ten odd people as opposed to over 25 manager in the leading companies. Due to deficiency in the management these companies are poorly run. In the past few years a large number of the medium scale firms were weeded out since they were unable to sustain themselves in the face of more difficult times.

The small-scale manufacturers are basically 'one man show', with the founder responsible for all the activities. The lack of management is inconsequential for the firms in this segment. This is due to the fact that they are basically assemblers with little need for professional management.

7.2.4.2 Finance

Finance department in the fan industry is almost non-existent. Activities such as investment decision making, forecasting and planning are not performed in this sector. Lack of usage of financial tools is due the fact that these companies do not possess employees with financial background.

Investment decisions are not based on formal capital budgeting analysis. Rather, the large-scale manufacturers rely on measures like payback to justify investment in any machinery. Similarly, they plan and forecast very informally. No demand estimates are made and production is scheduled based on previous years sales adjusted for growth.

The medium-scale manufacturers also lack the human resource to undertake formal financial activities. Most of the investment decisions to increase capacity are not made based on the fact whether or not the project is feasible. Rather, their decisions are formulated by the large-scale manufactures. The small-scale manufacturers purchase in particular machinery if all the leading players have invested in that machinery.

Small-scale manufacturers do not practice financial management. This is due to the fact that their small size does not justify any fancy financial practices. Also this segment purchases all the parts from the vendors and the only activity they perform at their facility is of assembly. As a consequence they can easily increase production of fans by purchasing more parts from the vendors.

7.2.4.3 Accounting

Accounting at large and medium scale manufacturers is limited to book keeping. The larger players employ qualified accountant to manage their books along with few clerks, while the accounts of the medium players are managed by untrained but experienced 'munshies'. This allows the players to understand the overall profitability of their businesses. But they are not acquainted with sophisticated cost accounting measures, which would help to track cost to each product.

The smaller players do not manage these in details. As a consequence of sketchy accounts they are not able to ascertain expenses incurred to manufacture a fan. These accounts are managed just to fulfill government regulations.

7.2.4.4 Legal

The large-scale manufacturers participate more actively in import/export activities. They import raw material such as electric steel sheet and export all most one third of their production. These players require legal departments to handle the documentation related to the imports and exports. Instead of setting up independent legal departments in each of the

five leading organizations, they have collectively out-sourced these services to one firm. This allows them access to professional legal advice without incurring excessive cost.

The other two segments have little need for the legal services hence they acquire the services of lawyers as per requirement.

8 Financial Practices In The Industry And The Role Of Financial Institutes.

The financial practices common in fan industry are quiet primitive. The level of sophistication of these practices increases from small scale manufacturers to large scale manufacturers, the level of detail and analysis, however, within the industry remains rudimentary. The reason industrial practices in financial management remains under developed can be attributed to lack of managerial capabilities in different industrial segment for maximally utilizing the benefits of the financial services offered by the market. This lack of managerial capability decreases from large scale manufacturers to vendors. Large and medium scale manufacturers face little difficulty in utilizing financial services offered by the different banks. Greater problem is faced by the small scale manufacturers and vendor segment of the industry.

The analysis of practices carried out by the financial sector in providing services to the last two segments of the industry is discussed later in the section. An account of financial practices in different segment of the industry is discussed below.

8.1 Financial Needs And Practices In The Industry

8.1.1 Large Scale Manufacturers

This segment within the industry is the most sophisticated while reporting its financial performance, accounting practices and making capital investment decisions. However, these practices serve the management's purpose while satisfying the financial intermediaries they deal with. The employment of such practices by this segment is driven because of the following factors discussed below.

8.1.1.1 Debt To Equity Ratio

These firms have been operating for the last 30 to 40 years, over these years they have acquired the size at which they are now functioning. These now large firms were started as entrepreneurial ventures with very small amounts of capital from personal savings of their own, relatives and friends. This borrowed sum is treated as equity rather than debt. They have over years build their firms by reinvesting their profits. That is the reason these firms even now after years of operations and growing to their present size are still debt free.

8.1.1.1.1 Difference In Financial Practices Of Gujrat And Gujranwala Sector

The researchers during their project found a marked difference between the origin of financial practices in Gujrat and Gujranwala sectors. The two big players in Gujranwala namely Asia Fans and Climax Industries, have financed their growth through heavy borrowing from local banks during 70s. These firms were the biggest two fan manufacturers at that time. Climax Industries is the only firm in the industry, which listed on the stock exchange. The management of Climax Industries carried out a BMR process in late 1960's acquiring state of art machinery including automatic stamping presses (Many of the current large scale manufacturers have acquired these presses in mid 1990s). Because of many exogenous (Unfavorable business environment e.g. difficulty in materializing of business transactions with WAPDA, and foreclosure by Banks) and endogenous factors (Management disputes) led to downturn of one of the most admirable mechanical engineering firm in the country. Asia Fans (Anwar Industries) also faced problems, which were internal i.e. Management disputes, which led to breaking up of the group in 1992 and external problems (Repayment of loans under stressed business conditions). The experience of these two major players in the Gujranwala sector has caused a negative impact on debt financing amongst other players of the industry. It was the downfall of these two major players that created an opportunity for fan manufacturers in Gujrat to come up. The above cited cases in the industry has thus created an aversion towards practices involving debt financed expansion in the companies. This has in a way also effected the growth of the industry.

The firms in Gujrat sector remains to be privately held within the family; Yunas Family owns Yunas Fans, G.F.C Fans and Metro Fans the combined annual production of these three firms is about 4 – 5 million fans.

8.1.1.2 Magnitude And Need For Finances

This segment of the fan industry is the most capital intensive, with total capital investment in equipment, land and building ranging from Rs. 200 – 400 million. Annual sales of this

segment range from Rs. 100 – 200 million, employing 200 – 300 employees and much sophisticated machinery.

The sector is compared to other members of the industry is the most organized and often utilizes the financial services provided by the financial intermediaries operating in the market. These services are employed in the areas discussed below;

8.1.1.3 Working Capital

Mostly the finances acquired by these large manufacturers from the financial institutes are in the form of short-term working capital loans. The need of which arises during off season, these loans are in the form of revolving credit lines or over – draft facilities extended to these firms on the basis of their past performance and relationship with local banks.

8.1.1.3.1 Pledge And Hypothecation

These two practices are to little extent common within this segment of the industry to generate finances for the daily operations of the firm. However, these two services even in this segment are looked upon with skepticism and are usually avoided unless deemed necessary.

8.1.1.3.2 Letter Of Credit

As this segment imports some of the raw material (electric sheet etc.) and since this segment is also involved in exporting their product to different countries, they utilize letter of credit facilities offered by their local banks.

8.1.1.4 Capital Investment Decisions

The initial growth of these firms was geared by their retained earnings, however, this growth cannot be sustained for long, as opportunities in the market starts to decline. The use of financial services available in the market over the years has been increasing, however, the management still remains skeptical about this practice too. The most favored source for making capital investments in machinery or increase capacity or capability still remains to be retained earnings. However, the use of leasing and long term borrowing are increasing in practice. Among the two leasing is favored over the other.

The decision making process involves still remains to be under developed, practices such as Net Present Value (NPV) analysis or Internal Rate of Return (IRR) analysis are not used, as these firms have no idea about cost of capital. A simple Pay Back analysis or Break Even analysis is conducted, which estimated the duration in which the total investment will be recovered.

Most of the decisions about capability enhancement or capacity increment are done following the actions of main competitors.

8.1.1.5 Financial Markets And Institutions Used

Climax Industries is the only fan manufacturer, which has used the equity market, the other firms as mentioned above are held privately with in the family. Amongst financial institutions used only the local banks have been used for different financial services. The service of DFIs by the industry has never been employed. The reason being

8.1.2 Medium Scale Manufacturers

The segment of the industry does not differ greatly from large scale manufacturers in interaction with financial institutes. The requirement of this segment is less than that of large scale manufacturers, however, it utilizes much of the same services used by the large manufacturers.

This sector lacks more in managerial capabilities as compared to large scale manufacturers, therefore, financial systems employed and amount of reporting detail is less than their peers are.

8.1.2.1 Debt To Equity Ratio

Though, this sector faces less difficulty in acquiring bank's assistance when desired as compared to small scale manufacturers and vendors; the sector is more plagued with apprehension of utilizing debt or credit services offered by the formal financial markets.

8.1.2.2 Working Capital

The financial services used are mostly in the form of working capital to finance daily operations. Standing lines of credit and over draft facilities are used for procurement of

raw material and other expenses. Practices such as hypothecation and pledging are also commonly employed.

8.1.2.2.1 Letter Of Credit

As these players have not as yet played any part in international finance their use of letter of credit is limited. Capital investment decisions remains to be undeveloped using only pay back break even analysis.

The source of funds remains to be internally generated for expansion or modernization, though practices of leasing are becoming popular in this segment.

8.1.3 Small Scale Manufacturers And Vendors

The financial reporting practices in these two segments of the industry are minimal. The firms completely lack the managerial capability to carry out such practices. The day to day management of finances is carried out usually by the owners or by a senior worker acting as cashier. Their interaction with the financial intermediaries is minimal and is only limited to the extent of obtaining small short term financing facilities. However, this segment has benefited in the past from low interest rate loans provided by different governments in 60s and 70s.

8.1.3.1 Magnitude And Need For Finances

They are also unaware of different services extended by banks and DFIs. The reason for this ignorance is lack of interaction with them. Leasing practice, which have become popular in the upper two segments of the industry is not utilized by this segment. The capital needs of these segment are minimal, however like the rest of the industry this segment is becoming stagnant in its technological capability and needs revival which can only be done by incorporating more capital from market.

The unavailability of recorded information regarding business also makes them unattractive to banks for lending. The alternative to collateral based lending is positive cash flow based lending, this form of lending is based on availability of documented proof of the business of the firm. Since there are no formal contracts in case of vendors with the manufacturers and small manufacturers do not have detailed documented proof of their

past performance this further reduces the attractiveness of these players to the financial sector.

The lack of using financial markets such as debts through banks is also the exorbitant interest charges 18 – 20% charged by the banks depending upon the nature of the loan.

8.2 Role Of Financial Institutions

Financial institutions over the years have come up with different financial instruments to cater for different customers in the market. The objective of these financial intermediaries has been to promote the economical growth of the country. Over the years they have been following prudent principals of lending i.e. secured financing against collateral in the form of fixed assets, personal guarantees etc. They have paid a key role in the development of both organized and unorganized industrial sector. Though the organized or the formal sector comprising of large and medium scale enterprise have gained more from their services as it was easier for them to acquire financing; their role in development of small scale enterprise though minimal can also not be ignored. Government has in the past given special attention to SMEs and formed special Development Financial Institutions (DFIs) such as Small Business Finance Corporation (SBFC) and Industrial Development of Pakistan (IDBP) to cater for the unorganized sector. SBFCs branches were set up provincially to better cater for the needs of sectoral SMEs. The role of these institutes was to channel the foreign financial aid for development into different industrial segments. In doing so they have played a key role in the development of small and medium enterprises.

Small and Medium Enterprises are generally more flexible in responding to market situations and are major contributors to employment generation, and to structural and technological change. However, one major constraint on their growth and expansion is the absence of capital (both working and long term loans). To any firm the need for availability of credit is important during the five stages i.e. start up, expansion, penetration of foreign markets, modernization and technological acquisition. The capital should also be available at reasonable interest rates, the interest rates are dependent on valuation of the risk. Banks view SMEs as short term risky investments where as they can be looked upon

as long term investments generating positive cash flows, by doing that banks will benefit from the segment which is potentially very viable.

8.2.1 Banks

The national and regional banks like Habib Bank, National Bank and Punjab Bank have been offering players in the industry with different financial services depending upon the size of the player. The basic principle of lending has been collateral based lending. Therefor, the beneficiaries of these services have been those firms, which can provide with the collateral required. By this practice banks have been unable to promote and take active part in the development of small and medium scale enterprises.

Banks have been focusing on large corporations for ease in assessment of risk and monitoring of the performance of their client's business and credit worthiness. SME's on the other hand require greater attention and focus on principles of lending other than currently employed. This makes the financial institutions hesitant in increasing their dealing with them.

The inability of the banks to fully utilize this opportunity currently is constrained because of both demand side (industrial practices already mentioned above) and supply side (lending criteria of financial institutions). The constraints on the supply side includes the following,

8.2.1.1 Ceilings on the provision of credit.

- National Credit Consultative Committee (NCCC) role has been to devise credit plans for monetary expansion in Pakistan. This practice has been placing emphasis on lending to special sectors which has further reduced the availability of credit to SMEs.

8.2.1.2 Lags In Disbursements

Though, different governments have been giving special attention to SME, by offering special packages for them. This practice to some extent does make for the above mentioned constraint on the supply side, but the disbursement of these funds create another discrepancy on the supply side operations. According to State Bank Statistics available the

applications processed and loans disbursed to SMEs are 40% - 50% of the applications received and of amount allocated. None of these loans have been for working capital.

8.2.1.3 Improper Risk Assessment

SMEs has been viewed as short term risky investments by the financial institutions rather than as long term investments generating positive cash flows. Financial institutions do not have the resources in form of man - power and experience with this segment so as to properly assess the riskiness associated with small and medium enterprises.

8.2.1.4 Lending Criteria Of Financial Institutions

The criteria for lending as described the financial institutes during the study is as follows

- Ability to payback the loan out cash flows.
- Character of the borrower and reputation of the business.
- Collateral offered for the loan.

  However, collateral is given the most weightage in general practice while financing for any purpose whatever the scale of the firm.

8.2.1.5 Inadequate Systems Of Commercial Credit Analysis And Provisions

The inability of financial institutes to rely of other criteria of lending has much to do with the unavailability of adequate system of commercial credit analysis of firms. The importance of these firms. This reduces the ability of banks to finance small and medium enterprises, whose attractiveness depends solely on their ability to generate long term positive cash flows.

8.2.2 Development Financial Institutions

DFIs have been more active in promoting SMEs as compared to banks. Though their role is commendable but it cannot be said about their performance. Both Industrial Development Bank of Pakistan (IDBP) and Small Business Finance Corporation (SBFC) have been running into financial difficulties for some years. The Government of Pakistan

formed the two institutes to promote Medium Scale and Small Scale Enterprises. The objective of the two institutes was to channel foreign funds available for development to different segments of SMEs. However, both institutes suffered because of inefficient operations. IDBP is still functional and playing its role in promoting SMEs with constraints already mentioned above, whereas SBFC because of mismanagement in the past years is now comatose.

Though principle criteria for lending still remains to be collateral based, because of their reason for existence these organization or less stringent on this principle. Hence, they were able to participate better as compared to commercial banks.

The failure of these institutes is attributed to following reason

8.2.2.1 Operational Inefficiencies

DFIs were operating as a routing channel for the funds coming to Government of Pakistan through multinational donor agencies. These funds were given to the government on very low interest rates. This low interest source of funds relaxed the DFIs in their utilization and mismanagement and they could not maintain a good quality loan portfolio.

These institutions also lacked human resources as for proper analysis and assessment of industrial and economical trends. Moreover, they were also plagued with same inefficiencies like lags in disbursement, inefficient lending and evaluating criteria like the rest of the financial sector.

8.2.2.2 Political Pressure

Majority of the loans given through these institutions was under the influence of some political pressure. The default rate under these pressures increased. Because of this the institutes could not play as much a role in the development of SMEs as what expected of them. They were unable to strategically invest in the areas, which could have added to the comparative advantage of the nation.

9 Government Relations

9.1 Tax Structure

9.1.1 Income tax

Currently a company is treated as a separate juridical person distinct from its owners for tax purposes. The total income of a company is determined more or less in the same manner as that of a sole proprietor. A company is, however, not entitled to any earned income relief, personal allowance or other deduction except the donations for charitable purposes and unlike individuals the whole income of the company is liable to tax without any exemption limit.

Fan manufacturers pay income tax at the flat rate of 25 per cent of the whole of its income. For income tax purposes, the taxable income of a business consists not of its gross receipts but of residual derived by subtracting from those gross receipts, the expenses incurred for earning them. In other words, income tax is levied on business profits, not on receipts. Gross income is synonymous with receipts. But for tax purposes a net income is arrived at by subtracting such items as salaries and wages, rent, interest charges, depreciation, cost of material used in production and any other expense, which is necessarily and exclusively incurred for business purposes, from the gross income.

9.1.2 Sales Tax

Sales tax is one of the major sources of revenue for the government. It is collected by the Federal Government, but 80 per cent of the revenue is distributed among the provinces. It is collected on all the goods imported or manufactured in Pakistan. At the import stage it is collected along with the customs duty on paid value by the Customs Department and on the local items, which are liable to central excise duty on the excise duty paid value by the Central Excise Department. Whereas, sales tax on domestic products not subject to excise is collected by the Income Tax Department. Sales taxation can take many forms. The turn over tax, the manufacturer's sales tax, the whole sales tax, the retail sales tax, and the value added tax are the different types of sales tax prevalent today. Sales tax may be imposed at the retail, wholesale or manufacturer's level. It may be a multiple stage tax or a single stage tax. The multiple stage tax is generally known as a turnover tax and is levied at each

stage of transaction. The value added tax is increasingly adopted in many western countries.

Currently fan manufacturers are paying fixed sales tax regardless of their production, according to the rates given below in the Table (S.R.O. 904(I)/93, Dated 5-10-1993). Introduction of this fixed rate taxation is considered a milestone in the history of simplification of excise procedure. The levy of duty on the basis of number of machines constitutes a novel experiment, perhaps unique of its kind in the developing world. Since this tax was to be a fixed charged on the basis of number of machines of each manufacturing unit, its collection was considered to offer no problem once the number of machines had been determined in each unit. It was hoped that the new measure would give a great fillip to production as the amount of tax payable by a manufacturer would not be related to the actual production. Thus the more the production the lower would be the average incidence of tax per unit of output.

TABLE 8 SALES TAX STRUCTURE

S. NO.	CATEGORY OF FACTORIES	LIABILITIES OF SALES TAX PER ANNUM
1	NOT MORE THAN 4 LATHES	RS.13,500 PER LATHE.
2	5 TO 7 LATHES	Rs.54,500 for the first 4 lathes plus Rs.27,000 per additional lathe.
3	8 TO 10 LATHES	Rs.135,000 for the first 7 lathes plus Rs.40,500 per additional lathe.
4	11 TO 15 LATHES	Rs.256,500 for the first 10 lathes plus Rs.67,500 per additional lathe.
5	ABOVE 15 LATHES	Rs.594,000 for the first 15 lathes plus Rs.108,000 per additional lathe.

The measurement of production capacity to fix the rate for a machine proved to be the most baffling problem of all. There have been complaints of excessive technical assessment and wide disparities in tax burden of similar units. Other problems, which have arisen in the administration of fixed sales tax i.e. frequent ascertainment of, installed capacity of individual units, supervision of dismantling, removal and restoration of machines, certification of closures and stoppages for the purposes of abatement of duty. It has been maintained that the problems arising in fixed rate tax administration and the

nature of disputes involving huge amounts are such that they can be decided upon only by the Central Board of Revenue and the Central Government.

9.1.3 Local Taxes

In Pakistan, as in any other country with a Federal Structure of Government, there are three levels at which the functions of Government are exercised - Federal, Provincial and Local. Naturally, corresponding to these three levels on the administrative side, there are three levels of authorities exercising tax jurisdiction. These are the Federal Government, the Provincial Government and the Local Bodies. The Local Bodies have specific duties and responsibilities in matters affecting the life and activities of the residents of their localities; they have lately gained in importance because of the emphasis on development and stress on the growth of democratic institutions and people's participation in the management of affairs from the grass root level. The only relevant tax for fan industry among local taxes is Octroi or Zilla tax i.e. the duties on goods meant for consumption within the city or district. Octroi duty, which in payers opinion, is a thoroughly unpopular levy and is, by all canons of taxation, primitive and undesirable. This tax is considered to be a major source of harassment, corruption and malpractice and is an impediment to trade and industrial growth.

9.2 Proposed Tax Structure By Fan Manufacturers

9.2.1 Income Tax

9.2.1.1 VIP Status

All assessee be given due respect in all government departments, particularly those who are paying tax of over Rs. 100,000/- be given VIP status all over the country and special cards should be issued to these tax payers or manufacturers in this regard.

9.2.1.2 New Assessee

The new assessees may be allowed to file return at any time without any penalty or any action against them as per self-assessment policy. The new assessees may be allowed to pay tax at flat rate on the assets declared by them for the first time.

9.2.1.3 Harassment by Tax Department

To enable the assessees to pay their due taxes without fear of harassment, we propose the following steps as part of a comprehensive scheme to make the manufacturers to be tax payers:-

- All returns would be under self-assessment scheme even where loss has been declared.
- If within nine months of filing of return the assessing officer detects no discrepancy it should constitute final assessment.
- If the assessing officer detects discrepancy or has definite proof or concealment by the assessee, he will send written intimation for seeking clarification from the assessee given two weeks time from the receipt of the notice for such clarification. If need be the assesses may be given a total of three such opportunities to clarify, in writing to queries of assessing officer. There would be no personal contact between the assessing officer and the assessees and/or his authorized representative.
- In case the assessing officer is not satisfied with the replies submitted, he would file his appeal with the first appellate forum along with his assessment for adjudicating thereon. The appellate for would be under the judiciary and not the CBR.
- No demand will be created against the assessee unless the Assessment of assessing officer is upheld by the first appellate form.

9.2.1.4 Self Assessment Scheme

About 80% of the assessees in Pakistan are materially and directly affected by the Self-Assessment Scheme. The scheme is made each year by CBR without any participation

of the Parliament. This tantamount to enactment by CBR. The scheme is changed every year. So much so, certain major clarifications affecting the scheme are made public only a week before the due date of filing of the tax returns. Some times such clarification is made after due date. Further, after every couple of years the tax return forms are changed. For example, in last 10 years tax return forms have been changed four times. It is recommended that CBR should not design the Self-Assessment Scheme instead the Parliament should do this job. Like wise the Forms of Tax Returns should also not be changed frequently. Efforts should be made to increase the number of new assesses by introducing the most lenient method of taxation.

9.2.1.5 Fixed Tax Scheme For Small Business

The fixed tax scheme was introduced in assessment year 1991-92. The scheme was failed due to the following reasons:-

- The scheme was only for new assessees and were not for existing assessee.
- The scheme was only applicable if income was not more than Rs. 36,000/- and capital of the business up to Rs. 100,000/-
- The scheme was not properly advertised.

It is suggested that the scheme should be prepared with consolation of Trade Bodies and tax be collected on broad bases, such as limit of capital up to Rs.1 million and income up to Rs. 300,000/-. The fixed rate be allocated according to income and capital. Fixed Income Tax be introducing on machine basis to at least bring this sector in to the tax net by saving them any apprehended harassment by the Tax Department.

9.2.1.6 With Holding Tax Rate

The with holding tax rate is higher. It should be reduced to 2% to 3.5% in case of supplies and from 5% to 4% in case of contractors. Resultantly collection will be increased. At

present companies and registered firms (with capital of Rs. 1.5 million or more) have to compulsory deduct with holding tax u/s 50 (4) and 50 (7A) on their purchase of goods and services which ranges from 3.5% for goods and 5% on services and contracts, to 7.5% for rent. The sole proprietorship and firms with less then Rs. 1.5 million capital do not have to deduct these withholding taxes. This puts companies and registered companies (with capital of Rs. 1.5 million or more) at a distinct advantage with their purchase cost increasing by 3.5% to 7.5%. Since suppliers increase their prices by these amounts. This also retards the growth of the corporate sector.

It is suggested that this with holding tax deduction should be made compulsory for all payers, irrespective of their status which will (a) help in documenting economy and (b) increase the Govt. tax revenues and (c) remove discriminatory application of income tax rules.

9.2.1.7 Income Tax Deducted By Banks

The income tax deducted by the banks on realization of export proceeds constitutes full and final discharge of income tax liability of the exporters filing the returns. The income tax so deducted constitutes a substantial amount of income tax refund. The payment of such refund by income tax department is very time consuming. It is therefore suggested that the exporters should be exempted by the deduction of income tax under the subsection of section 50 of Income Tax Ordinance 79.

9.2.1.8 Concessional Rate Of Taxation

Efforts are being made by Government to encourage documentation in the economy. It towards this end in mind that the registered firms were allowed a concessional rate of taxation in the past. Un-registered firm pays income tax at the maximum rate of 20% whereas a registered firm pays super tax at the rate of 25% plus partners tax at the rate of 20%. In addition to this concessional rate of income tax un-registered firm also enjoy lot of exemption from Income Tax Ordinance 79, clauses. It is therefore suggested that the

Government should review this situation and make necessary changes in the law to allow concessional rate of taxation to registered firms as well.

9.2.1.9 Appeal Fees

Appeal fee in Income Tax is Rs. 1,000/- whereas in W/Tax it is Rs. 2,500/-, which should be Rs. 1,000/- or minimum in both cases.

9.2.2 Sales Tax

9.2.2.1 Minimum Penalty

The minimum penalty has been laid down to be paid by the person who fails to submit his return by the specific date. It is submitted that penalty should not be levied in case where delay is genuine and beyond control of the person. It is suggested that the provision should be incorporated in the Sales Tax Act 1990, whereby issuance of Show Cause Notices is made necessary and penalty should be imposed only after it has been adjudicated that the cause of delay is willful on the part of the person concerned.

9.2.2.2 Penalty For Delay In Payment

It is provided in the Sales Tax Act that delay in payment will carry automatically additional amount of Sales Tax by way of penalty/interest. This provision is being misuse in case where there is a dispute about the taxability of any product, the penal provisions are being brought to play. It is, therefore, suggested that this provision may be suitably amended.

9.2.2.3 Rate Of Sales Tax

Most of the leading Sales Tax Collectorate are working with negative figure, i.e. where refund is more than actual collection. To stop leakage the best way is “no duty no drawback” on the other side maximum rate of Sales Tax should be 1%.

9.2.3 Wealth Tax

9.2.3.1.1Exemption

The statutory exemption be raised to Rs. 2 million. The assessee whose income exceed Rs. 200,000/- should file the return instead of Rs 100,000/-

9.2.3.1.2 Value Of Properties

The value of properties should not be increased every year. The value of plots and vacant properties should be taken at cost where is no schedule framed by Municipal Committees.

9.2.3.1.3 Wealth Tax To Be Abolished

Presently intricate and cumbersome procedure of submitting Wealth Tax Return and arbitrary scrutiny of these return create unpleasant situation besides causing lot of time and inconvenience. In the presence of Income Tax, the Wealth Tax needs to be abolished but in case it is thought prudent to phase it out, the following measures would be required in the interim:-

- Exemption limit be increased to Rs. 2.5 million.
- Single slab of 0.5% be applied to taxable wealth.
- Assets be valued at cost.
- Dead assets such as investment made in industrial units, which have become sick, shares of companies declaring dividends, etc., should be exempted from wealth tax.

9.2.3.2 Exports Of Electric Fans

Fan Industry of Pakistan after meeting the entire demand of local market has a great potential to earn foreign exchange by exporting of electric fans which ultimately will be helpful in utilizing full installed capacity

On export of electric fans a nominal 5.6% rebate is admissible which is not sufficient for industry to compete in the International Market price wise. In order to be competitive to attract the International Market from India, China and Taiwan, it is need of time to enhance the rate upto 12% and also subsidy of at least @20% be awarded to the exporters of electric fans as is already being given in India and China. The Electric Fan Manufacturers can play a very positive role for the betterment of economic situation of the country by exporting thousands of fans, provided our genuine demands are met.

9.2.3.3 Excise Duty

The government is substantially reducing import duties on various finished products and increasing the sales tax coverage on local products. In many cases there are double tax by imposing both excise duty and sales tax. This is leading to a drastic reduction in Effective Protection Rate to local industries.

It would be necessary in many cases to abolish excise duties so that the effective protection rate of local industry remains at a level where it can compete and survive.

9.2.3.4 Zilla Tax

The Zilla Tax is charged on the transfer of Goods from one District to another. The system has been awarded to the contractors, firstly the staff tries to charge the extra amount on the goods. Secondly they behave rude on the tax posts situated in the Jungle. The Zilla Tax on Export is zero rated and refundable after payment, but:

- The staff tries to over charge tax amount.
- The staff misbehave with the carriers.
- The staff charges Zilla Tax on maximum vehicle.
- After the payment contractor does not make refund in a year.

Of all the above Zilla Tax (Export Tax) has become a very obnoxious tax due to the high handedness of the contractors and needs to be withdrawn.

9.2.3.5 Miscellaneous

9.2.3.5.1 Reduction Of Tax Collecting Departments.

- There are 24 Federal Taxes, 15 provincial Taxes, 6 Labor Related levies and 14 Local Bodies Taxes which are being paid by business community.
- A factory from the day of its birth is to deal with 59 Departments and all the talent of Industrialist consumed while dealing with these departments.
- It is a long standing demand of the private sector trade and industry that tax collected at various levels of Govt. Federal, Provincial and Local Bodies - be reduced to the

maximum possible extent as these are great source of harassment and wastage of time and energy. This will also result in saving in tax collecting charges of the Government.

- Ideally, it will suit the trade and industry if there are only three tax collecting agencies, one each at Federal, Provincial and local bodies level and may be given the name of "**One Window Taxation System"**

10 International Markets

10.1Fan Exports From Pakistan.

10.1.1 Direction And Concentration Of Pakistan Exports

The export market potential of the fans has been recently tapped by some of the manufacturers in the industry. Pakistan's direction of export and its concentration is given in Table 9 and statistics of trade for the past 5 years is given in Table 10. The major export partner has been Iraq in 1993, however, these exports were not continued over the years and recently Bangladesh has emerged to be the major trading partner in both categories of fans (i.e. SIC 74341 and SIC 743453)

TABLE 9 QUANTITY SHARE OF PAKISTAN EXPORTS TO DIFFERENT COUNTRIES

	1997	1993 - 1997
Fans (74341)	%age	
IRAQ	0%	45%
YEMEN	NA	NA
BANGLADESH	73%	33%
IRAN (ISLM.R)	4%	12%
SAUDI ARABIA	22%	3%
UNTD ARAB EM	1%	8%
S.AFR.CUS.UN	NA	NA
Fans (74343)		
BANGLADESH	31%	32%

SOURCE: PC TAS SOFTWARE.

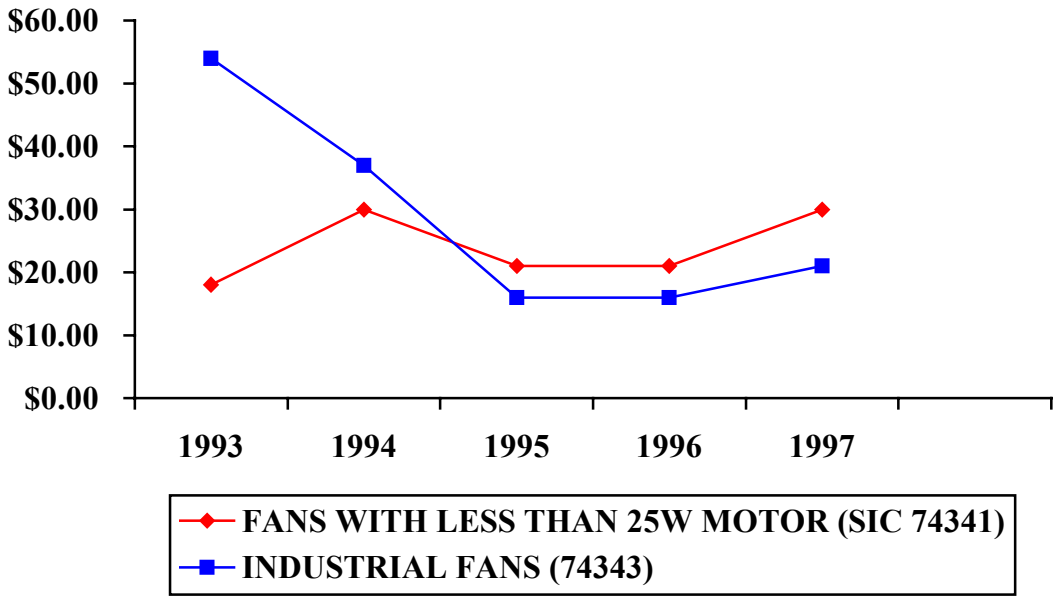
TABLE 10 EXPORT OF FANS FROM PAKISTAN (1993 – 1997)

	1993		1994		1995		1996		1997		1993-97	
Fans (74341)	VALUE (000s)	QNTY	VALUE (000s)	QNTY	VALUE (000s)	QNTY	VALUE (000s)	QNTY	VALUE (000s)	QNTY	VALUE (000s)	QNTY
WORLD	$4,288	42166	$32	1068	$165	7736	$368	17750	$435	14564	$5,288	17748
IRAQ	$2,615	41899									$2,615	41899
YEMEN	$1,313										$1,313	
BANGLADESH	$8	400	$22	834	$150	6926	$152	13519	$97	9482	$429	31161
IRAN (ISLM.R)	$282	10500							$36	500	$318	11000
SAUDI ARABIA	$1	7	$2	12					$234	2838	$237	2857
UNTD ARAB EM	$67	4580			$14	810	$100	1536	$$6	138	$187	7064
S.AFR.CUS.UN							$74				$74	
Fans (74343)												
WORLD	$43	800	$80	2163	$52	3212	$149	8781	$156	7387	$480	22343
BANGLADESH	0	0	$16	258	$8	320	$107	6539	$71	3374	$202	10491

SOURCE: PC TAS SOFTWARE

The average price of fans exported by the local industry in the international market are given in Figure 12

FIGURE 12AVERAGE PRICE OF FANS EXPORTED FROM PAKISTAN.



10.2World Markets

The export of fans in the two categories i.e. Fans with motor less than 25W (SIC 74314) & Industrial fans (SIC 74343) are given in

Table 11. The market has been over a period of five years (1993-1997) growing at a rate of 6.4% for fans with motors less than 25 Watts (SIC 74341). With respect to quantity the market has been growing at a rate of 23%, all this slightly offset by the decline in world average prices which is by 14%. The total world market is worth $ 1.1 Billion in 1997 – 1998.

TABLE 11WORLD EXPORTS OF FANS

Fans (74341)	1993	1994	1995	1996	1997	1993-97	GROWTH
VALUE(000)	$ 808,253	$ 910,010	$1,141,921	$ 1,200,282	$ 1,104,177	$ 5,164,643	6.40%
QUANTITY	47,987,878	64,591,049	97,773,751	127,202,148	140,154,821	477,709,631	23%
AVERAGE PRICE	$16.84	$14.09	$11.68	$9.44	$7.88	$10.81	-14%
Fans (74343)							
VALUE(000)	$1,511,035	$1,810,022	$2,317,771	$2,410,918	$2,442,325	$10,492,071	10%
QUANTITY	25,390,801	29,073,062	37,053,048	11,441,528	16,030,066	118,988,506	-8%
AVERAGE PRICE	$ 59.51	$62.26	$62.55	$210.72	$152.36	$88.18	21%

Source: PC TAS Software.

From trade information available with United Nations Center of Trade and Development, an analysis of world trade of fans was conducted keeping in view the current technological capability of the industry and different markets are identified. The characteristics of these markets are discussed below.

The selected world trade statistics are given in the

Table 12 Selected World Trade Statistics. The biggest market in terms of quantity is Asia, whereas in terms of value the biggest market is Europe. A basic strategy for entrance into these markets is discussed below.

Table 12 Selected World Trade Statistics

CONTINENT	QUANTITY	VALUE	AVG.PRICE	VALUE GROWTH RATE(%)	QNTY. GROWTH RATE(%)
EUROPE	40,011,949.00	$ 1,193,640,000.00	$ 29.83	4.2%	3.8%
AFRICA	74,711.00	$ 7,191,000.00	$ 96.25	-35.44%	-2.47%
ASIA	58,101,954.00	$ 753,007,000.00	$ 12.96	8.00%	0.07%
CENTRAL AMERICA	2,739.00	$ 6,291,000.00	$ 2,296.82	34.75%	30.24%
NORTH AMERICA	38,132,284.00	$ 754,303,000.00	$ 19.78	2.95%	4.54%
SOUTH AMERICA	37,450.00	$ 103,931,000.00	$ 2,775.19	-1.28%	-1.89%
OPEC	3,659.00	$ 9,223,000.00	$ 2,520.63	-36.64%	-26.45%

SOURCE: PC TAS SOFTWARE

10.2.1 Early Entry Markets

The exports of fan are to different markets are subject to product market fit. The average export price of Pakistan's fan is $20 where as China and Taiwan are supplying fans at much cheaper rate in all markets. However, the fan produced by the domestic industry is popular in countries with similar climatic conditions as that of Pakistan. These markets should be targeted first. These markets include Africa, Central and South America. Detail of individual markets and the countries are given below, where local fan manufacturers can target their efforts.

10.2.2 Late Entry Markets

These are the markets where Pakistan cannot currently compete with other exporting countries because of price and technology. These markets have tremendous potential and should be looked upon as long term strategy by the fan manufacturers. These markets include European and American markets.

10.2.3 Africa

Continent of Africa promises a great potential for the imports of fans. The total African market is declining at a very high rate. In 1997 the quantity of imported fans have declined from a record high of 131,220 units to 74,711 units. Still for Pakistani fans the continent is an attractive market. There is a declining trend in the annual average price levels. The prices have dropped to the level of $ 96 from a high of $ 500 in 1993. The high price range indicates that it is a market for fancy, high quality and durable fans. The detail information about the 1997 traded quantity, value and average prices are given in table below.

10.2.4 Asia

In 1997 continent of Asia imported 58,101,954 units of fan for worth $ 753,000,000 dollars. The annual average price for 1997 was $ 13. The prices have increased over the last five years period. Because of this increasing trend in price range the growth rate in dollar value for the period 1993-1997 is 8% as compared to the quantity growth rate of 0.07%. The average prices are higher than the prices of Pakistani fans. As these markets

are the future potential for fan exports, hence we hope that in the coming years if technology advancement is provided to the manufacturers, we will be able to compete in this price range. The details of growth rates and prices are given in table. For country wise breakdown refer to Appendix B.

10.2.5 Central America

Central America is an attractive market for exports of fans because of the high quantity growth rate of 30%. The countries in this region imported $ 6.3 million worth of fans. The growth rate in dollar values is 34%. The price data for this region can not be explained because of high degree of discrepancies. The market share of top five countries is explained in the chart. For details and country wise breakup please refers to the Appendix. The volumes imported, average price (1997), value and growth rates are given in table below.

10.2.6 Europe

The growth rate of 4% in quantity of fan exports makes the countries included in this region an attractive target for exports of fans. The European market imported 40,011,949 units of fans in 1997 at an average price of $ 30. The prices in this region have remained somewhat stable over the last five years. The average price range is higher as compared to the average price of $ 24 for Pakistani fans. The table below shows the 1997 data for average price, quantity, value and market growth rate. For country wise details please refer to Appendix. The market shares of top 5 partners are shown by the graph.

10.2.7 North America

In quantity and dollar value terms the North-American market for imported fans is growing at the rate of 4.5% and 3% respectively. This region imported $ 754.3 million worth of fans in 1997 at an average price of $ 20. The prices have a stable trend and have varied in a narrow range of $ 19 to $21. The average price is close to the average prices of $ 25 for Pakistani fans. The country wise data is given in the Appendix. For market growth rates, average price for the region and quantity imported in 1997 please see table. The market shares of top 5 countries are shown by the graph.

10.2.8 South America

The South American region imported 37,450 units of fans for worth $ 104 million. The average prices in this region can not be explained. However, the market is shrinking experiencing a negative growth rate of 1.8% for quantity and –1.3% for dollar value terms. The table below shows the 1997 data for average price, quantity, value and market growth rate. For country wise details please refer to Appendix. The market shares of top 5 partners are shown by the graph.

10.3 Potential Markets

10.3.1 Bangladesh

Bangladesh is one of the biggest export market for Pakistani fans. The major share of the Pakistani exports is to Bangladesh, over the period of 5 years of the total fans exported 33% has been to Bangladesh. In 1997 the value of exports to Bangladesh was $97,000 where as the quantity of fans exported was 9,482 units.. Bangladesh is the first market tapped by Pakistani manufacturers, and the quality of fans exported by Pakistan is recognized in that market.

10.3.2 Iran

According to the recorded trade data for last five years it is a plus 50,000 units market. The volumes are at the same level. Pakistan is exporting good volumes of fans to this market. The fans exported from Pakistan mostly are pedestal fans and ceiling fans. Pakistani products here are known for quality and durability. So far there have been no complaints coming from this market. Pakistan exported 10,500 units in 1993 at a price of $ 27, as compared to the average price of $ 20 in the Iranian market. Pakistani fans are little expensive but the customer is willing to buy it because of it high quality and performance. Fans exported from Pakistan have 24% of the total market. The good reputation of Pakistani fans will help in exploiting and increasing the market share Pakistani fans in Iranian fan market. The Appendix B. Trade Statistics provides detail on 1997 average price for the imported fans. This also provides data about the different countries exporting fan

their volumes and prices over the last five years period. The major export partners for fans include China, Italy, Germany and Pakistan.

10.3.3 Sri Lanka

It is an emerging market. The growth rate recorded in the export market is 6%. In 1997 the quantity of the fans supplied were 69,607 units. The 1997 average price was $ 26. The average prices are closer to the prices of the fans supplied by the Pakistani manufacturers. The market gives a high growth potential and there is a demand for the pedestal fans of 52". The average temperatures are 32 to 35 centigrade. The electricity is expensive in Sri Lanka. The middle segment is 80% of the total population, which can not afford air conditioners. So the demand for fans is great. The details about the average price breakup and volumes for the major exporters are given in Appendix B. Trade Statistics.

10.3.4 Indonesia

There has been a decline in Indonesian fan imports. The imports have declined from 104,625 units in 1996 to 70,536 units in 1997. The major importers of this market are Italy, Japan, China, Korea, France and USA. The share distribution among the major players is given in Appendix B. The table also includes the last five years price, volume and quantity data. The largest share is with Italy (46%) followed by Japan (32%) and China (11%). The average price for the Indonesian market is $ 16. Over the last five years the prices have varied between $ 16 to $21. Italian firms quote the average lowest price, which is $ 5. The market high and low is $30 and $ 5. These averages are based upon data of 1997. The Pakistani fan manufacturers have not yet entered the market. In this market they have to compete against the Japanese and Chinese fans.

10.3.5 Malaysia

Malaysian imports for fans in 1993 were 362,154 units from major fan exporters. Over the period the imports have decreased and now the imports and exports are almost at the same level. In 1996 the imports were 167,807 units and imports exceeded to the level 75,612 units. So introducing fans to this market can help in wide market accessibility to other

partner countries of Malaysia. The annual average price prevailing in the market is in the range of $20 to $ 25. This average is close to the prices of Pakistani imported fans. The countries operating in the upper price bracket are Germany and Singapore with price range between $ 30 to $ 50 on average and the countries like Japan and Hong Kong are supplying for prices between $12 to $15. The import market size, prices and country wise breakup is given in Appendix B. Trade Statistics

10.3.6 Turkey

The strong players in the import market in Turkey are Germany (55%) and Italy (20%). It is because of the easy access to the European countries. The growth of the fan imports is very attractive. In 1997 the imports from major world fan exporters were 833,704 units. In 1997 the average price was $16. The fans provided by USA and Germany were in the lower price segment. The price quoted by these countries were $6 (Germany) and $5(United States of America). The details about exporter country, average prices and quantities exported are given in Appendix B.

10.3.7 Yemen

Pakistan is exporting currently to this market. The recorded exports from the major fan exporters have declined to the level of 5,755 units. And the shift is towards the smaller exporters. The competition in this market is from China, India, Germany, Italy and Japan. The average prices are lower than the prices provided by Pakistani manufacturers.

10.3.8 Saudi Arabia

The Saudi market is growing at the rate of 5%. The market size is pretty huge. In 1997 the units imported from major world exporters were 931,283 units. The average price for 1997 was $ 17. There are two distinct segments of the market. In the higher segment of the market about 112,960 units of fans were imported. The price range for these fans is between $ 44 and $ 55. Pakistan has been exporting fans to this market since early 90's. The fans exported from Pakistan are in the high price range. The average price quoted for the order in 1997 was $82 per fan. Pakistan is exporting fans to this market but the total volumes are low as compared to the total market size. The reason for this very huge market

is that Saudi Arabia is re-exporting the fans to neighboring Muslim countries. The Pakistani manufacturers are known for the high quality and durable products. It was also mentioned by GFC the biggest fan exporter that Pakistanis in this market can be of great help. He mentioned that when he first time sent fans they were sold from the retail outlet owned by a Pakistani. The details of the country wise breakup of fan's supply are given in Appendix B. The average prices for last five years are in the range of $ 20 to $ 25.

10.3.9 United Arab Emirates

Pakistan is currently entered the UAE market but the volumes exported as compared to the fan imports of UAE are very minimal. In 1997 the recorded volumes were-----, as compared to the total fan imports of UAE of 892,838. There is a strong market for Chinese and Japanese fans. The annual average prices were in the range of $ 20 to $25. But in 1997 the prices fall to the level of $ 14. This decline was because of the fans supplied by Germany and Japan for the average prices of $ 7 and $ 9. The country wise details of the fan imports to United Arab Emirates are given in Appendix B.

10.3.10 Bahrain

Bahrain is a potential export market for the Pakistani fans. The exports to Bahrain from major fan exporters are given in Appendix B. The data reported is for the last five years. The trend shows that the fan exports have increased from 44,912 fans in 1993 to 105,757 fans in 1996. The annual growth rate in Bahrain for fans export is 32% over the past five years. According to the export figures of 1997 the major share is with Japan accounting for the 63% of the fans exported by the major fan exporting countries. The average price for the imported fans in Bahrain is $ 11. The reason that Japan has such large share of the imported fans in Bahrain is the price. Japan is exporting fans to this market at an average price of $6, which is lowest as compared to $ 15 that is the average price quoted by China. The reason for this price differential apparently is the volume sold. Japan is selling 28,000 fans as compared to 2,757 fans supplied by China.

10.3.11 Oman

In Oman the exports of fan are growing at the rate of 4%. The market size in 1997 was for 135,325 units. This volume is the share provided by the major fan exporters of world. Among the top exporters of world Hong Kong is on the top of the list with 39% share of the market and USA with 33% of the market share. The average price for 1997 is $23. However the average prices were in the range of $ 12 to $ 32. If Pakistan enters the market then it competitors will be India, China, Japan and Singapore. The prices quoted by these competitors have decreased over five years period from $ 40 to $ 20. So Pakistan have to promote its product as a high quality brand to charge the premium price. The country wise breakup of the imports is given in Appendix B.

10.3.12 Qatar

The price range is close to our product prices and it is in the region with which Pakistani fan exporters are familiar. The knowledge of the neighboring countries will ease the market access and penetration. Currently the major players in this market are China, Japan, Hong Kong, Singapore and USA. Japan has a strong foothold in this market among the major exporters. The exports from Japan have 80% of the market of the top exporters of fans to Qatar. The annual average prices have declined from $ 20 to $ 13 over the last five years. The Appendix B provides the details about the five year average prices, volumes country wise.

10.3.13 Kuwait

In 1993 the exports of fan to this market were over 229,000 units. Last year the recorded exports were 154,403 units. The major export countries are Japan with 80% and USA with 12% market of the major fans exporter market. The other export partners include China, Hong Kong, Italy, Japan and India. Pakistan has not tapped the potential of this market fully. But the product has been introduced on the small scale through re-exports from Dubai and other neighboring countries. In this market also the good repute of the Pakistani fans will help in the early acceptance of the product. The product performance and qualities will also match the requirements of the market, as the climatic conditions here are

similar to Pakistan and the countries where Pakistan is currently exporting. The average prices over the period of last five years are in the range of $12 to $28. The players for the fancy or higher value fans are Singapore, Thailand and Italy, whereas China, Hong Kong, Italy and Japan are in the lower end of the market. The country wise details are given in Appendix B.

10.3.14 Jordan

The major exporters of fans to this market include Italy, China, India, Japan, Thailand and USA. The major market share is with China (37%) and Japan (45%) among the major exporters. This is also a potential market for Pakistan. Pakistani fans are being sold to this market through Dubai, which is said to be the hub for Pakistani export products. The Appendix B provides detail about the average price, quantity and dollar value of fan exports. However these are the recorded exports. The values are less than the actual level especially in case of Pakistan. In Jordan also the good repute of Pakistani fans in UAE, Saudi Arabia, Iran and Iraq will help in the early acceptability of our products.

10.3.15 Lebanon

Lebanon markets for exported fans are over 116,000 in 1997. The market is growing at a rate of 18%. The major portion of the export market is with China and Italy. The average prices for the yearly exports are in the range of $ 20 to $ 30. Last years average price was $ 22. Pakistan has not started exporting fans to this market. Pakistani fans will be cost competitive in this market as our prices are in the range of $ 20 to $ 25. The major fan exporters are China, Hong Kong, Italy, Japan, Thailand and USA. The country wise details of the Average prices, volumes and quantities are given in Appendix B. The high price players in this market are Hong Kong, Thailand and China. The Japanese, Italian and USA brands are in the lower price range.

10.3.16 Egypt

Egypt also falls in hot climatic region and the socioeconomic conditions are similar to Pakistan. There exists a market for exported fans. Currently the major exports are from India, Germany, France, Singapore, USA, Italy and Korea. Among these major exporters

the largest share is with Japan (44%) and Singapore (28%). The detail for the market share for the major fan exporters in Egypt is given in Appendix B. The average price for this market is $ 15. The high and low prices for imported fans are $ 28 quoted for fans imported from Singapore and $ 7 for Japanese fans. Pakistan has not yet supplied fans to this market but the fan manufacturers that are into fan exports declare it as a potential market and have plans to tap the potential of imported fans market in Egypt.

The market is growing at a rate of 9% over the last five years. It has increased from 80,280 units in 1993 to 111,976 units in 1997. The detail about the values and quantities is given in table bellow.

10.3.17 Kenya

The Pakistani fan manufacturers in the export business have identified African countries as their next target market. They have a plan to introduce Pakistani products to the African markets. It is a fragmented market a number of countries are accounting for small share of the total market. The major fan exporters include USA, China, India and Singapore. The average prices are in the range of $15 to $ 40. The higher price bracket includes some fancy product. The country wise break up is provided in the Appendix B. The fans from Singapore are in the higher price bracket (), whereas China and India are in the lower price segment. Pakistani fans are some where in between these price ranges.

10.3.18 Russian Federation

The market for imported fans in 1997 was 112,517 units. There is the decline in the share of the top world fan exporters for this market. The strong hold is of German fans with 80% market share. The other major brands include countries like France, India, Italy, Korea and USA. The average price for year in 1997 is $ 15. There is not much difference in the prices over the last five years. The details about the trade between Russian Federation and other major fan exporters are given in Appendix B.

10.3.19 Kazikistan/Ukraine/Uzbekistan

Kazikistan is one of the Muslim states that emerged as independent markets after the break up of Russia. It is an emerging market the growth rate in the imported fan market is 24%.

Last year the exports were 14,770 units. Pakistan has exports and imports of food products with Kazikistan. Because of this already establish trade channels market entry to Kazikistan would be easy. The prices last year were in the range of $ 10 to $ 13. The average prices in 1996 were $ 20. The major share of the export market is with Germany and US manufacturers. The growth rate in this market is attractive. The country wise details about volume sales, average prices and quantities are given in Appendix B.

10.3.20 South African CUS.UN

This market was growing at the rate of 15% from 1993 to 1996. The market share of the world top fan exporters has declined to 94,282 units in 1997. Still the market size is big enough to put an effort. While talking to the fan manufacturers about the potential export markets; they highlighted the South African Countries as their next target market. The reason given in support of this market was similar climatic conditions and the product requirements. The average prices prevailing in this market is between $ 20 to $ 38. So Competition will be on product quality and easy product availability. The current size and the major competitors in this market are given in the Appendix B.

10.4Conclusion

The export markets for fans are divided into two segments. One is the existing export market where Pakistani fan manufactured have introduced their products and their neighboring countries. . Second are the potential markets, which are identified as the world top fan importers. Both the markets have high potential for Pakistani fans.

10.4.1 Existing Export Markets

Currently Pakistan is exporting fans to Middle East. The list of the countries and the quantities exported in terms of percentage of total Pakistan exports is given in table below. Pakistan is exporting fans to these countries for last five years but the share of Pakistani fans in these markets is very small. As reported by the Manufacturers the Pakistani fans are developed a high quality image over the past years. There is room for expansion into these markets. On basis of value Nigeria is top of the list with imports worth of $ 52,809,000, followed by United Arab Emirates with imports value of $13,177,000. The top five

markets based on dollar value include Saudi Arabia, turkey and Oman. The total dollar value of fan exports to these markets is $110,511,000. In terms of quantity the total market is 14,659,640 units of fans. The biggest market with respect to quantity is Nigeria followed by Bangladesh, United Arab Emirate, Turkey and Saudi Arabia. The top five players based upon quantity and value are given in table below.

TABLE 13 TOP FIVE POTENTIAL EARLY MARKETS

COUNTRIES	QUANTITY	VALUE (000)
NIGERIA	6,754,565	$ 52809
BANGLADESH	4,127,458	$ 221
UAE	892,838	$ 13177
TURKEY	833,704	$ 7057
SAUDI ARABIA	528,933	$ 7655
OMAN	135,325	$ 3923

SOURCE: PC TAS SOFTWARE

The average prices in these markets are comparable to the average prices of Pakistani fans. The higher prices in these markets are justified by high quality image of our fans.

11 Detailed Recommendations

The industry has reached a maturity stage where there is evidence of a shake out in the form of narrowing of medium scale manufacturers, whose share has been eaten up by large scale manufacturers through filling of the product gaps in the market. Technological advancements in the industry are little and are restricted to only large scale manufacturers which are later copied by the other players in the industry. The support industry has been over the years stagnant and there has been little development in technology used. Where as the domestic demand is provided for the industry quiet adequately, the industry is not able to fully tap the potential of the foreign export market. The industry as a whole can grow at a much faster rate if it is directed towards exploiting the export potential. This however can not be achieved without developing the support industry, which comprises of small and medium enterprises and smaller manufacturers in the industry. Following recommendations are made keeping in view that with development of vendor industry the competitiveness of Pakistan fan manufacturers in terms of cost and quality will increase in the foreign markets. To be able to do that the asymmetry of information existing in the markets has to be removed, the following recommendations will help in achieving that.

11.1 Financial Reforms

Past studies have emphasized upon the need of finances increased as SMEs increase in size. The role of financial institutions has so far been minimal in financing the growth of this sector after its establishment. The role played by the government in promoting the development of SMEs has been commendable over the past years and financial institutions have been playing an important role with the government in disbursing the financial aid available to government from the international agencies and government's self allocated funds for their development. The need for availability of funds increases as the small and medium enterprise grow in size and operations. It is at this stage that the current financial system lacks the role that is expected of it.

The small and medium enterprise currently is viewed as short term risky investments and are thus neglected by the financial sector, whose major concentration has been on macro enterprises. Whereas, the track record of SMEs prove them to be positive cash flow generating enterprises and thus should be views as profitable long term investments.

However, to fully benefit from the potential of this segment certain structural changes in the system are required.

The focus of these changes are to benefit small and medium scale manufacturers; and vendors of the fan industry. The large scale manufacturers currently have enjoy good relationship with the banks and have little or no problems in securing finances for their growth needs.

11.1.1 Change Of Lending Criteria For Small And Medium Enterprises

The current collateral based lending criteria is the main hindrance, which the smaller players in the industry face while securing finances for their growth. This problem is even more critical in case of small scale manufacturers and vendors in the industry as compared to medium scale manufacturers for the lack of available fixed assets to offer as collateral. This hindrance can be over come by financing these business entities on the basis of cash flows of these firms.

In current scenario banks and other financial institutions are unable to do so because of the unavailability of expertise and resources. Expertise is required for assessing the viability of the firm and business the firm is in. Development of expertise will require resources which is another part where these institutions at the moment lack. However, the expected benefits in the form of better loan portfolio and loan repayments of the financial institutions out weigh the costs associated with providing such facilities. The ideal institution to perform this service are the local banks such as Habib Bank, United Bank and Allied Banks etc. The privatized banks at the moment are more constrained towards resources, however they can also benefit by participating more actively in this sector.

From the demand side the constraints which limit the implementation of this system are the lack of formal documentation of business transactions i.e. records of performance. However, this demand side constraint can be overcome initially by more vigorous analysis and scrutiny from the supply side before providing the finances and by educating the manufacturers and vendors in keeping better quality records and the benefits which they will drive from doing so.

11.1.2 Role of Pakistan Electric Fan Manufacturer's Association

Financial institutions can also utilize the services of Pakistan Electric Fan Manufacturers Association. The role of PEFMA will be that of an information providing agency regarding the applicant and his business. It will not act as a guarantor but rather than provider of information regarding business history of the applicant and the sharing information as to industrial situation. Banks will thus be in a better position to forecast the cash flows of an applicant with the help of information shared by PEFMA.

PEFMA can also play a more active role in which it should on its behalf secure finances from the financial institutes and distribute them amongst its members. This role would require PEFMA to act as guarantors for the members on whose behalf the loan would be made. This though calls for PEFMA to take unnecessary risk but it will increase the prestige of the organization amongst it members and other industrial organization.

11.1.3 Use Of Formal Contracts With Buyers

This recommendation is for the vendor segment of the industry. This segment is the least developed segment and has little assets to offer for collateral, furthermore the financial practices within this segment are also least developed. To assess the cash flows of this segment financial institutions can use the formal contracts made between the members of this segment and their buyers (fan manufacturers). This will enable the financing entity to evaluate the profitability of the applicant. The role of the fan manufacturers will be to vouch for the sales that the vendor has made to him over the period, which will be in the form of documented proof.

This will also benefit the government as it will be better able to assess the sales of the vendors and their tax returns.

11.1.4 Third Party Intermediation

Recognizing that financial institutes do not have available to them that much of resources as to be able to do supervised lending, which will increase their costs. To avoid that banks

can utilize the services of a consultant firm which will carry out financial analysis and suggest them the viability of a loan proposal by applicant. Firms like Small and Medium Enterprise Development Authority are already serving this purpose.

11.2Improvement In Operations

11.2.1 Develop Vendors

The vendor industry has been unable to grow and develop with the development and growth of the fan industry. This has caused the medium and large-scale manufacturers to develop in-house facilities, which require heavy investment in general, purpose assets. Because of this high degree of vertical integration the cost of manufacturing is high. In order to lower the production costs it is recommended to develop the operation of the vendors. The technical capabilities of vendors can be developed through following ways.

11.2.1.1 Role Of Large-Scale Manufacturers

Over the period large-scale manufacturers have invested heavily in technology development. They have high-speed automated lathes, plastic molding machines, die casting machines etc. These all are expensive imported machines. Because of this their cost of production is high. The economic production quantity for these machines is higher than their current production levels. So it is recommended that the large-scale manufacturers who have the financial resources should import the machine and provide it to the vendors. Hence catering to the needs of other industry players. The consolidation of orders by the industry at the vendor's level will cause faster pay back and lower per unit production cost. Another reason for this step is that the machinery involved in manufacturing of fans is general-purpose machinery, which can cater to the needs of other industries. For example the plastic injection-molding machine can cater to the needs of plastic industry, shoe manufacturers etc.

11.2.1.1.1 Incentive

- The government can offer import duty discounts on machines purchased for the purpose of developing vendor, which come under the small and medium enterprises.

- It will lower their cost of production, which is going to increase their profitability.
- This low-cost of production will allow Pakistani fan manufacturers to compete with the low-cost fans produced by countries like China and India in the international markets.
- Long-term contracts with vendors will raise the barrier to entry for this industry, which will stabilize the profitability of the manufacturers.

11.2.1.2 Role Of Medium/Small-Scale Manufacturers

Currently the medium and small-scale segment of the fan industry are using local machinery, which is their weakness. This raises their costs because of low production efficiencies and low quality output. The reason for not having imported automated machines is the scarce financial resources of the individuals. Their low volumes and low growth can not justify the individual ownership of the imported machinery. So in order to have access to the latest technology, the medium and small-scale manufacturers should confederate their financial resources and import machinery, which will cater to the needs of all the players of this segment. This machinery will be installed at the common vendor facility, which will be shared among the segment players contributing to the cost of establishment.

11.2.1.2.1 Incentive

- This will give the small and medium-scale access to new technology, which will lower their costs because of material savings without effecting quality. It will also increase the production efficiency of the players.
- Long-term cordial relationship with vendors, which will improve their bargaining power while negotiating prices with the vendor.
- They will be able to compete with the large-scale manufacturers currently dominating the market with 60% market share.
- Their improved product range and quality as a result of this step will increase the demand for their product and increase profitability.

11.2.2 Government Support

When the option of the consolidation was given to the manufacturers while conducting the survey two problems were raised regarding the recommended strategy. One was low level of trust among the players and secondly the large-scale manufacturers mentioned the threat of loosing competitive advantage. We think that if government is involved in this venture then the problem of time-sharing and mistrust can be taken care of. In addition to this government support will be required through import duty exemption on such machinery,

11.3 Promotion Of Exports

To completely tap the export potential and making fan industry directed towards exports the following suggestions are recommended

11.3.1 Availability Of Information Regarding Export Markets

The domestic industrial knowledge of export markets is low. The government should through its embassies in different countries or by Export Promotion Bureau should gather information regarding these markets and make them available to the industry.

Players in the medium and large segment at the moment has little or no information regarding the export markets and kind of product which can be sold into those markets. These players are not resourceful enough as to gather this knowledge on their own. Because of this unawareness we are loosing valuable foreign exchange.

11.3.2 Development Of Current Export Markets

Though Pakistan fan manufacturers cannot compete in some of the foreign markets but the existing trading partners and number of other countries (which have similar climatic conditions) hold tremendous potential for our fan industry. However, one reason this potential cannot be realized is lack of proper marketing and promotional activities in those markets. Export Promotion Bureau should play more active part here in promoting and marketing this product abroad. This is currently being done through trade fairs held in different countries.

Fan manufacturers should also establish strong distribution channels abroad through reputed and strong importers in that country, which will help them in building their brand name and promote the domestic industry in the foreign markets. Currently the trade channels used are small importers, which cannot promote the product except in certain small areas.

11.4 Government Regulations

11.4.1 Fixed Tax Schemes

Though the fixed tax schemes are favored by the industry and government for the mere reason of their being easy to execute and understandable. The tax scheme is in fact hurting the industry at present as it is independent of the number of units produced by the manufacturer and causes unnecessary burden on the manufacturer, especially the small scale and vendors.

However, to implement the alternative to fixed tax structure the tax payer has to be educated as to filing of the tax returns and the benefits that it will get from doing away with the fixed tax rate. This can be done with the help of PEFMA.

11.4.2 Consistent Government Policies

Government should be consistent as to the duties levied on the material imported. The medium scale manufacturers have suffered greatly because of this through the imports of electric steel, the import duty on which has varied from 10% ad volarum. Government policies have not been consistent on this import duty and it has been changing from time to time. This practice has caused many of the medium scale manufacturers to stop using electric sheet and switch to the use of metal sheet or drum sheet. Which has effected negatively on the product quality of these manufacturers.

11.4.3 Rebates

Currently rebates offered to fan manufacturers is around 5% which is not much of an incentive to promote exports. Government should increase the rebates offered so that there should be much incentive for the fan manufacturers to explore the international markets.

11.4.4 Reduction In Import Duties

Currently electric sheet, which is the major contributor towards quality of the fan is being charged with 10% of import duty, this duty should be reduced so as to enable smaller manufacturers to use this and improve the quality of the product.

The use of electric sheet will also benefit the government in terms of savings in electricity consumption by consumer.

11.4.5 Incentive For Installation Of Modern Plants

Currently Pakistan fan manufacturers are at disadvantage regarding their prices in some developed market of the world, where the can compete with fan manufacturers of Taiwan, China and other countries. The highlighted reason for this is the manufacturing process or technology employed currently, to be able to enter and compete in those markets investments in technology and modern plants has to be made. Government should provide incentives in form to rebates or other tax incentives to make the environment more conducive for investments of such type.

11.5Role of Pakistan Electric Fan Manufacturer's Association

Apart from the role it should play in the above mentioned recommendations PEFMA should actively work for improving the conditions of the industry.

Since, the current training institutes available in Gujrat and Gujranwala are not providing the skills to the work force up to the satisfaction of manufacturers. And the need for proper training is felt in the industry both in technical as well as managerial areas. PEFMA should provide for the training need for the industry.

The managerial skills that were highlighted as essentially needed by the industry include import export procedures and financial reporting. This will improve industry chances in international markets as well as domestic financial market.

PEFMA should also complete the training institute funded by World Bank and Ministry of Science and Technology which because of lack of funds is incomplete. The funds should be collected from its member as was in the initial plan.

Apart from this PEFMA should issue a news letter which should inform its members about the conditions and practices in the local market as well as the opportunities in the foreign market and the latest developments in the technology employed fan manufacturing around the world.

12 Methodology

12.1 Objectives

This research study has been conducted with the purpose to achieve the following objectives:

1. To analyze the dynamics of the fan industry, evaluate the value chain of this industry and to study the market forces as to remove any asymmetry of information prevailing in the following areas
    - Labor force
    - Technological
    - Financial
    - Government
2. To propose recommendation which will assist SMEDA to devise policies so as to improve the performance of the industry.

12.2 Research Methodology

The salient features of research methodology used are as follows

12.2.1 Secondary Data

Various reports written on SMEs and Fan Industry were used to gather information. The List of these publications are given in bibliography. The trade statistics were taken from PC TAS software.

12.2.2 Primary Data

Primary data was gathered by conducting, in-depth interviews of fan manufacturers in the industry, vendors of these manufacturers and their distributors. Data regarding the dynamics of market elements operating upon the industry were gathered by interviewing representatives of financial institutions and chairman of Pakistan Electric Fan Manufacturers Association.

To substantiate or verify the results of the interviews and to have better understanding of the common practices of medium and small scale manufacturers in the industry, drop in questionnaires were also used. The significance of these questionnaires was to validate the general practices in the industry, which the researchers discovered during the research.

12.2.3 Research Technique

In-depth interviews were employed to collect primary data. The nature of the study demanded a comprehensive analysis of fan industry. This required detailed information about various aspects of the industrial practices. In order to achieve this purpose, interviews seemed to be the most appropriate research technique.

12.2.4 Survey Type

Researcher had the choice between interviewer administered or self-administered questionnaires. The decision to employ interviewer-administered questionnaire to gather primary data was made due to the fact that most of the questions were open ended and required explanation and guidance by the interviewer. Also the researcher had to probe the responded to provide minute details of the industrial practices.

12.2.5 Sampling Plan

The three distinct segments in the industry are Large scale manufacturers, Medium scale manufacturers and Small scale manufacturers. Their segmentation is based upon their production capacity, with large scale manufacturers producing between 50,000 units to 200,000 units; medium scale manufacturers produce between 10,000 units to 50,000 units whereas, the small scale manufacturers produce only 1,500 units to 10,000 units. The sample of fan manufacturers was drawn with the help of Chairman and Secretary of Pakistan Electric Fan Manufacturers from the list of registered firms, apart from the large scale manufacturers which totaled 8, 30 to 50 players each were identified from the two smaller segments. All these firms belonged to Gujrat and Gujranwala cities as the fan manufacturing industry is concentrated in these two cities.

The selection of the firms for detailed interviews was done on the basis of convenience sampling depending upon the accessibility of the manufacturers. Whereas for the drop in

questionnaires the firms were selected from the identified list provided by the secretary of PEFMA.

12.2.6 Target Population

12.2.6.1 Manufacturers

The manufacturers identified for the survey belonged to the cities of Gujrat and Gujranwala, which are the industrial hubs. The total number of large scale manufacturers is 8, 5 belonging to Gujrat city and 3 belonging to Gujranwala. The number of operating medium scale manufacturers is 50, whereas the total number of small scale manufactures are 420.

12.2.6.2 Vendors

There are about 1,000 vendors supplying to the fan manufacturers located in Gujrat and Gujranwala. Researchers were unable to obtain a comprehensive list of all the vendors as this segment is the most fragmented, fan manufacturers helped to identify the various vendors.

12.2.6.3 Distributors/Retailers

Researchers defined all the distributors/retailers in Lahore as the target population.

12.2.6.4 Financial Institution

Development financial institutions and other local commercial banks were defined as the population.

12.2.7 Sampling Method

12.2.7.1 Manufacturers

PEFMA Chairman was consulted so as to assist the researcher to segment the manufactures in large, medium and small category. Based on his input 8 large, 50 medium and 422 small players were identified. These firms were categorized based on annual production of the fans. Firms producing more than 50,000 fans were categorized as large,

firms manufacturing between 10,000-50,000 were categorized as medium the remaining were considered as small scale manufacture. The respondents were selected based on convenience.

12.2.7.2 Vendors

Due to time constraints study of all the vendors was not possible therefore the researcher limited their study to vendors who were supplying parts which were important in terms of cost to the fan manufacturers. Based on this criteria five parts were identified: guard, lock nut, blades, fan base and steel rod (stalk). The researcher interviewed vendors identified by the fan manufacturers.

12.2.7.3 Distributors/Retailers

Manufacturers identified their distributors in Lahore. Researcher interviewed these on the bases of convenience.

12.2.7.4 Financial Institutions

Researcher selected banks, which have over the years extended loan facility to the fan industry.

12.2.8 Sample Size

12.2.8.1 Manufacturers

Five in-depth interviews were conducted in each of the three segments of the fan manufacturers. In addition to the in-depth interviews, 20 questionnaires were also dropped at medium scale manufacturers and small scale manufacturers.

12.2.8.2 Vendors

Two in-depth interviews of each of the selected parts were conducted.

12.2.8.3 Distributors/Retailers

Researchers conducted ten interviews of the distributors/retailers in Lahore.

12.2.8.4 Financial Institutions

Three interviews of representatives of the financial institution were conducted.

12.2.9 Data Gathering Instrument

Separate questionnaires were designed in English for the different members of the value chain. In case of the manufacturers, two questionnaires were designed. The rational for designing two questionnaires was the fact that due to the scope of work and time constraint only 15 manufacturers were interviewed. For these interviews detailed questionnaire in English was designed. In order to substantiate the findings a shorter questionnaire in Urdu was designed which focused on the key area of concern. This questionnaire was dropped at the facility of twenty manufacturers.

12.2.10 Questionnaire Design

The questionnaire consisted mainly of *open-ended* questions. Background research in the form of secondary data and detailed interview with Mr. Illayas Chaudary had already been done, the findings were used to design questionnaire covering all the various areas of interest. The rational for having pre-dominantly open-ended questions was to solicit replies which reflected the operations of the individual companies. And it was felt that if close-ended question were used than the richness of responses will be lost.

The questionnaire was pre-tested before data collection to indicate any potential problems. In appendix A

12.3 Limitation

- The sample size for some segments of the industry is very small therefore the results are not statistically significant. However, to overcome this limitation a separate questionnaire in urdu was designed to be filled by small scale manufacturers and medium scale manufacturers.

- Due to lack of time and resources the sample for the different segments of fan industry was drawn from the cities of Gujrat and Gujranwala, whereas the sample for Distributors was drawn from Lahore.
- Lack of time and resources, the researchers relied on convenience sampling, hence the results may not be representative of the population.
- Due to the length of questionnaire some bias may be created because of respondent's fatigue.
- The data on foreign markets was collected from PC TAS software, however, due to unavailability of resources detailed product or market specifications could not be made available. Therefore, the data on international trade only represents the volume of fans of SIC 74314, which represents the fan with less than 125 watt motor.

13 Appendix A: Questionnaire

13.1 Detailed interview with Manufacturers and Vendors

I. GENERAL INFORMATION

1. Name of the firm _____
2. Address _____
3. Respondent Name _____
   - 3.1. Designation _____
   - 3.2. Qualification _____
   - 3.3. Years on the post _____
   - 3.4. Years of experience in the industry _____

4. Firm's year of establishment _____
5. What percentage of your business is in fan? (As percentage of your firm's total revenue)

6. Types of fans the firm makes and the percentage of capacity for each type.

Type of fan	**% age of capacity assigned**
Ceiling fans	
Pedestal fans	
Exhaust fans	
Bracket fans	
Table fans	
Industrial fans	
Others	

II. PRODUCTION

1. What percentage of your production is the customized products.

TYPE OF PRODUCT	**% AGE OF PRODUCTION**
Customized	

2. Please state the nature of customization you offer to your customers?

_____

_____

3. For how many months in a year do you produce fans?

Number of months	

4. What percentage of the production is against advanced orders?

Percentage of advanced orders	

5. Show the process flow diagram and ask for differences.

6. Which of the following steps you follow for quality assurance and to what extent do you have ---for checking each of the following? ***(RATE ON THE SCALE OF 1 TO 5,"1" BEING VERY UNIMPORTANT AND "5" BEING VERY IMPORTANT)***

MEASURES					
Stringent raw material specifications	1	2	3	4	5
Raw material quality checks at the facility	1	2	3	4	5
In process quality checks	1	2	3	4	5
End of the line quality checks	1	2	3	4	5
Others.(Please specify)					
	1	2	3	4	5
	1	2	3	4	5
	1	2	3	4	5

7. What is your lead-time in fulfilling orders from the customers (Distributors)?
Less than 1 month Less than 3 months Less than 6 months

8.Do you forecast and what is your forecasting period?
Do not forecast Between 6 and 9 months
Less than 3 months Between 3 and 6 months
Others (Please specify) Between 9 and 12 months

9. What percentage of your cost of goods sold id direct labor cost?

Direct labor cost as %age of COGS	

10. What percentage of total installed machinery is locally manufactured?

TYPE	**%AGE**
Locally manufactured	

III. HUMAN RESOURCES

1. Total number of employees

GROUPS	NO. OF PERMANENT EMPLOYEES	NO. OF TEMPORARY EMPLOYEES
Managerial/ Supervisory		
Skilled labor		
Unskilled labor		
TOTAL		

2. What pay structure do you follow for the following groups? And if more than one than please state the %age of employees in that pay structure?

GROUPS	**PIECE RATE**	MONTHLY
Managerial /Supervisory		
Skilled labor		
Unskilled labor		

3. What is the average wage rate of the following employee groups over last three years?

GROUPS	**1998**	**1997**	**1996**
Managerial/Supervisory			
Skilled			
Unskilled			

YES NO

4. Is your labor unionized?

If "Yes", then please state the name of the union. _____

5. What fringe benefits do you offer to your employees?

BENEFITS	**MANAGERIAL/SUPERVISORY**	**SKILLED LABOR**	**UNSKILLED LABOR**
Medical			
Transport			
Bonus			
Others (Please specify)			

6.***Please state the criteria for hiring.(Please use the following table to record the answer)***
(RATE ON THE SCALE OF 1 TO 5,"1" BEING VERY UNIMPORTANT AND "5" BEING VERY IMPORTANT)

CRITERIA	**MANAGERIAL**					**SUPERVISORY**					**SKILLED LABOR**					**UNSKILLED LABOR**				
Experience	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
Age	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
Education	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
Residence	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
Recommendations	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
Others. (Please specify)																				
	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5

7. On what basis do you fire your employees
(RATE ON THE SCALE OF 1 TO 5,"1" BEING VERY UN IMPORTANT AND "5" BEING VERY IMPORTANT)

CRITERIA	**MANAGERIAL**					**SUPERVISORY**					**SKILLED LABOR**					**UNSKILLED LABOR**				
Lack of cooperation	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
Poor performance	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
Seasonality	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
Others. (Please specify)																				
	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5

8. In the past years what has been the turnover among your employees.

GROUPS	TURNOVER (PAST YEARS)	
	1998	1995
Managerial/ Supervisory		
Skilled labor		
Unskilled labor		

REASONS:

IV. TRAINING/DEVELOPMENT

1. Are you satisfied with the level of technical skill of your work force?
(RATE ON THE SCALE OF 1 TO 5,1 BEING COMPLETELY DISSATISFIED AND 5 BEING COMPLETELY SATISFIED)

CRITERIA	**MANAGERIAL**					**SUPERVISORY**					**SKILLED LABOR**					**UNSKILLED LABOR**				
Managerial / Supervisory	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
Skilled labor	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
Unskilled labor	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
Others. (Please specify)																				
	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5

2. Do you have any training programs for your employees? YES NO
If yes How many from each of the following group have you sent for training?

TRAINING FOR	**NUMBER OF EMPLOYEES**	DURATION **(MONTHS)**
Managerial/Supervisory		
Skilled Workers		
Unskilled Workers		

3. Please name the training institutes you have used for the training of your workers and the level of your satisfaction with their training. ***(RATE ON THE SCALE OF 1 TO 5,1 BEING COMPLETELY DISSATISFIED AND 5 BEING COMPLETELY SATISFIED)***

TRAINING INSTITUTES	**COMPLETELY SATISFIED**				**COMPLETELY UNSATISFIED**
	1	2	3	4	5
	1	2	3	4	5

4.Do you think fan industry need training institutes? Yes No

5. What type of training should they provide and how important is it for your firm?
(RATE ON THE SCALE OF 1 TO 5,1 BEING COMPLETELY DISSATISFIED AND 5 BEING COMPLETELY SATISFIED)

NATURE OF TRAINING					
Technical training	**1**	**2**	**3**	**4**	**5**
Managerial training	**1**	**2**	**3**	**4**	**5**
Training in Designing	**1**	**2**	**3**	**4**	**5**
Marketing and selling activities for exports	**1**	**2**	**3**	**4**	**5**

V. SALES

1. Please specify breakdown of your sales by customers

	1998	TREND (INDIVIDUAL)	
Customer	**% age**	1997	**1995**
Direct to end user			
Distributor			
Dealer			
Retailer			

2. Please state following information.

NUMBER OF	1998	1997	1995
Sales man			
Dealers			
Company owned outlets			

3. Do you sell your product under your own brand name? ❑ YES ❑ NO

Brand name: _____

Otherwise: _____

4. What is the pay structure for the sales force?

Salary	Commission	Salary plus commission

5. What are the selection criteria for the Dealers?

(Rate at the scale of 1 to 5, 1 being very important & 5 being least important)

CRITERIA	VERY IMPORTANT				LEAST IMPORTANT
Coverage	1	2	3	4	5
Warehouse facility	1	2	3	4	5
Financial strength	1	2	3	4	5

6. What sorts of services do the Dealers/Distributors provides to the customers?

7. Does your company have sales contracts with any of the following?

INSTITUITIONS

Army	❑ YES	❑ NO
Hospitals/Health Institutes	❑ YES	❑ NO
Government departments	❑ YES	❑ NO
Others		
	❑	❑
	❑	❑

8. What is your trade strategy in off-season?

_____

_____

_____

_____

9. In past five years how many new products did you introduced in the market?

Number of product _____

10. Please give the description of the product and from where the need was generated.

TYPE OF PRODUCT	NEED GENERATED
1.	
2.	
3.	
4.	

11. Please state the pricing policy followed by you.

12. How do you advertise (media selection) your product and who is your target market?

13. What is your advertising budget as a percentage of sales?

14. Do dealers and other members of trade take part in promotion and advertising?

❑ YES ❑ NO

15. Please give the structure of trade channel.

16. Have you segmented the end user market? Please specify the segments

17. Please specify the products designed for different segments.

VI. EXPORTS

If you are in business of exporting your products to other countries please answer the following other wise go to question Number 9

1. Are you exporting your products? ❑ YES ❑ NO

2. Please state, which countries are you exporting your products and the number of years that you are exporting?

COUNTRIES	No. OF YEARS	VOLUMES

3. Are you exporting under your own brand name? ❑ YES ❑ NO

4. Why are you following this strategy?

5. Which mode or forum are you using for introducing your product in the foreign markets? If you used any government agencies please name them and the efforts made by them

6. What difficulties did you face in entering these markets?

7. How would you like Government agencies to intervene and facilitate in the export process?

8. Have you in the past participated in any Trade Fairs? Was it of any help?

NAME OF THE TRADE FAIR	YEAR	COUNTRY

9. Do you believe that an export market exists for products? ❑ YES ❑ NO

Please state your reasons for each product category?

10. If the answer to the above question is YES. Please state the region(s) in the world where you believe that you can export your product?

VII. Government Regulation

1. Please list 5 government regulation, which are beneficial for your industry?

2.Please list 5 government regulation, which are detrimental for your industry?

3. What do you consider the major threats to your business in the coming years?

4. In your opinion what should the government do to boost this industry?

5. Would you like to share resources with your competitors? ❑ YES ❑ NO

6.Please give details of a project, which will enhance the performance of your organization and you, would like to carry it out for your organization if you had the resources.

V. OPERATIONS
Vendors

1. What are your criteria for vendor selection Please rate the following on a scale of 1 to 5 as to their importance. (1 BEING LEAST IMPORTANT AND 5 BEING MOST IMPORTANT)

	LEAST IMPORTANT				MOST IMPORTANT
Market reputation of the vendor.	1	2	3	4	5
Technical capability of the vendor.	1	2	3	4	5
Vendor firm size.	1	2	3	4	5
Past experience.	1	2	3	4	5
Other's please specified.	1	2	3	4	5

1b. Of the total components used, how many are produced by vendors (out sourced) in
1998 _____
1995 _____

1c. Has there been any attempt in the past five years to develop expendabilities in house for the components that have been out source? ❑ YES ❑ NO

Reasons
_____
_____
_____
_____

Of the following components used by your firm please state the following.

	Component	No. of Sub-Contractor	Choices Available	City	Quality Control Checks	Level of Satisfaction
1						
2						
3						
4						

How long have you been working with your sub-contractors.
Min Years _____, Max Years _____, Average Years _____.

3. What percentage of your vendor's output does your firm purchase?

	MARK THE APPROPRIATE
More than 90%	❑
More than 75%	❑
More than 50%	❑
More than 25%	❑

4. Do you provide any of the following to your subcontractors?

Advance Payments	❑ YES	❑ NO
Organized Production	❑ YES	❑ NO
Provide Technology Assistance	❑ YES	❑ NO
Lend Machine Equipment	❑ YES	❑ NO

5. Write the steps followed in process flow and draw process flow diagram.

6. Please specify the kind of process followed.

TYPE OF PROCESS		
Continuous	❑ Yes	❑ No
Batch	❑ Yes	❑ No
Job shop	❑ Yes	❑ No
Hybrid	❑ Yes	❑ No

VI Procurement

Supplier

1. What percentage of input do you buy from the following sources and are they readily available in required quantity and quality.

TYPE OF INPUTS	LOCATION FO SOURCE		AVAILABILTY IN QUANTITY REQUESTED		AVAILABILTY IN QUALITY REQUESTED	
	LOCAL	ABROAD	YES	NO	YES	NO
Silver/Aluminum			❑	❑	❑	❑
Other Metals			❑	❑	❑	❑
Enamel Copper Wire			❑	❑	❑	❑
Plastic Components			❑	❑	❑	❑
Capacitor			❑	❑	❑	❑
Bearings			❑	❑	❑	❑
Paint			❑	❑	❑	❑
New Machinery			❑	❑	❑	❑
Second hand Machinery			❑	❑	❑	❑
Other inputs 1 Specify			❑	❑	❑	❑
Other inputs 1 Specify			❑	❑	❑	❑

2. Do you use electric sheets (ES) or drum sheets (DS)?

ES DS Both

VII FINANCE

1. Do you take loans for your business, please mention sources?

2. What is your estimated debt to equity structure?

3. Of the areas listed below, please state your levels of investments over the last 5 years and your future investments plan

	LAST 5 YEARS	**FUTURE**
Capacity expansion		
Product development		
Advanced technology/equip		
Marketing/sales		
Backward integration		
Training		
Others		

4. Please rate the extent of difficulties you face in obtaining credit from the following sources

Banks	1	2	3	4	5
DFI's	1	2	3	4	5
Others *(Others please specify)*					
	1	2	3	4	5
	1	2	3	4	5
	1	2	3	4	5

5. What are your sources of equity?

6. What are your sources of debt?

13.2 Detailed questionnaire for distributors

1. What are your terms of sale?

TERMS			
Cash	❑ Yes	❑ No	
Installments	❑ Yes	❑ No	Monthly
Credit	❑ Yes	❑ No	Duration

2. What are the terms of procurement from your distributors?

TERMS			
Cash	❑ Yes	❑ No	
Installments	❑ Yes	❑ No	Monthly
Credit	❑ Yes	❑ No	Duration

3.What are the lead-time for order placed with the manufacturer?

Lead time (days) _____

4. Do you use financial institutes credit facility and for what purpose?

❑ Yes ❑ No

5. Please specify the number of employees their designation and pay structure also.

Number of employees _____

Designation	**Pay structure**	**Pay**

6. Please give the capital investment required to startup this business of yours.

Capital investment required _____
Working capital required _____
Investment in Inventory _____

Marketing

1. What is your annual sales volume in rupees as well as in units?

Rupee Sales	1998	1997	1996
Unit Sales	**1998**	**1997**	**1996**

1a. Please give the product wise sales breakup?

Type of fan	% age Sales this year	% age Sales last year
Ceiling fan		
Pedestal fan		
Table fan		
Bracket fan		
Exhaust fan		

2. What is your percentage margins on different types of fans?

TYPE OF FAN	% AGE MARGIN
Ceiling fan	
Pedestal fan	
Table fan	
Bracket fan	
Exhaust fan	

3. What pricing policy do you follow?

PRICING POLICY	FOLLOWED BY YOU
Company fixed prices	
Dealers fixed prices	
Others	

4. Are you contributing to Advertising and promotion with the manufacturer?

Your policy ❑ Yes ❑ No

5. Are you in a position to influence customer to buy a certain brand?

❑ Yes ❑ No

6. Do you deal in imported products?

❑ Yes ❑ No

7. What are the factors influencing purchase of the fan? (***PLEASE RATE THE FOLLOWING FACTORS ON A SCALE OF 1-5. 1 FOR LEAST IMPORTANT AND 5 FOR VERY IMPORTANT)***

Quality	1	2	3	4	5
Brand	1	2	3	4	5
Durability	1	2	3	4	5
Service	1	2	3	4	5
Warranty	1	2	3	4	5
Others	1	2	3	4	5
	1	2	3	4	5

8. Do customers ask for special features, which you are unable to provide? If yes please mention those features.

- ❑ Yes
- ❑ No

_____
_____
_____

9. Reasons for purchase of local brands.

_____
_____
_____
_____
_____

10. Reasons for purchase of imported brands.

_____
_____
_____
_____

11. Complaints regarding fans.

TYPES	COMPLAINTS

13.3 Questionnaire for financial institutes

1. Please state your criteria for offering loans for Small and Medium Enterprises?

2. What type of Loans/Credit Facilities do you offer Small and Medium Enterprises?

CREDIT FACILITIES	OFFERED		%AGE
Working capital	❑ Yes	❑ No	
Long term loans	❑ Yes	❑ No	
Short term loans	❑ Yes	❑ No	
Line of credit	❑ Yes	❑ No	
Others (Please specify)			
	❑ Yes	❑ No	
	❑ Yes	❑ No	

3. In the small and medium enterprises, have you extended credit/loan facility to Fan Manufacturers?

❑ Yes ❑ No

4. If the answer to the above question is "No", please state the reasons for not extending these facilities to them?
Reasons:

5. If "Yes", please state the type of credit/loan facilities that you have extended to them?

CREDIT FACILITIES	OFFERED		%AGE
Working capital	❑ Yes	❑ No	
Long term loans	❑ Yes	❑ No	
Short term loans	❑ Yes	❑ No	
Line of credit	❑ Yes	❑ No	
Others (Please specify)			
	❑ Yes	❑ No	
	❑ Yes	❑ No	

6. Of your loan portfolio what percentage is given to fan manufacturers? _____ %age

7. What are your criteria for lending to small and medium enterprises?

8. What risk category do fan manufacturers fall into?
❑ Below average ❑ Average ❑ Above average

9. Please tell us the default rate of fan manufacturers?
❑ Below average ❑ Average ❑ Above average

14 Appendix B. Trade Statistics

FAN IMPORTS OF BANGLADESH	QNTY	PRICES	VALUE	QNTY	PRICES	VALUE	QNTY	PRICES	VALUE	QNTY	PRICES	VALUE	QNTY	PRICES
REPORTER COUNTRY	1993	1993	1994	1994	1994	1995	1995	1995	1996	1996	1996	1997	1997	1997
CHINA	2855	6	764000	3041	251	874000	33879	26	160000	16982	9	87000	11226	8
INDIA	3735	19	210000	8700	24	328000	15758	21	511000	22398	23	0		
KOREA	0		62000	1000	62	0	0		25000	3000	8	0		
SINGAPORE	1302	43	71000	4058	17	174000	13052	13	18000	366	49	51000	1232	41
THAILAND	1427	41	106000	3195	33	220000	10150	22	0			83000	4115000	20
TOTAL	9319	27	1213000	19994	19	1596000	72839	20	714000	42746	22	221000	4127458	23

FAN IMPORTS OF EGYPT	QNTY	PRICES	VALUE	QNTY	PRICES	VALUE	QNTY	PRICES	VALUE	QNTY	PRICES	VALUE	QNTY	PRICES
REPORTER COUNTRY	1993	1993	1994	1994	1994	1995	1995	1995	1996	1996	1996	1997	1997	1997
FRANCE	0		11000	1000	11	77000	2000	39	16000	13	1231	15000	1000	15
GERMANY	2000	21	78000	8000	10	32000	1000	32	36000	2000	18	66000	2000	33
INDIA	3030	18	50000	4000	13	232000	13780	17	225000	14800	15	0		
ITALY	18000	5	9000	1000	9	121000	11000	11	122000	15000	8	247000	26000	10
JAPAN	55000	11	10	0		35000	1000	35	105000	11000	10	354000	50000	7
KOREA	0		93000	20000	5	0	0		96000	22000	4	0		
SINGAPORE	1500	19	19000	663	29	158000	5620	28	301000	12061	25	885000	31639	28
USA	750	53	28000	810000	35	36000	43000	837	421000	3559	118	170000	1337	127
TOTAL	80280	12	288010	844663	16	691000	77400	27	1322000	80433	28	1737000	111976	15

FAN IMPORTS OF INDONESIA	QNTY	PRICES	VALUE	QNTY	PRICES	VALUE	QNTY	PRICES	VALUE	QNTY	PRICES	VALUE	QNTY	PRICES
REPORTER COUNTRY	1993	1993	1994	1994	1994	1995	1995	1995	1996	1996	1996	1997	1997	1997
CHINA	63359	28	3341000	15381	217	2651000	35980	74	1509000	55563	27	2904000	7876	369
FRANCE	5000	3	841000	41000	21	161000	17000	9	0	0		0	0	
GERMANY	0		8	0		13000	1000	13	14000	1000	14	59000	2000	30
ITALY	0		0	0		22000	2000	11	21000	4000	5	154000	33000	5
JAPANESE	38000	20	670000	42000	16	571000	36000	16	764000	41000	19	296000	23000	13
KOREA	0		363000	16000	23	177000	15000	12	46000	3000	15	0		
USA	613	109	9000	1000	9	32000	3000	11	52000	62	839	56000	4660	12
TOTAL	106972	17	5224008	115381	17	3627000	109980	21	2406000	104625	16	3469000	70536	16

FAN IMPORTS OF IRAN	QNTY	PRICES	VALUE	QNTY	PRICES	VALUE	QNTY	PRICES	VALUE	QNTY	PRICES	VALUE	QNTY	PRICES
REPORTER COUNTRY	1993	1993	1994	1994	1994	1995	1995	1995	1996	1996	1996	1997	1997	1997
CHINA	36898	12	20000	2571	8	20000	2635	8	0	0		404000	30255	13
GERMANY	15000	20	177000	8000	22	3	0		21000	1000	21	17000	1000	17
ITALY	6000	34	52000	19000	3	0	0		0	0		86000	10000	9
USA	0		79	0		0	0		0	0		0	0	
TOTAL	57898	22	249079	29571	15	20003	2635	8	21000	1000	21	507000	41255	13

FAN IMPORTS OF JORDAN	QNTY	PRICES	VALUE	QNTY	PRICES	VALUE	QNTY	PRICES	VALUE	QNTY	PRICES	VALUE	QNTY	PRICES
REPORTER COUNTRY	1993	1993	1994	1994	1994	1995	1995	1995	1996	1996	1996	1997	1997	1997
CHINA	56462	24	1118000	32968	34	823000	11849	69	342000	30851	11	808000	13267	61
INDIA	0		26000	1160	22	49000	1710	29	53000	2070	26	0		
ITALY	8000	7	31000	3000	10	85000	10000	9	729000	58000	13	103000	6000	17
JAPAN	17000	9	333000	36000	9	169000	16000	11	232000	25000	9	112000	16000	7
THAILAND	0		62000	1610	39	0	0		0			11000	223	49
USA	0		44000	2027	22	46000	3600	13	142000	218	651	10000	9	1111
TOTAL	81462	13	1614000	76765	23	1172000	43159	26	1498000	116139	15	1044000	35499	34

FAN IMPORTS OF KAZIKISTAN	QNTY	PRICES	VALUE	QNTY	PRICES	VALUE	QNTY	PRICES	VALUE	QNTY	PRICES	VALUE	QNTY	PRICES
REPORTER COUNTRY	1993	1993	1994	1994	1994	1995	1995	1995	1996	1996	1996	1997	1997	1997
CHINA	169	24	246000	7250	34	22000	1430	15	0	0		0	0	
GERMANY	2000	57	8	0		0	0		3	0		47000	6000	8
KOREA	4000	8	0	0		81000	8000	10	117000	6000	20	0		
USA	0		0	0		0	0		0	0		114000	8770	13
TOTAL	6169	30	246008	7250	34	103000	9430	13	117003	6000	20	161000	14770	8

FAN IMPORTS OF KENYA	QNTY	PRICES	VALUE	QNTY	PRICES	VALUE	QNTY	PRICES	VALUE	QNTY	PRICES	VALUE	QNTY	PRICES
REPORTER COUNTRY	1993	1993	1994	1994	1994	1995	1995	1995	1996	1996	1996	1997	1997	1997
CHINA	6887	18	76000	20803	4	74000	5893	13	75000	6718	11	22000	1955	11
INDIA	232	26	27000	1577	17	54000	2999	18	53000	1955	27	0		
SINGAPORE	92	43	66000	1777	37	165000	1815	91	15000	194	77	4000	276	14
USA	0		223	0		0	0		0	0		0	0	
TOTAL	7211	29	169223	24157	19	293000	10707	40	143000	8867	19	26000	2231	13

FAN IMPORTS OF KUWAIT	QNTY	PRICES	VALUE	QNTY	PRICES	VALUE	QNTY	PRICES	VALUE	QNTY	PRICES	VALUE	QNTY	PRICES
REPORTER COUNTRY	1993	1993	1994	1994	1994	1995	1995	1995	1996	1996	1996	1997	1997	1997
CHINA	53049	25	1685000	51300	33	135000	13560	10	245000	34170	7	68000	6089	11
HONGKONG	19036	36	607000	14250	43	227000	16880	13	675000	49620	14	89200	1424	63
INDIA	15125	18	180000	10130	18	479000	24672	19	399000	26788	15	0		
ITALY	13000	10	170000	16000	11	106000	7000	15	383000	33000	12	46000	890	52
JAPAN	111000	12	1870000	141000	13	1611000	124000	13	923000	82000	11	1242000	125000	10
SINGAPORE	5569	46	83000	2027	41	11000	808	14	2000	122	16	2000	200	10
THAILAND	2304	35	81000	2114	38	16000	500	32	0			90000	2800	32
USA	10000	9	42000	440	95	28000	24000	1	0	0		87000	18000	5
TOTAL	229083	24	4718000	237261	28	2613000	211420	17	2627000	225700	12	1624200	154403	26

FAN IMPORTS OF LEBANON	QNTY	PRICES	VALUE	QNTY	PRICES	VALUE	QNTY	PRICES	VALUE	QNTY	PRICES	VALUE	QNTY	PRICES
REPORTER COUNTRY	1993	1993	1994	1994	1994	1995	1995	1995	1996	1996	1996	1997	1997	1997
CHINA	15660	58	612000	14465	42	1439000	22210	65	1134000	49500	23	1967000	45916	43
HONGKONG	1575	32	113000	2918	39	0	0		3000000	25000	120	0	0	
ITALY	34000	9	213000	22000	10	252000	21000	12	368000	36000	10	404000	45000	9
JAPANES	3000	11	59000	5000	12	114000	10000	11	116000	12000	10	107000	13000	8
THAILAND	2736	38	142000	3760	38	193000	5110	38	0			195000	6651	29
USA	2500	12	18000	9000	2	65000	79	823	36000	1970	18	103000	5467	19
TOTAL	59471	27	1157000	57143	28	2063000	58399	31	4654000	124470	15	2776000	116034	22

FAN IMPORTS OF LIBYA	QNTY	PRICES	VALUE	QNTY	PRICES	VALUE	QNTY	PRICES	VALUE	QNTY	PRICES	VALUE	QNTY	PRICES
REPORTER COUNTRY	1993	1993	1994	1994	1994	1995	1995	1995	1996	1996	1996	1997	1997	1997
CHINA	8251	11	8000	1085	7	88000	5632	16	48000	4500	11	0	0	
GERMANY	8000	28	123000	4000	31	62000	1000	62	28000	1000	28	163000	4000	41
ITALY	9000	17	79000	3000	26	4000	1000	4	34000	2000	17	26000	4000	7
TOTAL	25251	19	210000	8085	21	154000	7632	27	110000	7500	19	189000	8000	24

FAN IMPORTS OF MALAYSIA	QNTY	PRICES	VALUE	QNTY	PRICES	VALUE	QNTY	PRICES	VALUE	QNTY	PRICES	VALUE	QNTY	PRICES
REPORTER COUNTRY	1993	1993	1994	1994	1994	1995	1995	1995	1996	1996	1996	1997	1997	1997
GERMANY	0		84000	3000	28	32000	1000	32	210000	6000	35	124000	7000	18
HONGKONG	2700	24	69000	6374	11	289000	13228	22	82000	3485	24	45000	2200	20
JAPANESE	311000	9	1335000	109000	12	1487000	75000	20	541000	38000	14	691000	60000	12
SINGAPORE	45970	20	2358000	57858	41	1899000	42528	45	1991000	25937	77	2818000	37978	74
USA	2484	191	59000	494	119	2070	173	12	177000	2190	81	145000	4370	33
TOTAL	362154	18	3905000	176726	23	3709070	131929	26	3001000	75612	24	3823000	111548	21

FAN IMPORTS OF NEPAL	QNTY	PRICES	VALUE	QNTY	PRICES	VALUE	QNTY	PRICES	VALUE	QNTY	PRICES	VALUE	QNTY	PRICES
REPORTER COUNTRY	1993	1993	1994	1994	1994	1995	1995	1995	1996	1996	1996	1997	1997	1997
CHINA	2500	10	99000	8460	12	213000	18594	11	128000	10250	12	410000	5008	82
INDIA	4855	24	180000	7603	24	241000	10390	23	186000	8514	22	0	0	0
TOTAL	7355	17	279000	16063	18	454000	28984	17	314000	18764	17	410000	5008	82

FAN IMPORTS OF NIGERIA	QNTY	PRICES	VALUE	QNTY	PRICES	VALUE	QNTY	PRICES	VALUE	QNTY	PRICES	VALUE	QNTY	PRICES
REPORTER COUNTRY	1993	1993	1994	1994	1994	1995	1995	1995	1996	1996	1996	1997	1997	1997
CHINA	53870	36	1329000	101750	13	1243000	34550	36	1227000	55360	22	52390000	6749000	8
GERMANY	0		0	0		0	0		148000	1000	148	27	1	27
INDIA	3153	23	54000	3200	17	281000	12212	23	136000	6200	22	0		
SINGAPORE	20561	22	38000	4483	8	325000	4680	69	678000	12540	54	419000	5564	75
THAILAND	2913	45	52000	886	59	4000	160	25	0			0	0	
TOTAL	80497	32	1473000	110319	24	1853000	51602	38	2189000	75100	33	52809027	6754565	37

FAN IMPORTS OF OMAN	QNTY	PRICES	VALUE	QNTY	PRICES	VALUE	QNTY	PRICES	VALUE	QNTY	PRICES	VALUE	QNTY	PRICES
REPORTER COUNTRY	1993	1993	1994	1994	1994	1995	1995	1995	1996	1996	1996	1997	1997	1997
CHINA	13520	71	1011000	55238	18	135000	11795	11	107000	15399	7	61000	10725	6
HONGKONG	17848	17	405000	21926	18	222000	17426	13	490000	39002	13	672000	53600	13
INDIA	20424	19	570000	28045	20	523000	28734	18	524000	27890	19	0		
JAPAN	66000	11	761000	66000	12	520000	41000	13	347000	32000	11	290000	26000	11
SINGAPORE	1767	40	66000	1673	39	66000	1020	65	0	0		0	0	
USA	0		27000	5000	5	13000	1000	13	224000	187000	1	2900000	45000	64
TOTAL	119559	32	2840000	177882	19	1479000	100975	14	1692000	301291	12	3923000	135325	23

FAN IMPORTS OF OTH.ASIA NES	QNTY	PRICES	VALUE	QNTY	PRICES	VALUE	QNTY	PRICES	VALUE	QNTY	PRICES	VALUE	QNTY	PRICES
REPORTER COUNTRY	1993	1993	1994	1994	1994	1995	1995	1995	1996	1996	1996	1997	1997	1997
GERMANY	2000	35	61000	4000	15	21	0		188000	6000	31	44000	1000	44
ITALY	0		83000	13000	6	138000	11000	13	11000	2000	6	107000	15000	7
JAPAN	79000	12	660000	36000	18	934000	48000	19	2076000	83000	25	768000	33000	23
SINGAPORE	3223	72	359000	2329	154	227000	5651000	40	20000	1537	13	4000	39	103
THAILAND	39457	5	111000	7694	14	226000	4225900	53	0			0	0	
USA	3072	240	1010000	9397	107	559000	11550000	48	601000	19110	31	1867000	183700	10
CHINA	15359	14	8000	820	10	0	0		0	0		0	0	
TOTAL	142111	28	2292000	73240	13	2084021	21485900	35	2896000	111647	21	2790000	232739	21

FAN IMPORTS OF QATAR	QNTY	PRICES	VALUE	QNTY	PRICES	VALUE	QNTY	PRICES	VALUE	QNTY	PRICES	VALUE	QNTY	PRICES
REPORTER COUNTRY	1993	1993	1994	1994	1994	1995	1995	1995	1996	1996	1996	1997	1997	1997
CHINA	12019	5	39000	4906	8	66000	5941	11	91000	8698	10	24000	2513	10
HONGKONG	6442	29	157000	5860	27	0	0		18000	950	19	30000	1585	19
JAPAN	29000	9	223000	23000	10	194000	20000	10	251000	27000	9	176000	19000	9
SINGAPORE	1334	49	51000	1078	47	0	0		0	0		0	0	
USA	890	13	130000	21000	6	6000	4000	2	61000	7695	8	24000	1856	13
TOTAL	49685	21	600000	55844	20	266000	29941	10	421000	44343	12	254000	24954	13

FAN IMPORTS OF QATAR	QNTY	PRICES	VALUE	QNTY	PRICES	VALUE	QNTY	PRICES	VALUE	QNTY	PRICES	VALUE	QNTY	PRICES
REPORTER COUNTRY	1993	1993	1994	1994	1994	1995	1995	1995	1996	1996	1996	1997	1997	1997
CHINA	12019	5	39000	4906	8	66000	5941	11	91000	8698	10	24000	2513	10
HONGKONG	6442	29	157000	5860	27	0	0		18000	950	19	30000	1585	19
JAPAN	29000	9	223000	23000	10	194000	20000	10	251000	27000	9	176000	19000	9
SINGAPORE	1334	49	51000	1078	47	0	0		0	0		0	0	
USA	89	135	13000	210	62	60000	4000	15	61000	7695	8	24000	1856	13
TOTAL	48884	23	483000	35054	23	320000	29941	12	421000	44343	12	254000	24954	13

FAN IMPORTS OF RUSSIAN FED	QNTY	PRICES	VALUE	QNTY	PRICES	VALUE	QNTY	PRICES	VALUE	QNTY	PRICES	VALUE	QNTY	PRICES
REPORTER COUNTRY	1993	1993	1994	1994	1994	1995	1995	1995	1996	1996	1996	1997	1997	1997
FRANCE	2000	13	22000	2000	11	163000	19000	9	805000	78000	10	105000	10000	11
GERMANY	27000	5	644000	39000	17	205000	17000	12	788000	103000	8	773000	89000	9
INDIA	0		69	0		0	0		0	0		0		
ITALY	103000	14	16000	1000	16	462000	34000	14	613000	50000	12	183000	12000	15
JAPAN	2000	27	11	0		14	0		5	0		2	0	
KOREA	7000	7	29000	4000	7	99000	10000	10	1290000	77000	17	0		
SINGAPORE	1180	30	60	13834	0	99000	3171	31	32000	1388	23	16000	717	22
USA	6000	9	9000	800	11	0	0		82000	9700	8	16000	800	20
TOTAL	148180	15	720140	60634	12	1028014	83171	15	3610005	319088	13	1093002	112517	15

FAN IMPORTS OF S.AFR.CUS.UN	QNTY	PRICES	VALUE	QNTY	PRICES	VALUE	QNTY	PRICES	VALUE	QNTY	PRICES	VALUE	QNTY	PRICES
REPORTER COUNTRY	1993	1993	1994	1994	1994	1995	1995	1995	1996	1996	1996	1997	1997	1997
CHINA	68770	23	2639000	96790	27	3760000	144110	26	3026000	63612	48	1594000	21610	74
FRANCE	4000	12	112	0		14000	1000	14	0	0		0	0	
GERMANY	2000	28	59000	2000	30	128000	3000	43	58000	2000	29	170000	3000	57
HONGKONG	810	36	99000	4742	21	0	0		0	0		0	0	
INDIA	0		111000	5600	20	214000	9884	22	233000	9613	24	0		
ITALY	6000	12	436000	47000	9	716000	75000	10	737000	58000	13	603000	63000	10
JAPAN	26000	17	174000	11000	16	438000	24000	18	546000	31000	18	109000	6000	18
SINGAPORE	0		0	0		49000	4700	10	87000	1054	83	20000	672	30
TOTAL	107580	21	3518112	167132	20	5319000	261694	20	4687000	165279	36	2496000	94282	38

FAN IMPORTS OF SAUDI ARBIA	QNTY	PRICES	VALUE	QNTY	PRICES	VALUE	QNTY	PRICES	VALUE	QNTY	PRICES	VALUE	QNTY	PRICES
REPORTER COUNTRY	1993	1993	1994	1994	1994	1995	1995	1995	1996	1996	1996	1997	1997	1997
CHINA	53413	243	16655000	330820	50	28286000	618770	46	12120000	323300	37	4023000	342350	12
FRANCE	22000	5	51000	5000	10	132000	13000	10	27000	2000	14	74000	6000	12
GERMANY	1000	17	411000	21000	20	97000	4000	24	113000	3000	38	2369000	54000	44
HONGKONG	63602	41	2387000	63009	38	446000	28597	16	149000	9066	16	178000	10590	17
INDIA	12599	17	173000	8244	21	363000	24423	15	385000	21920	18	0		
ITALY	10500	39	64000	15000	4	161000	25000	6	112000	19000	6	99000	15000	7
JAPAN	561000	9	5458000	600000	9	4910000	476000	10	4245000	456000	9	2962000	371000	8
MALAYSIA	510	55	27000	940	29	1446000	25342	57	549000	17768	31	0		
SINGAPORE	17550	36	492000	21884	22	1201000	53226	23	2465000	60720	41	3240000	58960	55
THAILAND	13070	40	697000	16591	42	41000	9100	5	0			300000	11763	26
USA	16100	74	794000	77900	10	512000	7831	65	724000	1958	370	876000	61620	14
TOTAL	694931	29	10092000	803568	22	9080000	649519	19	8629000	586432	23	7655000	528933	17

FAN IMPORTS OF SRILANKA	QNTY	PRICES	VALUE	QNTY	PRICES	VALUE	QNTY	PRICES	VALUE	QNTY	PRICES	VALUE	QNTY	PRICES
REPORTER COUNTRY	1993	1993	1994	1994	1994	1995	1995	1995	1996	1996	1996	1997	1997	1997
CHINA	22845	11	330000	20718	16	560000	55121	10	170000	16257	10	229000	19291	12
GERMANY	1000	19	43	0		0	0		3	0		88000	2000	44
HONGKONG	1477	35	127000	6473	20	5000	150	33	30000	2108	14	142000	10283	14
INDIA	5969	20	206000	10625	19	303000	19632	15	487000	27368	18	0		
SINGAPORE	15002	38	483000	13599	36	405000	17744	23	448000	14323	31	874000	24092	36
THAILAND	8608	31	207000	5969	35	310000	13409	23	0			346000	13941	25
TOTAL	54901	155	1353043	57384	25	1583000	106056	21	1135003	60056	18	1679000	69607	26

FAN IMPORTS OF SUDAN	QNTY	PRICES	VALUE	QNTY	PRICES	VALUE	QNTY	PRICES	VALUE	QNTY	PRICES	VALUE	QNTY	PRICES
REPORTER COUNTRY	1993	1993	1994	1994	1994	1995	1995	1995	1996	1996	1996	1997	1997	1997
CHINA	43457	11	351000	37893	9	104000	9735	11	147000	13761	11	107000	10010	11
INDIA	4700	20	77000	5100	15	34000	2164	16	61000	4064	15	0		
SINGAPORE	0		0	0		0	0		0	0		62	0	
TOTAL	48157	15	428000	42993	12	138000	11899	13	208000	17825		107062	10010	11

FAN IMPORTS OF SYRIA.A.R	QNTY	PRICES	VALUE	QNTY	PRICES	VALUE	QNTY	PRICES	VALUE	QNTY	PRICES	VALUE	QNTY	PRICES
REPORTER COUNTRY	1993	1993	1994	1994	1994	1995	1995	1995	1996	1996	1996	1997	1997	1997
FRANCE	0	0	51000	4000	13	0	0		0	0		0	0	
ITALY	23000	43	161	18	9	330000	59000	6	457000	59000	8	428000	77000	6
JAPAN	0	0	166	7	24	0	0		0	0		162000	16000	10
TOTAL	23000	43	51327	4025	15	330000	59000	6	457000	59000	8	590000	93000	8

FAN IMPORTS OF TURKEY	QNTY	PRICES	VALUE	QNTY	PRICES	VALUE	QNTY	PRICES	VALUE	QNTY	PRICES	VALUE	QNTY	PRICES
REPORTER COUNTRY	1993	1993	1994	1994	1994	1995	1995	1995	1996	1996	1996	1997	1997	1997
CHINA	34630	22	539000	43127	12	338000	44232	8	289000	32806	9	1782000	40704	44
FRANCE	0		57000	3400	17	0	0		104000	1000	104	4	0	
GERMANY	6000	10	257000	22000	12	716000	41000	17	1135000	109000	10	2680000	461000	6
ITALY	78000	8	462000	55000	8	1128000	98000	12	1587000	136000	12	1870000	174000	11
USA	640	70	9000	1000	9	135000	11300	12	90000	1330	68	721000	158000	5
TOTAL	119270	13	1324000	124527	12	2317000	194532	12	3205000	280136	10	7053004	833704	16

FAN IMPORTS OF UKRAINE	QNTY	PRICES	VALUE	QNTY	PRICES	VALUE	QNTY	PRICES	VALUE	QNTY	PRICES	VALUE	QNTY	PRICES
REPORTER COUNTRY	1993	1993	1994	1994	1994	1995	1995	1995	1996	1996	1996	1997	1997	1997
FRANCE	0		0	0		0	0		69000	5000	14	9000	1000	9
GERMANY	1000	33	98000	8000	12	42000	2000	21	89000	12000	7	151000	19000	8
ITALY	0		0	0		1	0		14000	1000	14	88000	8000	11
USA	492000	65	81000	208000	0	0	0		0	0		0	0	
TOTAL	493000	33	179000	216000	12	42001	2000	21	172000	18000	12	248000	28000	9

FAN IMPORTS OF UAE	QNTY	PRICES	VALUE	QNTY	PRICES	VALUE	QNTY	PRICES	VALUE	QNTY	PRICES	VALUE	QNTY	PRICES
REPORTER COUNTRY	1993	1993	1994	1994	1994	1995	1995	1995	1996	1996	1996	1997	1997	1997
CHINA	300720	40	9848000	258490	38	5792000	121950	47	8818000	631520	14	6358000	423360	15
FRANCE	0		191000	19000	10	96000	5000	19	96000	5000	19	2	0	
GERMANY	9000	4	43000	2000	22	99000	4000	25	60000	2000	30	72000	11000	7
HONGKONG	35879	24	653000	24463	27	300000	22235	13	1311000	34144	38	675000	48600	14
INDIA	29001	56	909000	48858	19	1514000	140570	11	1060000	58687	18	0		
ITALY	25000	11	923000	92000	10	1843000	109000	17	1534000	124000	12	1446000	140000	10
JAPAN	246000	11	2730000	244000	11	2224000	194000	11	2170000	217000	10	1836000	215000	9
MALYSIA	0		9000	280	32	0	0		51000	1700	30	0		
SINGAPORE	6422	20	83000	1983	42	22000	2086	11	59000	2802	21	246000	19662	13
THAILAND	9330	35	227000	7878	29	361000	9963	36	0			366000	11980	31
USA	40400	11	750000	9440	79	267000	540	494	526000	866	607	2158000	23236	93
TOTAL	701752	23	1636600 0	708392	24	1251800 0	609344	21	1568500 0	1077719	21	1315700 2	892838	14

FAN IMPORTS OF UZBEKISTAN	QNTY	PRICES	VALUE	QNTY	PRICES	VALUE	QNTY	PRICES	VALUE	QNTY	PRICES	VALUE	QNTY	PRICES
REPORTER COUNTRY	1993	1993	1994	1994	1994	1995	1995	1995	1996	1996	1996	1997	1997	1997
CHINA	4906	16	3000	450	7	0	0		0	0		0	0	0
KOREA	0		13000	1083	12	5000	385	13	102000	8500	12	0	0	0
TOTAL	4906	16	16000	1533	9	5000	385		102000	8500		0	0	0

FAN IMPORTS OF YEMEN	QNTY	PRICES	VALUE	QNTY	PRICES	VALUE	QNTY	PRICES	VALUE	QNTY	PRICES	VALUE	QNTY	PRICES
REPORTER COUNTRY	1993	1993	1994	1994	1994	1995	1995	1995	1996	1996	1996	1997	1997	1997
CHINA	21293	9	163000	15267	11	73000	7927	9	75000	7427	10	44000	2755	16
GERMANY	0		0	0		14000	1000	14	0	0		61000	1000	61
INDIA	35904	20	701000	38444	18	878000	53971	16	391000	22100	18	0		
ITALY	0		0	0		0	0		0	0		128000	2000	64
JAPAN	10000	10	0	0		7000	1000	7	30000	4000	8	0	0	
TOTAL	67197	13	864000	53711	14	972000	63898	12	496000	33527	12	233000	5755	16

15 Appendix C: Interviews

15.1 Manufacturers

Mr. Muhammad Illyas – GFC fans

The important findings of the interview conducted with Mr. Muhammad Ilyas are as follows.

Exports

Regarding the current situation, which appeared after the nuclear explosion done on 28th of May 1998, there were sanctions imposed by foreign governments on Pakistan. Under these sanctions the loan facility was terminated and the future investment in Pakistan was stopped. These steps had a negative impact on the foreign exchange reserves, which were already at the record low level. So in order to cater for this situation the Government of Pakistan announced took some immediate as well as some long-term steps. The short-term steps were freezing of the foreign exchange accounts and among the long-term steps one was the establishment of small and Medium Enterprise Development Authority (SMEDA). The main agenda for SMEDA was to first highlight small and medium enterprises, which have the export potential and can generate the valuable foreign exchange for the country. In second phase it will help the Government of Pakistan to formulate a strategy for the future uplift of these small enterprises. So as the focus of our study was inclined towards the export potential that existed in this industry we started our interview by asking the view of Mr. Illyas Chaudary the Chief Executive Officer of General Fan Corporation. Mr. Illyas Chaudary is the biggest fan exporter, exporting under the GFC brand name. He has one the award for the biggest exporter for 1998. He told that he is currently exporting fans to Bangladesh, Yemen, Qatar, Iraq, Saudi Arabia, Dubai and other Middle East countries. He said in these markets there is demand for the type of fans we manufacture in Pakistan. The market is mainly for Table fan. Among different sizes the 56-inch table fan is popular. He said that Dubai is the hub from where fans are exported to other Middle East countries as well as Europe. As we told him that there is a big European market for fans, why you have not yet tapped this market? In response to this question Mr. Illyas said that we can sell our product or otherwise our product is suitable to those countries which have similar socioeconomic and climatic conditions. In European market the climatic conditions are

very much different and hence the type of fans required are much different from what we produce. Mr. Illyas said that presently our objective is to sell the over-capacity that exists and optimally utilize our installed capacity. So the markets we have tapped readily for our type of fans. We are not producing any customized products for these markets.

In response to this we asked him **why not you design products specifically for these markets?** The answer was because of China. China, Korea, Thailand and now India have cost advantage over us. They are flooding the market with disposable kind of fans, which are selling for $10 - $12 (FOB). Where as we are supplying fans for $23 - $24. The last shipment, which we sent to Bangladesh, was $20. **Why our costs are high?** The reason that our costs are high is that we do not have such high volumes on which these countries are producing fans. There the vendor industry is very well developed and the fan manufacturers are just the assemblers, which are assembling and packing large volumes, which we can not currently imagine. In Pakistan the fan spare parts manufacturers are very fragmented they have low capacity. No vendor can presently fulfill the demand of the big players. They lack technology. They lack technical know how. They presently neither have the resources or the skills to work on the new technology.

We here asked him why don't you develop the Spare parts manufacturers as done by Japanese? In response to this he said that no individual has muscle to do this. Here a collaborative effort might help but again you know we lack trust and confidence. If one has excess to new technology he is not willing to share it with others. If we develop one of our spare parts manufacturer today, tomorrow he will start supplying to our competitors and the competitive advantage will be lost. You can not have patent protection here in Pakistan. That is the reason that who so ever among us afford to have technology he imports the machine and start producing in-house. Because of these low volumes our costs are high and we do not enjoy economies of scale that are enjoyed by our international competitors, which are producing ten times the volumes which we are producing. **Are the exports of fans growing and what is the growth rate?** Yes the exports of fans have increased over the past few years. It has more than doubled. This year GFC has exported 30-40 thousand fans and it is the beginning of the season. The competition from local players is also increasing. The small size manufacturers, which are producing low quality

fans are cutting prices and damaging the quality image what GFC and other big players have established over the years.

How is Pakistani Fan perceived in the International Market? Till now it is perceived as a high quality long lasting fan. There are no complaints yet from our foreign buyers. But we face a threat from these small players, which are selling low price, low quality and unbranded products. This can hurt our image and the customer once lost will be hard to replace. **Do you have plans to tap the other international markets like Europe and United States of America?** Not now but might be 4-5 years from now we may have a product for these markets. As I told you during the discussion that when we went to these markets it was a well thought plan. We had under utilized capacity and to fulfill this we went abroad taking samples of our product and getting orders.

Why we not cost competitive? The reasons for this are as follows:

Access to cheap raw material

Economies of scale

Cheap labor and state control

How you were able to tap this International market? It was completely an individual effort**.** I still remember my trip to Dubai in **1993,** when I took 10 Ceiling fans under my personal baggage. I took these fans to the fan distributors in Dubai and asked them to just place my product in their shops. Yes I knew one of the Pakistani distributors who were dealing in other Pakistani products. It was very kind of him that he accepted the offer. Next trip I again took some of our product and this way we were able to develop a demand for our market. Now thanks to Allah all mighty that we have developed a market and exporting a great number which at that time I never expected. **Does the Government of Pakistan in any way help you to tap the export potential?** Not really. But one thing that government did was the exemption of Pakistan Standard of Industry (PSI) for fan exports. This was the biggest hindrance in exports of fans. **What steps would you recommend for Pakistan Government that will help fan manufacturers to increase their exports?**

Currently the export rebate given to us is very low this should be increased.

Reduce duties on imported machines, which can improve our processes and make us cost competitive in the international markets.

Make the government machinery efficient, so that we can get our refunds early and without paying additional fees.

Open up institutes from where we can get trained labor that can work on the new high tech machines.

Which markets you have plan to go for in near future? In near future we have plans to go for markets like:

Kenya

Sudan

Tanzania

Bhutan

Gulf

How do you see the growth of the local market? The variables that we see are Growth of WAPDA, village electrification, cash crops and growth of households. Currently the economy is growing at 6% and the fan industry is growing at 10%. Our pie is increasing but at the expense of small and medium size players. **Why at the expense of medium size players?** The reason for this is that initially these small players were catering for low-end market. But as the big players saw the demand for this segment growing because of the decreasing purchasing power of the end consumer, almost all the big players have started manufacturing product for this low-end market with new brand names. This strategic move has increased the share of large players and has wiped out the medium size fan manufacturer from the market. We have started selling this product under the brand name of Wahid Fans. However, as the purchasing power of the customer is decreasing and with rising prices of cement building a house is very expensive and this will have a sever impact on our growth. We do not have a big replacement market. As you know that fans have long life so once installed they need minor repairs and these also not very frequent. The average age of a ceiling fan is 30 years and that of table fan is 10-15 years. So you need fan only when you build a new house.

What are the key success factors?

The key success factors are same as that of other industries

Broad product range catering to the needs of your customer

Design innovation

Technology

We now are introducing on average five new models every year. This is why we have to revise our catalog every six months. We this year have introduced remote control fans. Fans with low wattage that will give tremendous savings to our customer. We are also promoting this attribute in our advertisements also, so as to increase awareness among the end users. Some of our new designs are the copy of the imported fans like plastic body pedestal and louver fans.

Capacity expansion

As I have told you that the market is roughly growing at 10% so we have set a target of 10% capacity expansion every year. At present we are producing some where around 15,00 fans every day during the peak season that is from March to July and then off season this goes down to a level of less than 1,000 fans a day. We work for 10 months and the remaining two months the facility is shut down for maintenance and renovation.

How frequently you introduce new machinery and on what basis the decision is made? It is not very frequent but as soon as we see that we can utilize the new machine we import it or purchase from the second hand market. It is mainly demand driven. We do not have any kind of capital budgeting techniques. The reason is the lack of knowledge as well as the availability of statistical data. Material savings are also one criterion on the basis of which we plan the purchase of new machinery. Electric sheet is the major component of the raw material cost. By having this automatic stamping press we are saving 20 % on material. In making one fan we almost use Rs 180 worth of electric sheet. So by using automatic stamping press we are making a saving of Rs.30 which helped us cover the costs in less than one year. Another is the pressure from the competition. The strong competition drives us to the acquisition of new technology.

What are the economic production quantities for your automatic machines like Plastic molding and automatic stamping press? We do not have any cost accounting or any mechanism to judge the costs, so we do not have any idea of this. But what I care that the machine should keep on running for 8 hours a day, 6 days a week and 256 days a year. If it is stopped or there is no order to produce that is the time I get worried because this will increase the payback period.

How many new players have come up during last years?

Players keep on coming and old ones going but in last few years very few have emerged. I know that there are almost 50 players who have not started production this year. So you can say that the growth is negative. The big players as mentioned earlier because of the new strategy follow this.

What is the concentration ratio and how the share is divided among the big giants?

It is roughly 60-40. Sixty percent is with the big giants and 40 percent with the small/medium players. Among the big players it is almost equally distributed.

Why are you vertically integrated?

The vendors lack the technological capabilities and the resources to provide us with the services that the present market requires. We are trying to cut our costs down by employing technologically advanced equipment, which saves us the costs on wastage of material. The technological capability of vendor industry is not yet to that level where they can provide us with this kind of service.

15.2 Vendors

One interview of a fan guard manufacturer is reported as under.

Capital investment required

In response to our question regarding the capital investment required to setup this type of facility. The owner responded that it takes an outlay of five to seven Lac to have this type of facility. He further mentioned that this low capital outlay is because of the lease and rental facility available to them. He said that most of the vendor premises are on rental basis, which not only reduces the initial investment for them but also gives them higher

flexibility. Another reason for the low initial outlay is the availability of second hand local machinery. He gave an example that a new lathe machine will cost you about sixty thousand rupees, where as a second hand machine will cost you roughly thirty thousand rupees. These practices are common among the small players. Where as the big players do have there own plant and equipment, which increases the capital requirement for them. Then we asked that do you have any other advantages or disadvantages because of this low capital requirements. He mentioned that because of not having our own factory we have a problem in getting loans as we do not fulfill the collateral requirement of the banks or other financial institutes. However it reduces the switching cost.

Skill level of the labor

He said that it is a seasonal business, we work for maximum of six months when the season is good and the demand for fans is high. Because of the seasonal nature of the business we have labor contracts with the labor contractor called as the "THEKIDAR" for the season. Every year we revise the contract terms, which mainly constitutes the revision in the piece rate. This piece rate mode of payment also gives the product efficiencies. We asked him that don't you face the problem of dealing every season with new people. He said that usually the same contractor comes back. But as we don not have to deal directly with the labor, so we don't really care who is working. We have to make payments on the basis of parts manufactured and when we receive the daily production we give them their payments. The piece rates are set according to the industry practices and the nature of the part. For more complex parts the piece rate is higher. The average piece rate is Rs 7 to 8. We also asked him about the availability of the skilled labor. He responded to this question saying that Gujrat is an industrial area and the labor supply is in excess to the demand. He also said that the seasonal demand for the labor further reduces this problem, as our peak season does not coincide with the peak working seasons of other businesses. Also out of the total strength of 15 employees the skilled labor requirement is just five people.

Design And Product Development

Do you design a product and then sell it to the manufacturer?

The respondent said that the manufacturer gives all-spare parts designs. We do not have any input in the designing of the product. This is the case with all the spare parts suppliers

(vendors). In case of big players like G.F.C, Royal and Pak Fan the material used in manufacturing is also supplied by the manufacturers and they pay us for the machine hours used in the manufacturing of their order.

How you get the orders?

He said that we first contact the manufacturers personally by going to their facility. Take the design from them and the produce two three parts on those specifications. These parts are then taken to their office and given as a sample. If they have a need for that part then they place order with us. There are no long-term selling contracts with the manufacturers. The order is finalized mainly on the basis of the price quoted for the parts. It is highly price sensitive and the bargaining power also lies with the buyer because of the large number of spare parts vendors available.

The lead-time to fulfill an order?

As the vendors don't have storage facility and also the quality of parts will go down if stored. The reason, the quality will be effected is that these are unpainted metal parts which get rusted if stored in the warehouse. So we supply the daily volumes to the respective manufacturers where they are painted and used in the assembly. It is closer to the just in time delivery concept.

Sales

Through out the value chain the payments are on the credit basis. We do face a lot of problems in collection of the receivables, especially from small players. This credit collection increases the working capital requirements in our business. It is also one of the reasons of having highly fragmented vendors industry as it shares the burden of the working capital requirement. Long-term relation do play a role in the efficient recovery or at least the guarantee that you will receive your dues. In our price the delivery to the buyer's facility is included. But as we are located close to our customers, who are the fan manufacturers so we do not have high transportation costs.

Raw material supply

Most of the raw material needed is locally purchased. The problem is with the consistent specs. For example in case of steel wire the gage keeps on changing. It sometimes happen

that you do not get same gage even in one role of the wire. Because of this problem some of vendors have collaborated and installed machinery to size the wire according to their needs.

How do you check the quality of the raw material?

In order to check the quality of the incoming raw material very few of us have the relevant equipment and facilities. The quality checks are mostly subjective. However the bigger players do have the quality test facilities and if they reject our products we do collect them and if rework is possible do it otherwise it is waste. We do have almost the same kind of machinery like chrome plating equipment.

Loan facility

We normally do not use the credit facility given by banks. The reason for not using this facility is the high interest rates and also we are not able to provide the required collateral as our inventory is in cycle and we do not have the ownership of the finished goods. They lie with the manufacturers. Mostly our plant is on rental basis so we are unable to give it to the banks as collateral. We might start taking loans if the interest rate is low. Our profits are lower than 10% so giving interest rate of 23% is almost impossible.

Government Regulations

Talking about the problems or the effect of government regulation on their industry, one of the respondents mentioned that the tax return submission is a very complex procedure and regarding the education of our businessmen it is very difficult to file a tax return. As we face problem in filing the return so it is the point we get blackmailed by the government officials and have to pay fees for it. He said that we are willing to pay taxes but it would be better if it is a one-window operation. Presently we are paying taxes in number of ways like old age benefit, social security, employee education fund, labor union fees etc. Currently we are coming under the fix tax bracket and it is exercised on the basis of the number of lathe machine. Now some of our parts have very low profit margins so the tax should be on the basis of the value of the part produced, which will help us.

We here asked them why don't you hire an accountant. The reply was that we don't afford to pay thee expenses of an accountant. And the availability of the capable accountants is also low.

We are currently giving double taxes in case if we use imported material. As we have to pay sales tax on the purchased equipment and the sellers don't provide us with the invoice against which we can adjust the sales taxes paid by us so we are facing the problem of double taxation. Even if we do get the invoices the procedures involved in getting the sales tax refund is very hectic.

Almost all the business is on credit basis and the recovery of credit is very difficult. There is no law, which protect you against this scenario. Even if we file a case in the court the time and fees involved is very high. In some cases the client pay us through cheques but they get bounced. We want that there should be some penalty on the creditor if the bank dishonors his cheque.

We do face a problem in summers, which is our peak season because of load shedding. Another problem from WAPDA is the over billing. Some people don't pay their bills and those who are paying have to share the burden. .

16 Bibliography

1 SMALL BUSINESS IN THE THIRD WORLD

HARPER, MALCON.

2 SMALL SCALE INDUSTRIES IN ASIAN ECONOMIC DEVELOPMENT

NAYA, SEIJI. ASIAN DEVELOPMENT BANK. 1984

3 SLOW COLONIZATION OF SMALL INDUSTRIAL ESTATES IN PUNJAB

HABIB-UR- RAHMAN

4 STUDY ON SMALL SCALE INDUSTRIES IN PAKISTAN: ANALYSIS AND OVERVIEW

INDUSTRIAL DEVELOPMENT BANK. 1985

5 CHANGES IN THE INDUSTRIAL STRUCTURE AND THE ROLE OF SMES IN ASIAN COUNTRIES

UNIVERSITY OF PHILIPPINES

6 A SITUATIONAL ANALYSIS OF SMALL INDUSTRY ASSOCIATIONS IN INDIA

MATHEW, P.M.; SUKUMARAN NAIR, M.K.; KRUSCH, P.A.

7 SMALL BUSINESS MANAGEMENT

BROOM, H.N.; LONGNECKER, JUSTIN G

8 WHAT YOU SHOULD KNOW ABOUT SMALL BUSINESS MARKETING

FRAM EUGENE H.

9 EMPLOYMENT AND DEVELOPMENT OF SMALL ENTERPRISES

WORLD BANK

10 A GUIDE TO SMALL BUSINESS MANAGEMENT

HOLLINGSWORTH, A. THOMAS; HAND, HERBERT H.

11 SMALL VENTURES: TACTICS AND STRATEGIES

BOSTON: HARVARD BUSINESS SCHOOL 1980

12 MANAGING THE SMALL BUSINESS

KLINE, JOHN B.; STEGALL, DONALD P.; STEINMETZ, LAWRENCE L

13 SURVEY OF SMALL AND HOUSEHOLD MANUFACTURING INDUSTRIES

FEDERAL BUREAU OF STATISTICS 1976-77

14 SMALL AND MEDIUM SCALE MANUFACTURING ESTABLISHMENTS IN ASEAN COUNTRIES

HIEMENZ, ULRICH ADB. 1983

15 GROWING CONCERNS: BUILDING AND MANAGING THE SMALLER BUSINESS

GUMPERT, DAVID E

16 THE ROLE OF SMALL SCALE INDUSTRY IN ECONOMY AND GOVERNMENT INCENTIVES

MALIK MUHAMMAD HUSSAIN

17 SMALL BUSINESS: PRODUCTION AND OPERATION MANAGEMENT

DAVID CLARK, K

18 SMALL MANUFACTURING ENTERPRISES: A COMAPRITIVE ANALYSIS OF INDIA AND OTHER ECONOMIES

LITTLE, IAN M.D; MAZUMDAR, DIPAK: PAGE JOHN

19 SMALL SCALE ENTERPRISES IN INDUSTRIAL DEVELOPMENT: THE INDIAN EXPERIENCE

SURIE, K.B

20 SMALL BUSINESS SURVIVAL

BENNETT, ROGER

21 THE ROLE OF SMALL SCALE INDUSTRIES IN THE ECONOMIC DEVELOPMENT OF LESS DEVELOPED COUNTRIES

SAEED AKHTAR AWAN

22 EXPORTS FROM SMES IN DEVELOPING COUNTRIES

CAVUSGIL, S. TAMER

23 SME SUPPORT POLICIES IN JAPAN

ITOH, MOTOSHIGE; URATA, SHUJIRO

24 GETTING STARTED IN EXPORT

UNCTAD GATT - ITC 1995

25 PROMOTION OF SMALL SCALE ENTERPRISES IN PAKISTAN

PAKISTAN INSTITUTE OF DEVELOPMENT ECONOMICS

26 SMALL BUSINESS ENTERPRISES: AN ECONOMIC ANALYSIS

REID, GAVIN C.

27 HOW NOT TO RUIN YOUR SMALL INDUSTRY

PHANSALKAR, S.J.

28 CREDIT ANALYSIS FOR SMALL AND MEDIUM ENTERPRISES

DR. BASHIR A KHAN

29 FINANCING OF MEDIUM SIZED ENTERPRISES: CAPITAL STRUCTURE AND THE ROLE OF FINANCIAL INSTITUTIONS

DR. BASHIR A KHAN

30 TECHNOLOGY SERVICE CENTERS: A BUSINESS PLAN FOR THE GUJRAT AND GUJRANWALA FAN INDUSTRY CLUSTERS

DR. IRFAN AMER AND DR. JAWAID GHANI

31 ROLE OF PAKISTAN ELECTRIC FAN MANUFACTURE R ASSOCIATION

DR. ARIF IQBAL RANA

32 INDUSTRIALIZATION AND THE SMALL FIRM

SNODGRASS, DONALD R.; BIGGS,TYLER