UPSKILLING PUNJAB'S FAN INDUSTRY CLUSTER

A TRAINING NEEDS ASSESSMENT REPORT

PUNJAB Skills Development Fund

UKaid from the British people

ACKNOWLEDGMENTS

Punjab Skills Development Fund (PSDF) would like to thank members of the PSDF-Accountable Grant team for the support in development of questionnaire and getting the responses from the fan-manufacturing representatives. The role of Pakistan's Electric Fan Manufacturers Association (PEFMA) in providing the due facilitation is also placed on record.

This activity was made possible through the funds provided by the Department for International Development (DFID), United Kingdom, under the Technical Assistance component of *Punjab Economic Opportunities Programme (PEOP)*.

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LIST OF ABBREVIATIONS

ATC	Apprentice Training Centre
CE	Conformite Europeene
DFID	Department for International Development
FBR	Federal Board of Revenue
FDI	Fan Development Institute
G2	Gujranwala and Gujrat Fan Industry Cluster
GBP	Great Britain Pound
GDP	Gross Domestic Product
GOPB	Government of the Punjab
IFMA	Indian Fan Manufacturers Association
PCSIR	Pakistan Council of Scientific and Industrial Research
PEFMA	Pakistan Electric Fan Manufacturers Association
PEOP	Punjab Economic Opportunities Program
PIDE	Pakistan Institute of Development Economics
PKR	Pakistan Rupees
PSDF	Punjab Skills Development Fund
SABS	South African Bureau of Standards
SBP	State Bank of Pakistan
SIRIM	Standards and Industrial Research Institute of Malaysia
SMEDA	Small and Medium Enterprises Development Authority
SONCAP	Standards Organization of Nigeria Conformity Assessment Program
UK	United Kingdom
UL	Underwriters of Laboratories

LIST OF ILLUSTRATIONS

PREFACE

On the knowledge-based, technology-intensive economic world map, the Global North and South must compete to produce goods and services falling under the ambit of an increasingly stringent international standardization that includes a sophisticated skill set. Those with strategies to up-skill their human resource base through forward-looking technical and vocational education and training reap the economic benefits and never look back.

The provision of a viable economic playing field for businesses to mushroom, grow and diffuse supplanting economic growth and wealth creation have been standard benchmarks of good governance. Additionally, giving rise to a never-ending demand for a well-trained and efficient labor-market to contribute to better outcomes for all stakeholders. This remains a challenge for Pakistan's federal and provincial governments, alike as for the training and vocational institutions.

The *Skills Needs Assessment Report for the Fan Industry 2015* is prepared by Punjab Skills Development Fund (PSDF), a not-for-profit company founded under Section 42 in 2010 under the Companies Ordinance 1984. PSDF is a collaborative effort of DFID of United Kingdom (UK) and the Government of Punjab (GoPb). The Fund is specifically founded to vocationally train 135,000 individuals with a budget of GBP 50million. The importance of institutional vision and will to prepare a competent work force with sector-specific skills cannot be over emphasized. PSDF is a targeted intervention by GoPb to redress the neglected Human Resource Development in general and provide impetus to formalise vocational training in particular.

Since its inception PSDF has grown from an organisation operating in four poorest Southern Punjab Districts (Bahawlpur, Bahawalnagar, Muzzafargadh, Lodhran) to include eleven new districts (Chiniot, Faisalabad, Gujranwala, Khanewal, Lahore, Narowal, Rahim Yar Khan, Sargodha, Sheikhupura, Sialkot and Vehari).

As the lead GoPb agency with the goal to redress the low level skills trap under its jurisdiction, PSDF provides accredited vocational skills delivery by enlisting hydra-headed training services among private organisations, public institutions and the third sector through a competitive process. Over the years PSDF has not only grown as an organisation but also expanded its horizons to identify and include key employment-intensive sectors poised to optimally benefit from this endowment thereby consolidating skills training landscape in Punjab.

The domestically self-sufficient and otherwise promising Fan Sector of Pakistan is not a surprise inclusion to PSDF's agenda and next on the list for advanced technical know-how provision to realise its growth potential. As an umbrella organisation, Pakistan Electric Fan Manufacturing Association (PEFMA) has assisted PSDF in acquiring necessary information regarding various aspects of the fan industry sector. The collection of fan industry specific knowledge has been obtained through use of questionnaire. A close and thorough evaluation of replies by the respondents from this sector is to serve as a primary tool that will enable PSDF take an informed viewpoint about the sort of interventions required on its part regarding the fan industry.

EXECUTIVE SUMMARY

Objective

This report attempts to explore the vocational and technical training requirements of the Fan Industry in Pakistan. The need assessment analysis has been done with an objective that it will facilitate prospective interventions by PSDF. The study will allow PSDF to properly chalk out the action plan and strategize targeted schemes that would help achieve organizational objectives as well uplift the fan industry in Pakistan.

Methodology

The needs of the industry have been verified through a survey conducted by PSDF. The survey's first hand evaluation of prevailing industrial practices allowed analysis of skill sets of workforce presently engaged in this sector; and consequently helped in identification of skill gaps that require improvements. The structured questionnaire comprises 24 questions with 32 respondent firms to gauge the skills development requirement by the industry. It assesses the variance in competencies by making an organizational analysis, occupational evaluation and skills assessment.

Snapshot of Fan Industry

As one of Pakistan's oldest industry, the 500-plus fan manufacturers meet national demand singlehandedly supplying a range of household fan models with price penetration to all income groups. The industry is concentrated primarily in the Punjab cities of Gujranwala and Gujrat (hereinafter referred to as "G2 Cluster"). These establishments annually produce about 17.5 million units out of which 63 percent are ceiling fans. The fan industries directly employs estimated 40,000 individuals along with nearly 160,000 are indirectly associated to it.

The production in the fan industry is mainly seasonal and the units switch to alternate production during the other months that lead to various adverse outcomes. As the industry has predominantly micro or small-scale units, there does not exist any substantial emphasis on quality and safety standardization practices. The fans produced locally are of basic utility with barely any manufacturing reliance on innovation and latest technology.

Only 10 percent of the total local production is exported that is only worth US$50 million. These exports earn Pakistan a global share of dismal 1 percent. The local fan industry has to compete with regional giants like India and China both in terms of costs and quality. The local tax regime on raw material has also adversely impacted global competitiveness of Pakistani fans.

Tiers of Fan Industry

A horizontal and vertical vibrant cluster, the local fan industry ranges from big players who are main exporters to small self-employed entrepreneurs. All fan industry tiers are privately owned Small and Medium Enterprises (SMEs) with the exception of 8 top tier family-groups owning 70 percent of the industry. An estimated 13 percent of Medium enterprises and 81 percent Small and Micro fan firms operate with high dependency on permanent, contractual and seasonal workforce. In general, there is low literacy, lack of technical know-how and outsourcing practices that marginalizes the growth potential of fan industry.

Key Findings of the Survey

The survey has deduced several key findings that are critical to any form of support that is to be rendered by PSDF in future. The industry actors i.e. employers and employees have overwhelmingly shown eagerness for training initiative in this sector by PSDF. The analysis of results generated from the questionnaire empirically points out the need for suitable intervention of PSDF in the fan-manufacturing sector. At an over-whelming 97 percent there exists consensual interest within the industry in obtaining information about new training initiatives by PSDF. Historical industry trends cited in the report are clearly suggestive that new entrants in the fan industry are more likely to add up to the micro and small enterprises as workers make transitions as entrepreneurs. The prospects of growth of this sector will continue to be in the G2 Cluster region only.

1. On the basis of survey, it may be stated that the industry will remain limited to small and medium scale. Therefore PSDF may focus the micro and small enterprises as a priority target group. **The G2 cluster should be the only area of intervention** for the purposes of the fan-manufacturing sector. Middle managers and the operators/workers are the two employment categories in this industry for which distinct strategy may be devised by PSDF in imparting training to the entrants. Any immediate program of skills development by PSDF that facilitates larger pool of potential workers for the organizations would significantly improve the productivity levels.

2. Most of the firms in fan sector have been maintaining their employment size for several years and many of them exhibit ed **interest in increasing their scale and size** in future. The vacancies for clerks are the highest in demand at 34 per cent in the next 12 months, followed by export and import managers sought by 12percent and (9 percent employers respectively. The other open positions are for *sales man and general manager* at 6 percent only 3 percent vacant posi tions to fill for the *chief accountant, Fitter and Manager* Position. It is suggested that consideration is paid to the trainers who devise strategies specific to prioritising skills of the above workers engaged in the fan industry.

3. The employers encounter **difficulty recruiting skilled staff** in a number of areas. For instance 85 percent of the respon dents pointed to the unavailability of the skilled staff as the major stumbling block for hiring. This is further compound ed by dearth of qualified (82 percent) and experienced (75 percent) candidates. Nearly 75 percent of the fan manufac turers engaged through PSDF survey opine that they settle for the second best lacking basic work ethics such as re quired motivation and attitude for the job.

   This leaves a huge vacuum for PSDF to direct trainers to introduce courses in the above identified areas. There is im mense and immediate demand within the fan sector for motivated, trained and efficient workforce. This would trans late into boosted local productivity and overall benefit of the respective enterprises.

4. **The future skills training demand** is expected to be highest for the workers namely Winders (55 percent). Courses to improve *Painting Skills (*35 percent), and *CNC Machine Operators Skills* improvement courses are requested by a quarter (25 percent) of the respondents in need for specialized trainings. Hence, a demand-driven training methodology would benefit all as according to the prevalent opinion (75 percent), the industry-specific courses are unavailable.

5. There exists a sizeable demand for over all workforce as there are **generic deficiencies** identified by these units. *Basic Computer literacy and problem-solving skills* is most common (73 percent) followed by a 67 percent demand in the three areas namely; *planning and organisation skills, team-working skills besides written and oral communication skills. Customer-handling skills* another weak area at 30 percent which requires improvement.

6. There is **barely any focus in the industry on the usage of modern manufacturing technologies and innovation**. The salaries paid to various categories of employees also have a flexible range indicating that the industry do place pre mium on the high skills of the employees. Thus, it is safely assumed that a skilled worker has a better chance of find ing job security at better remuneration compared to a worker with basic skill set. The employers have consistently com plained about **unavailability of skilled resource** and shortage of competent job applicants.

   While there is a clear training demand by the manufacturers, they have also identified key barriers to providing staff trainings. Notable issues being difficulty in finding trainers willing to design a customised course (82 percent) at a suitable time (82 percent). It is thus inferred that PSDF-funded trainee firms steer their course design based on indus try grievances.

7. The **seasonal nature of fan manufacturing** adversely impacts development of specialized skills set and the propor tion of workers that are on temporary employment face low morale. Most of the workers cannot be enrolled into train ing courses due to inconvenient timings (conflicting with their daily working hours) as 86 percent pointed out this as the reason for low turn-out.It would perhaps be a good idea not to provide maximum courses during the peak season (January - July). The targeted training during the seasonal lay off between August to December could ensure a better turn out and also a more efficient and skilled workforce would report back to work. Similarly, keeping the time con straint issues in mind, the regular work force can be trained by encouraging the fan firms to enrol their workers for the evening or weekend courses.

8. As noted elsewhere in this report, the fan industry is dominated by small-to-medium-firms who find paying **high fee a barrier** for enrolling their workers for trainings. About 61 percent consider the current courses as too expensive. Need less to say, budget friendly skills trainings aimed at workers will redress this legitimate grievance.

9. Based on the key findings, the skills development initiatives should also be towards introducing courses targeting three key transition areas of Fan Testing Lab (18/24 respondents), CNC Machine Operators (14/24 respondents) and Improved Painting Techniques (11/24 respondents). Demand for skills in these areas has emerged in recent times.

10. There exists a need to **establish viable and more formal linkages** between PEFMA or the individual fan industrial units and the specialized institutes of vocational training, as this will contribute towards steady and ready supply of skilled workers at the time of recruitment.

Nature of Core Intervention by PSDF

The promotion of technical and vocational training for industrialization and economic development demands crosscutting strategies. Long-term failure to address skills weaknesses leads to a skill deficient work force and resultant stunted industrial growth.

This report has outlined core deficiencies that require immediate redressal to overcome the existing vacuum. PSDF can focus on the following for better outcomes.

Address **Skill Gaps** in the workforce defined as skills falling short of firm requirements. Main causes of skills gaps are:

- Rigidity to change;
- An operational culture with low emphasis on regular trainings;
- Time constraints to train;
- Lack of experience;
- Hiring issues.

Skills Gaps are rampant where **Skills Shortages** are experienced by the firms pointing to a dearth of workforce with requisite skills, qualifications and experience. This is particularly evident when the vacant posts fail to attract the suitably skilled. The fan industry manufacturers have identified the following reasons to fill the vacancies;

- Unavailability of a qualified pool;
- Dearth of skilled applicants in the field;
- Applicant with required experience;
- Seasonal nature of the industry;
- Fewer candidates with the required attitude, motivation or personality.
- Existing competition from the other firms;

The **Problem-Solving deficiencies** noted below were acutely evident at the individual level:

- Low academic, technical and vocation education;
- Poor IT skills;
- Personal attributes including attitude issues, lack of common sense and work ethics;
- Inability to be a team player.

Following **Training Requirements** are unanimously demanded by the fan industry:

- Timely information about the training programmes;
- Customized local training;
- Cheaper courses.

INTRODUCTION

This needs assessment report offers an overview of the performance, pitfalls and potentials of the Fan Manufacturing Sector of Punjab.The study attempts to achieve following objectives:

1. To define the Fan Industry structure;
2. Identify the Primary and Secondary manufacturers;
3. Analyse the drivers of fan cluster;
4. Assess the export performance and potential;
5. Identify skill gaps and their incidence;
6. Explore industry vocation and technical training requirements;
7. Provide a set of recommendations for PSDF.

The exercise was undertaken to collate the grass-root needs of the fan-specific SMEs concentrated largely in the industrial cities of Gurjanwala and Gujrat of Pakistan's Punjab province. The report draws on the data from official and un-official sources to present its findings, their implications and offers recommendations to prepare an up-skilled workforce led by cohesive management enabling the industry to realise and accelerate its true potential.

A simple research methodology has been adopted to analyse the performance, pitfalls and potential of Pakistan's Fan Sector. This report has collated the key findings by adopting the twin methodology of empirical research paired with field analysis. Existing empirical data has been referenced throughout the report, which varies, as there exist no comprehensive sector-specific archives.

METHODOLOGY AND STRUCTURE

The report is divided into two components: namely descriptive and analytical.

In Part One, the report charts the sector, the key players and examines the workforce. It details the strengths and weaknesses of the industry and maps the competition in the regional market. It next charts the opportunities for growth and spotlights the global demand market.

This *Fan Industry Skills Assessment Report* by PSDF is a welcome addition to otherwise sparse research available on this subject. Most of studies done over the years have relied heavily on the two comprehensive yet dated reports by UNIDO[2] and DPRC[3]. Several other publications accessed for this report have relied heavily on these two reports and this report is no exception. Needless to say none of the statistics cited in Part One have been originated by PSDF.

The *Part Two* of the report dwells on the Future Sector Scenario by offering linkages between the top-down and bottoms-up, for a horizontal and vertical overhaul and formulation of a strategy based on the needs by the former and response by the latter. To tap into the demand from the industry, PSDF in conjunction with PEFMA carried out a field survey by circulating a semi-structured questionnaire to the industry

SME DEFINED

As defined by State Bank of Pakistan – SME (**Small and Medium Enterprise**) means an entity, ideally not a public limited company, which does not employee more than 250 persons (if it is manufacturing concern) and 50 persons (if it is trading / service concern) and also fulfills the following criteria of either 'a' and 'c' or 'b' and 'c' as relevant:

(a) A trading / service concern with total assets at cost excluding land and buildings up to Rs 50 million.

(b) A manufacturing concern with total assets at cost excluding land and building up to Rs 100 million.

(c) Any concern (trading, service or manufacturing) with net sales not exceeding Rs 300 million as per latest financial statements.

Source: SBP[1]

professionals. The 32 responding firms hailing from cities of Gujranwala and Gujrat offered valuable insight into the grass root needs of the fan industry.

The first half of Part II provides the findings of this sector-sourced need survey via circulating a semi-structured questionnaire whereas the second half sketches the manner through which the deficiencies could be addressed; and incorporates the identified demands to develop a comprehensive action plan. The report summarizes the discussion substantiating the key findings and concludes suggesting a roadmap for a robust, reliable and affordable fan industry within Pakistan and beyond.

[1] State Bank of Pakistan, (March 15, 2013) "Infrastructure, Housing & SME Finance Department." Downloaded from http://www.sbp.org.pk/departments/smefd/15March/2-SME-BankingRegulatoryEnvironment.pdf Accessed on 08/02/2015

[2] Muhammad Ali Haroon and Sheraz Ahmed Farooqui, "Diagnostic Cluster: Fan Industry Gujrat." UNIDO, June 2006Downloaded from https://www.unido.org/fileadmin/user_media/UNIDO_Worldwide/Offices/UNIDO_Offices/Pakistan/DS_Fans_Final_june_28_06.pdf Accessed on 02/01/2015

[3] Kamal, M., Usman Khan, Kamal, M., Usman Khan, "Fan Industry in Gujrat and Gujranwala: An SME Cluster Study." Development Policy Research Centre, LUMS (March 2011). Downloaded from http://lums.edu.pk/docs/dprc/Fan-Industry-Report.pdfAccessed on 02/01/2015

PART I: AN OVERVIEW OF GLOBAL FAN INDUSTRY

Punjab Fan Industry is on the agenda of PSDF's twin pronged agenda of income generation for the marginalized and limited skills labour force and growth productivity to enhance export potential.

I - The Local

1.1 The Sector

Pakistan's fan industry is a self-sufficient and specialized cluster concentrated in Punjab's industrial cities of Gujrat and Gujranwala. The fan industry is a Small Medium Enterprise Industry under the umbrella of light engineering industry is concentrated in Punjab's top 3 industrial cities popularly known as 'The Golden Triangle'[4] consisting of Gujranwala, Gujrat and Sialkot as 60 percent of the SMEs are located in and around the export triangle. Unlike others, the fan industry had a head start dating back to pre-independence era when a native family business owner learnt the tricks of the electrical fan trade from Amritsar in United Punjab. The family foray helped launch an industry helping initially Gujrat and then Gujranwala emerge as fan producing giants in the Independent Pakistan.

1.1.1 The Size

Directorate of Industrial Establishments in Punjab estimates the total industries at 520. The G2 cluster produce 75 percent output from Gujrat and 25 percent from Gujranwala. Gujrat dominates the district wise breakdown. This cluster has 345 factories whereas Gujranwala has 149 production houses[5]. Comparatively, the other district Lahore seems negligible with 6 fan enterprises and Rahim Yar Khan and Sahiwal barely significant with 1 firm each to their name.

Source: OECD Report[6]

Table 1: District Breakdown of the Fan Industry

No	Total	502
1	Gujrat	345
2	Gujranwala	149
3	Lahore	6
4	Rahim Yar Khan	1

Source[7]

1.1.2 The Structure

The G2 cluster has a typical SME division of units with fewer large scale units, sizeable medium scale manufacturing firms and overwhelming number of small scale companies. The top tier sole proprietorship firms are numbered at 6-8 with international level manufacturing capacity and standardization.

1.1.3 Key Drivers of G2 Cluster

The key players are generally family run companies (GFC Fans, Yunus Fans, Pak Fans, Royal Fans, Starco Fans and Metro Fans)[8] with revenues of Rs.150-250 million from production of 60,000 – 250,000 units of fans every calendar year. The middle tier with 50-80 units has a projected cost of Rs.10-20 million employing up to 60-80 percent of the work force. The tier two firms generate Rs.150-250 million annually contributing up to 60,000 of the household fans. In total, the established fans linings generate 70 percent of the revenue alone[9].

The largest number of manufacturing units is the small-micro unit characterised by small partnerships. The ever-growing part of the industry has project cost of Rs.0.5 – 1.0 million attracts new entrants into the fold whereas 72 percent are old firms. As a result the tally has reached 450 units employing 20-25 workers reaching production of 2,000 – 10,000 with daily production of 500[10]. The small firms take in up to 5 million in revenues.

1.1.4 Regulation

An estimated 90 percent[11] of Pakistan's domestic fan manufacturers are formally registered firms. Fan industry is classified under quality standards and safety standards. Given the dominance of small scale firm reliance on obsolete technology, low emphasis on standardization practices is hardly surprising.However, the established top tier firms are cognizant of international certification and have in house testing capacity to produce fan units compliant with export markets. These include CE (Europe); UL (USA); SASSA (ICSA); SABs (South Africa); SONCAP (Nigeria); and SIRIM (Malaysia)[12].

1.1.5 Performance

The sector has been growing at 17 percent since 1999. As the older industry, the G2 cluster makes an impressive case study mushrooming from 40 units in 1940s to 500 plus to date. The industry has an investment of Rs.2.7 billion and production reaching 80 million units. The G2 cluster is specialized, diverse and well-established - meeting the national demand since independence in 1947. The G2 cluster is part of 90 percent of SMEs that annually contribute 30 percent to GDP and 25 percent to exports respectively. The 6 premium fan firms have clocked $50 million in 2013 mainly lead the export market[13]. The annual average production is 17.5 million units of mainly household fans. Of these 63 percent production is ceiling fans, whereas 32 percent are pedestal fans followed by 5 percent bracket fans.

1.1.6 Support Sector

The G2 Fan cluster also has a 700 vendors constituting supplier chain providing imported and locally manufacturing raw materials. Aside from electrical silicon, steel sheets, materials such as paint, copper wire and switches are domestically produced.

1.2 The Employers

Pakistan is self-sufficient in fan production as the industry consistently caters to 90 percent[14] of the local consumer market offering a wide range of household fans to all income groups.

1.2.1 The Primary Manufacturers

PEFMA estimates the employment at 40,000 direct involvements with the big 6 employing up to 450 staff per unit producing 70 percent of the total production[15].

1.2.2 The Secondary Manufacturers

The middle tier offers employment to nearly 50 while the micro units are staffed with fewer than 10 employees. It is important to highlight that the ancillary employment stands at nearly 160,000[16] of indirectly employed pointing toward outsourcing of work – a hallmark of the industrial clusters world over.

1.3 The Workforce

The workforce engaged in fan manufacturing sector range from basic technical workers to the top management positions.

1.3.1 Division of Labour

The labour is either engaged on regular, contractual or seasonal basis. From the basic operational tasks the labour performs laborious technical work.

Table 2: G2 CLUSTER EMPLOYMENT

Total	200,000
FORMALLY EMPLOYED	35-40,000
INDIRECTLY EMPLOYED	140-160,000
CAPITAL TO	6 WORKERS PER
LABOUR	MILLION RUPEES

Source[17]

1.3.2 Recruitment and Retention

Small firms only offer seasonal employment from January to July every year, the prime production months. The work assumingly dries up in the market from August to December each year and the manufacturing units switch to alternative production and labour force producing auto parts, geysers and washing machines. This SME also has external economies namely fan vendors and fan suppliers. There is significant fan vendors industry with an estimated 600 vendors of up to 1000 units employing 5-20 staff. These include: Fan Blade (30), aluminum (50), rotor (30), fan guard (25), specialist die making (5), regulator (100), switches and label (15), cup and kuppa (100), copper wire (10), locknut (30), worm axle (20), canopy (170), stand (40), nukka (20) complene (60) and rod (50)[18].

TABLE 3: SNAP SHOT OF THE FAN INDUSTRY

RANKING	Primary Manufactures	Secondary Manufacturers	
	TOP TIER	MIDDLE TIER	SMALL TIER
UNITS	8	494	
CAPACITY	17.5 MILLION		
PRODUCTION (FAN UNITS)	60,000-250,000	20,000-60,000	2,000 – 1000
PRODUCT COMPOSITION			
I			
House hold	90-95 percent		
Ceiling Fans	60 percent		
Pedestal Fans	30-_		
Bracket Fans	3percent		
2			
Industrial Fans	10 percent		
REVENUE GENERATION (PKR)	PKR 250-300 MILLION	PKR 150-250 MILLION	PKR 2-5 MILLION
EMPLOYMENT OFFERED	ABOVE 300	60-80	20-25
EXPORTING UNITS	8	42	
EXPORT REVENUE US $	US$ 50 MILLION		
GDP CONTRIBUTION	21 percent		
INVESTMENT	2,701,613,000		

Source[19]

[4] Directorate of Research and Training, (N/A) Syndicate Research Report. Scope & Development of Industrial Clusters in Pakistan (Lahore))Downloaded from http://www.dgtrdt.gov.pk/Research/folpercent2034.pdfpp 1-42. Accessed on 04/01/2015
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[6] Organisation of Economic Co-operation and Development, (2012) "Towards and OECD Skills Strategy" Downloaded from http://www.oecd.org/edu/47769000.pdf Accessed on 11/01/2015
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[8] Kamal, M., Usman Khan, Kamal, M., Usman Khan, "Fan Industry in Gujrat and Gujranwala: An SME Cluster Study." P. 37 Accessed on 02/01/2015
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[10] NazishAfraz, Syed TurabHussain and Usman Khan, "Barriers to Growth of Small Firms in Pakistan: A Qualitative Assessment of Selected Light Engineering Industries."Working Paper presented at International Growth Centre, (05/02/2013).P. 20 Downloaded from http://igc.soapboxserver.co.uk/wp-content/uploads/2014/09/Khan-Et-Al-2013-Working-Paper.pdf Accessed on 03/02/2015
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[16] Ibid., p. 27.
[17] Kamal, M., Usman Khan, "Fan Industry in Gujrat and Gujranwala: An SME Cluster Study." Development Policy Research Centre, op. cit. P.7
[18] Nadvi and Ahmed Cited by Arif Iqbal Rana and Jawaid Iqbal Ghani (1.1. 2004). "Dynamics of Outsourcing in Industrial Clusters: A Study of the Gujrat Fan Industry in Pakistan." Asian Journal of Management Cases, P. 15. Downloaded from http://ajc.sagepub.com/content/1/1/7 Accessed on 01/01/2015
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2 The Global

The light engineering sector forms 50 percent of the world exports. Pakistan performs dismally with a tiny 1 percent share. According to unofficial data shared by SMEDA, the exports stand at $50 million contributed by 50 large and medium enterprises, producing 20 million fan units per year. Despite self-sufficiency in the domestic market, Pakistan has failed in making a mark in the global fan trade worth US $3.5 billion. It is currently ranked 13th with the export share of 1.1 percent.

2.1 Regional Threat from China and India

Pakistani exports are confined to South Asian markets (Afghanistan, Nepal, Sri Lanka, Bangladesh), Middle East (Saudi Arabia, United Arab Emirates, Yemen) and Africa (Sudan), averaging at $21.98 per unit. The higher price has made Indian and Chinese fans more appealing as the consumers' pay $12.03 and $15.98 respectively. The low-end price has propelled China at the top of the supply chain claiming 70 percent of the global fan export stall with India buying 79 percent[20] of Chinese fans. This is made possible as the Sino-Indian fan entrepreneurs receive consistent state support (Chinese metal subsidy 10-17 percent; Indian metal subsidy 3-5 percent). On the other hand, Pakistan has levied 10 percent import duty as recently as 2014 on metal, an FBR move increasing the production cost up to 20 percent and adding a new barrier to reach or stay in the global markets. Also, lowerproduction capacity of about 400 units is another weakness of the Pakistani fan industry, which is significantly lower than 40,000 fans daily produced in China, bringing its exports to US $ 1.8 billion[21].

2.2 Demands from the West

Apart from pricing, lower branding also reduces Pakistan's chances of being an international player. A G2 cluster fan unit fetches $25 in the international market that retails better-branded and sophisticated units as high as US$ 400-500. This is because Pakistani fans are a basic utility item whereas they are a lifestyle choice for an international consumer. There exists no high end G2 product for top-end income markets pointing towards failure to develop sale point in to 5 fan markets such as USA ($1 billion); Japan ($184 million); China ($159 million); Hong Kong ($113 million); and Australia ($98 million)[22].

2.3 Growth Impediments

There is negligible emphasis on quality assurance, unless firms have a foreign target market. Certification cost at PKR 80,000 per product line is a luxury afforded only by those poised to dispatch an international delivery. Another factor affecting small and medium manufacturers to break into the market is low literacy, technical know-how and out-sourcing dependencies resulting in high risk and low profitability.

[20] Pakistan Institute of Trade and Development (N/A) "Sector Brief on Fan Industry." (Place: Author) Pp 1-5 Downloaded from http://www.pitad.org.pk/Publications/23-Pakistanpercent20Indiapercent20Tradepercent20Liberalizationpercent20Sectoralpercent20Studypercent20onpercent20Fanspercent20Industry.pdf Accessed on 09/02/2015

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PART II: NEED ASSESSMENT OF FAN INDUSTRY – EMPIRICAL ANALYSIS

3 - Questionnaire: A Basic Assessment Tool

In order to ascertain the grass-root industry needs, PSDF collated the feedback of the industry professionals by circulating survey questionnaires through PEFMA. The survey facilitated first hand evaluation of prevailing industrial practices; allowed analysis of skill sets of workforce presently engaged in this sector; and consequentially helped in identification of skill gaps that require improvements. The structured questionnaire comprises 24 questions with 32 respondent firms to report on the skills development requirements of the industry. It assesses the variance in competencies through three levels i.e. organizational analysis; occupational evaluation; and skills assessment.

i) **Organizational analysis** examined the size, performance and hierarchy of respondent firms to obtain a structural description of the firm;

ii) **Occupational evaluation** determined the recruitment practices, categorization of workforce and nature of their service. It also highlights the prevailing hiring issues;

iii) Skills assessment includes job performance of employees, their cognitive, social and technical skill deficiencies. It also includes the variation in the fan job market and identifies employability needs.
The structured questionnaire was designed and distributed by PSDF to identify the skills needs as foreseen by proprietors and managers. (The questionnaire can be found in Annex 3).

3.1 Results from the Questionnaire

The 32 respondent firms provided a mixed response to the 24 questions listed under multiple categories. There is a clear demand for staff trainings as the questions pertaining to industry size, wages, hiring difficulties and staff skill gaps, barriers in staff training and information about new training elicited the most responses. The other comprehensively answered involved employment-related queries; employee designations, entry and middle level eligibility criteria, future vacancies, recruitment mode and causes for skill deficiencies. In comparison, the answer rate for question 16, 17, 19 was poor. Table No (in Annex 2) illustrates the response rate in detail.

Categories of Fan Industrial Units

The fan industry offers various service categories (as seen in figure 1(a); with *Assembly & Fitting and Inspection & Quality being offered being the most commonly offered with 30 each. Fan Winding, Insulation & Varnish is another leading category with 29 offering this as a service. Fan Winding, Insulation & Varnish, Electronic Fan Fitting & Testing and Pattern Making at 29, 28 and 25 respectively.*

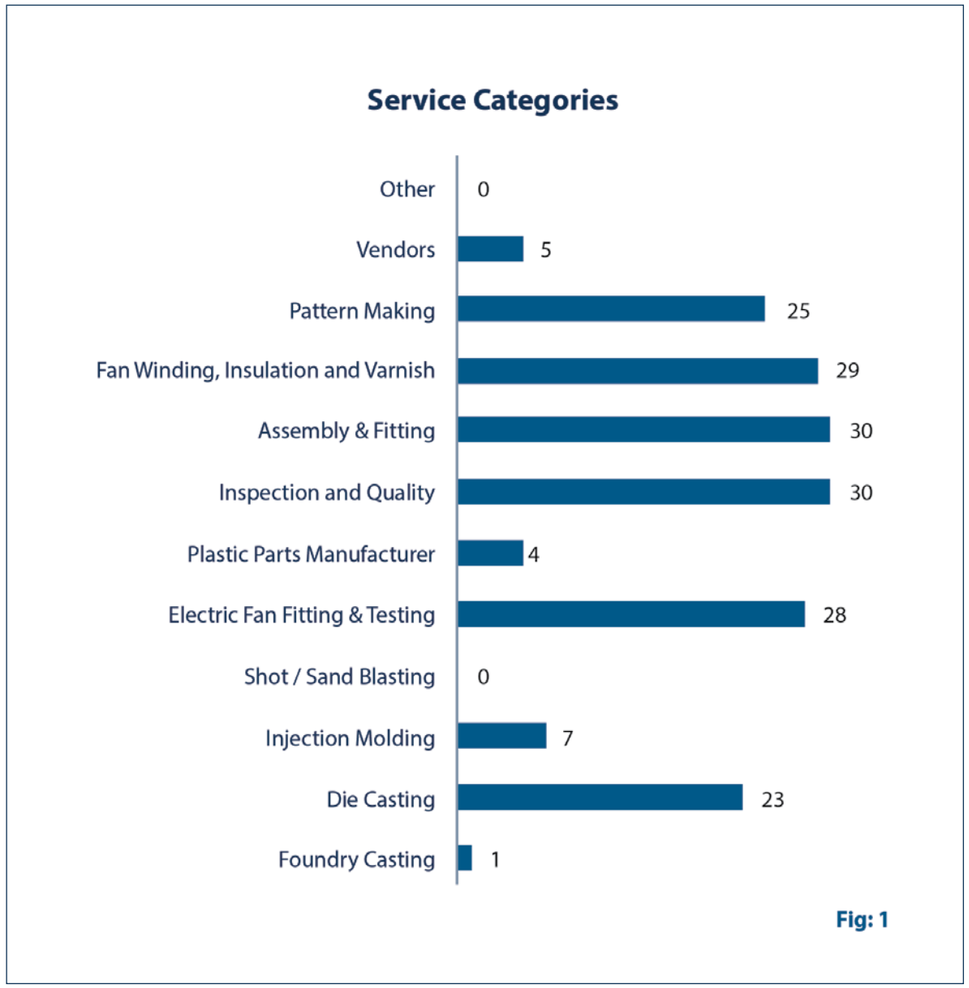


Fig: 1

The results in Figure 1b (below) corroborates that, this SME is mainly a composition of micro-small industries. The large industrial units comprising over 100 employees are a mere 6 percent well outnumbered by 19 percent micro firms with under 10 employees at the bottom rung of the ladder. The small enterprises comprising over 10 and under 35 employees constitute an over-whelming majority at 62 percent and the remainder are medium enterprises as 13 percent of the 32 respondents have between 36-99 employees.

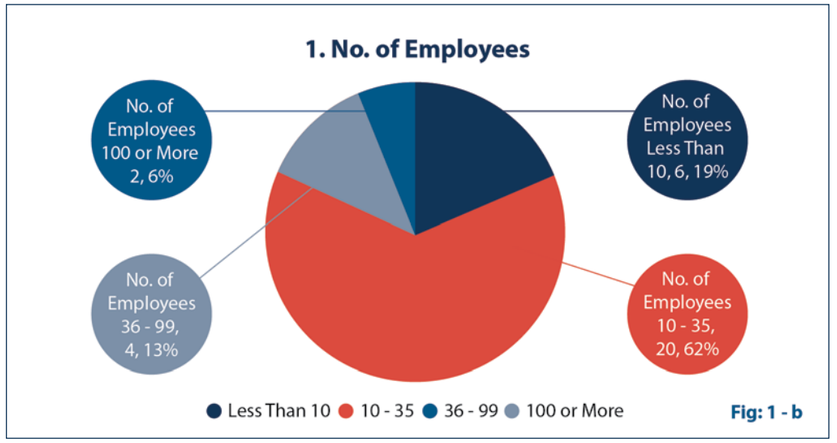


Fig: 1 - b

Nature of Employment in Fan Industry

Figure 2 shows overwhelming 99 percent majority of middle-level managers (including the secretarial and clerical level staff) as regularly employed in the fan industry. Similarly, a significant proportion of 82 percent of workers (namely fitters, painters and operators) remain regularly employed by their firms. There is overall job security and stable hiring policy under taken by the respondent firms as 11 percentare contractual employees while only a small 7 percent workers and operators are hired seasonally.

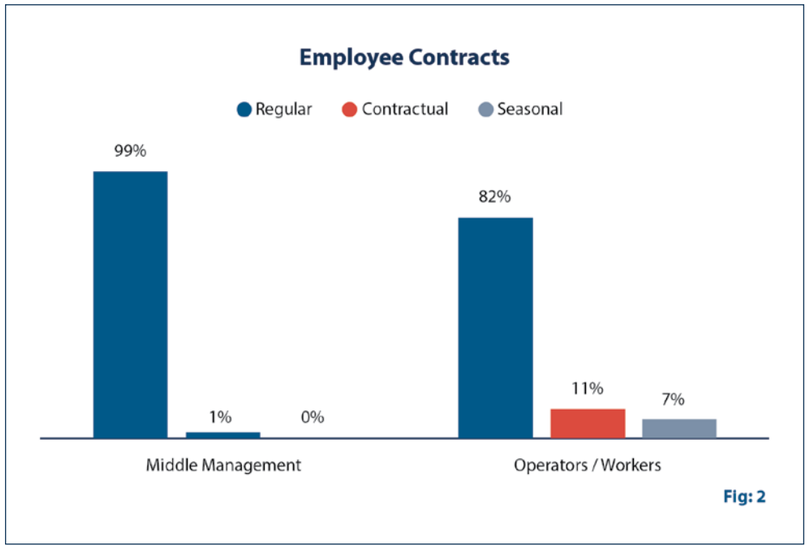
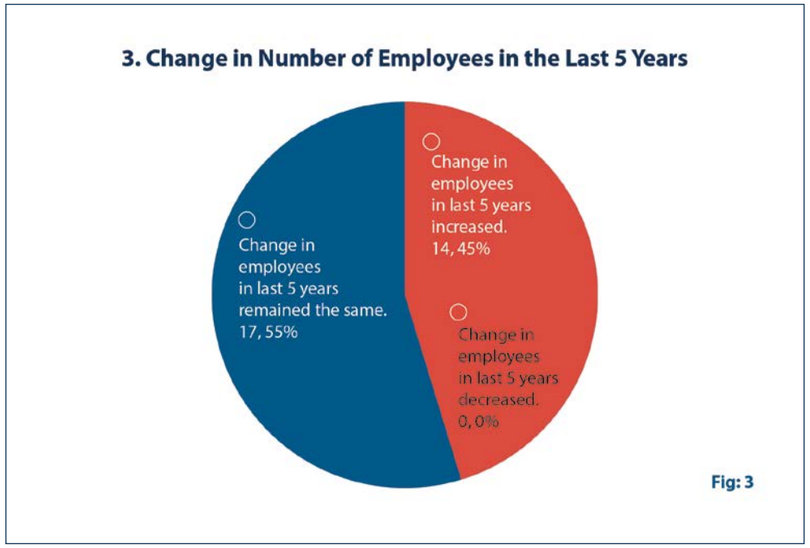


Fig: 2

Employment Patterns in Fan Firms

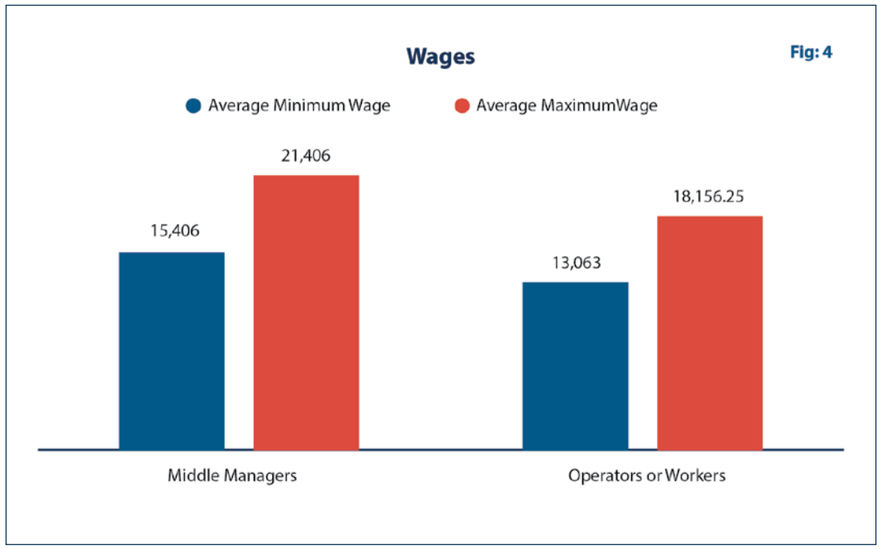
While the employment remains largely regular as stated by the sampling Firms, Figure 3 declares respondent policies remain stagnant, as 55 percent have not hired new staff. Marginally lower number of firms (45 percent) has clocked growth and report resultant increase in their staff. None of the respondents have decreased their staff over the last 5 years. The trend seems to reverse in the future as 17 of the 32 companies plan to grow in the next 2-3 years. (Fifteen respondents abstained).



Income and Wage Levels in Fan Industry

Figure 4 details the average maximum and minimum remuneration drawn by the Middle-level Managers and Workers. The top-end middle managers are paid an average monthly salary of PKR 21,406 while the average maximum salary offered by the 32 firms to their middle managers starts at PKR 15,406.

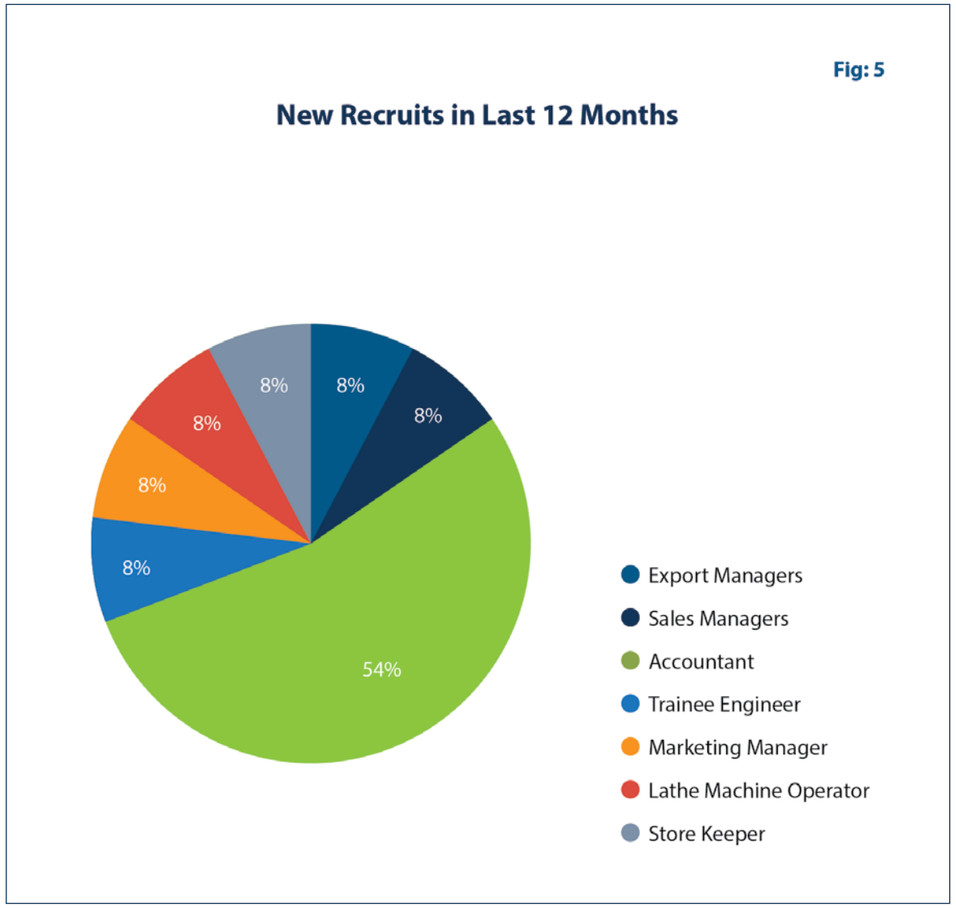
On the other hand, the highest operators can draw is PKR 18,156 per month whereas the fan industry workers remain lowest paid drawing a monthly pay out of PKR 13,000.



High Demand Skills in Fan Sector in Last 12 Months

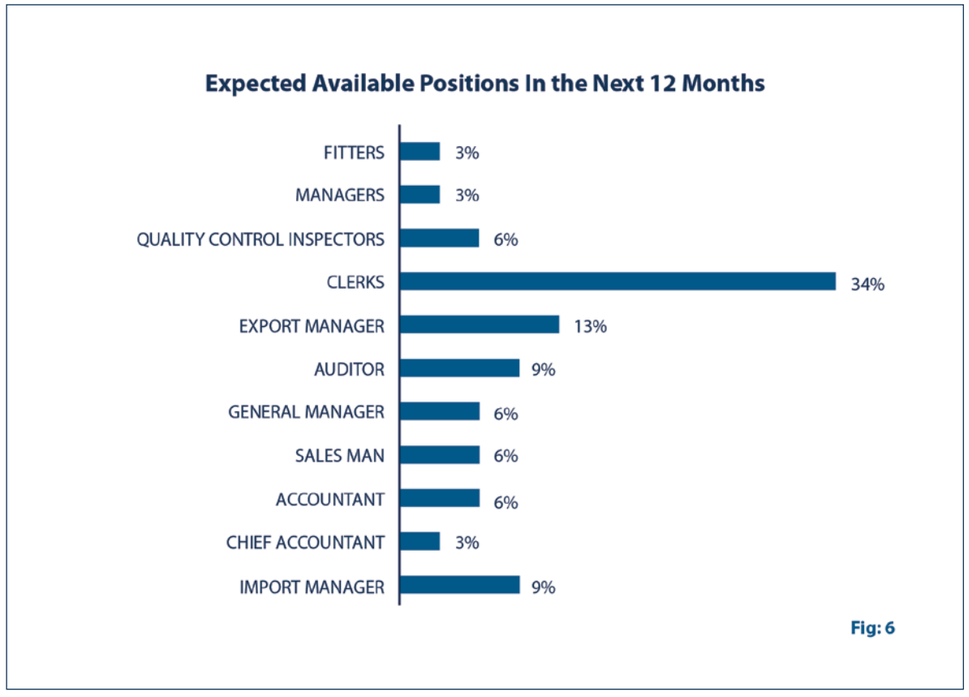
In another multiple-response answer, the respondents listed 106 *Mid-Managerial Level Employees* whereas the *Operator/Worker* were numbered at 915. It is important to mention that, the numbers are not matching total number of employees, because some did not mention the total number of employees and some did not fill the column indicating the nature of the contract.

There is a palpable demand for the *accountants* in the sector (Figure 5) as 54 percent of the new recruits in the industry over the past 12 months have been accountants. The *trainee engineers, marketing managers and lathe machine operator* are the newly hired staff at 8 percent respectively; while managerial vacancies filled by *export and sales staff* are the lowest in demand at 7 percent for each post.



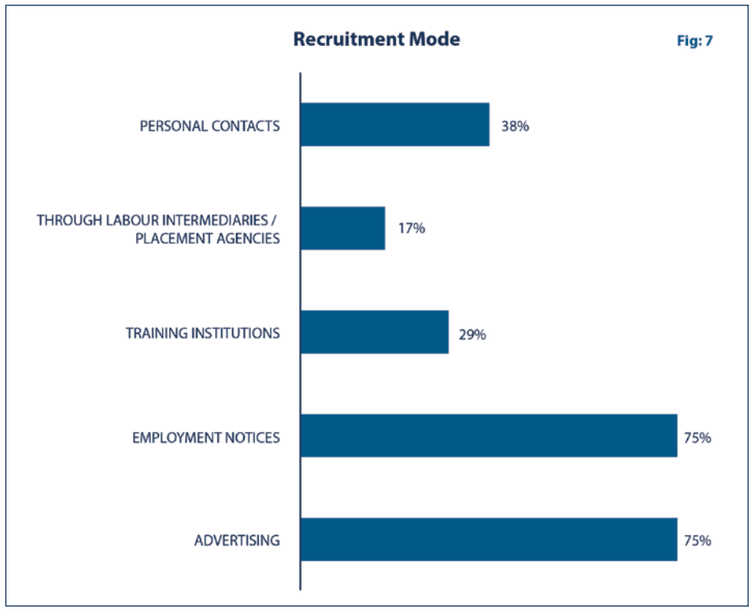
Prospective Demand for Skills in Fan Industry

The hiring trends for the *accountants* do not continue in the future with only 6 percent positions to fill (Figure 6; below). In marked contrast it is expected that these 32 firms will have 34 percent job openings for clerks within the next 12 months. Out of these, 12 percent firms with an eye on the global market have slots to fill for the *export managers* 9 percent for *Import Managers* and auditors alike. The other open positions range from *sales man and general manager* at 6 percent and the job market drying up for the account professionals with only 3 percent vacant positions to fill for the *Chief Accountant, Fitter* and *Manager* positions.



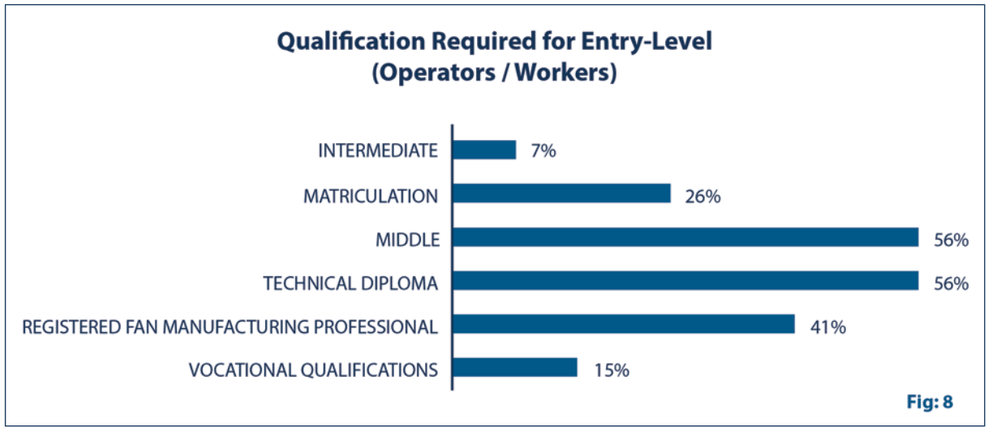
Modes of Recruitment in Fan Industry

Figure 7 (below) provides the industry response for which the firms chose multiple modes adopted to highlight recruitment purposes. Twenty-One respondents (75 percent) each use *employment notices and advertising* for recruiting new employees. The traditional *word-of-mouth* recruitment method remains a standard hiring practice with 38 percent. There is a discernible decrease in the number as 29 percent choose to advertise the vacancies at training institutions while the head-hunters or intermediaries are contacted by 17 percent of companies to attract new applicants.



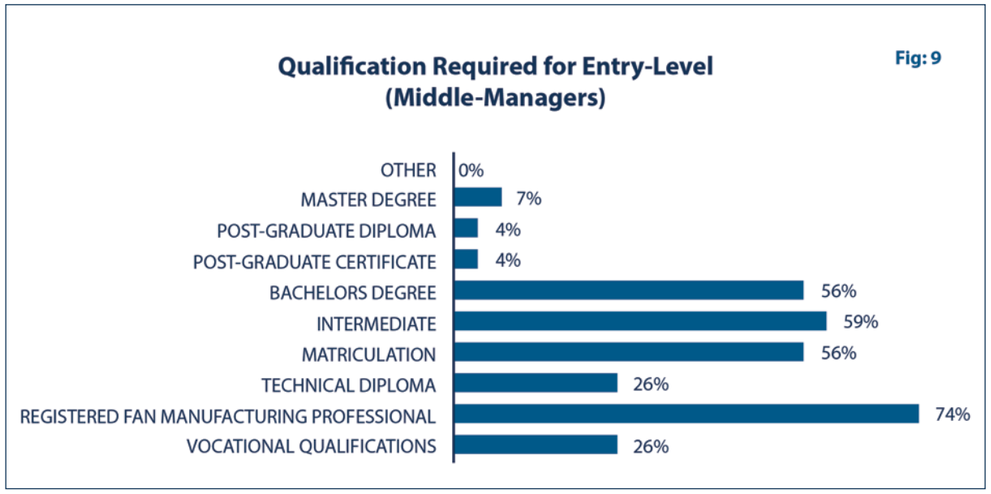
Qualifications for Employment in Fan Industry

Another multiple-response question to list qualifications required for Entry-level Employment for Operators and workers in the fan industry is listed in Figure 8. When inquired what eligibility criterion was adopted for the entry level advertised positions, 27 respondents explained that 56 percent of the companies required *technical diploma* for entry-level workers as well as the same percentage for those having passed their Secondary School Examination. *Registered Fan Manufacturing Diploma Holders* was a requirement for 41 percent and another 15 percent preferring vocational diploma. There is low emphasis on technical education as compared to the moderately academically qualified workers as 26 percent of the fan manufacturing enterprises demand that the applicant has *matriculated* from High School.



Entry Level Qualifications Requirements

Figure 9 provides an over view of the qualification requirements for the entry-level positions for the middle management in these fan firms. The 27 responding firms listed multiple qualifications with majority of these firms (74 percent) demanding that the successful applicants be *registered fan manufacturing professionally qualified*. While 59 percent inductees prefer qualified *Intermediates*, a slightly lower 56 percent respondents require *Matric to Bachelors Degree* for entry-level Middle Managers. Unlike the prevailing low emphasis noted in the degree qualification in the previously cited eligibility for the bottom level work-force (Figure 8), the numbers dwindle for the technical qualifications for the middle managers as Technical Diploma and Vocational Qualifications are preferred by 26 percent firms only. The Post Graduate level accounts for a mere 4 percent each for the *diploma and certificate* and a marginally higher 7 percent make Master Degree qualification a pre-requisite for this position.



Challenges in filling Vacancies in Fan Industry

Another question with multiple responses spotlights fan industry struggling to fill the positions as stated by the participants in this exercise (Figure 10). The implications of the identified challenges will be addressed under the *Recommendations* (Page 32).

According to the industry response, it encounters difficulties in filling the vacancies for the skilled and educated. The vacancies for *Diploma Holders* are the hardest to fill with 15 respondents identifying this shortage in the job market. Three each stated that *Import Managers* are also hard to find. Whereas two respondents each were of the view that *Chief Accountants and Sales* Department Staff is amongst the hard-to-fill vacancies.

The predominant underlying cause noted by 82 percent is *unavailability of a qualified pool* to choose from. This is exacerbated further as 86 percent lamented *dearth of skilled applicants* in the field. Another 75 percent mentioned *scarcity of the workforce* and the same percentage felt *applicant with required experience* were hard to find for the vacant positions. This is partially explained by instability in the market itself as a hefty 75 percent of those pointed towards the *seasonal nature* of the industry which may be the reason behind half of the firms (57 percent) finding it hard to find candidates with the *requires attitude, motivation or personality*.

Nearly 21 percent of 28 respondents believed that *competition from other employers* was one of the reasons making it hard-to-fill vacancies while a slightly higher number (25 percent) were of the view that it was a *shallow market* with low number of applicants to begin with.

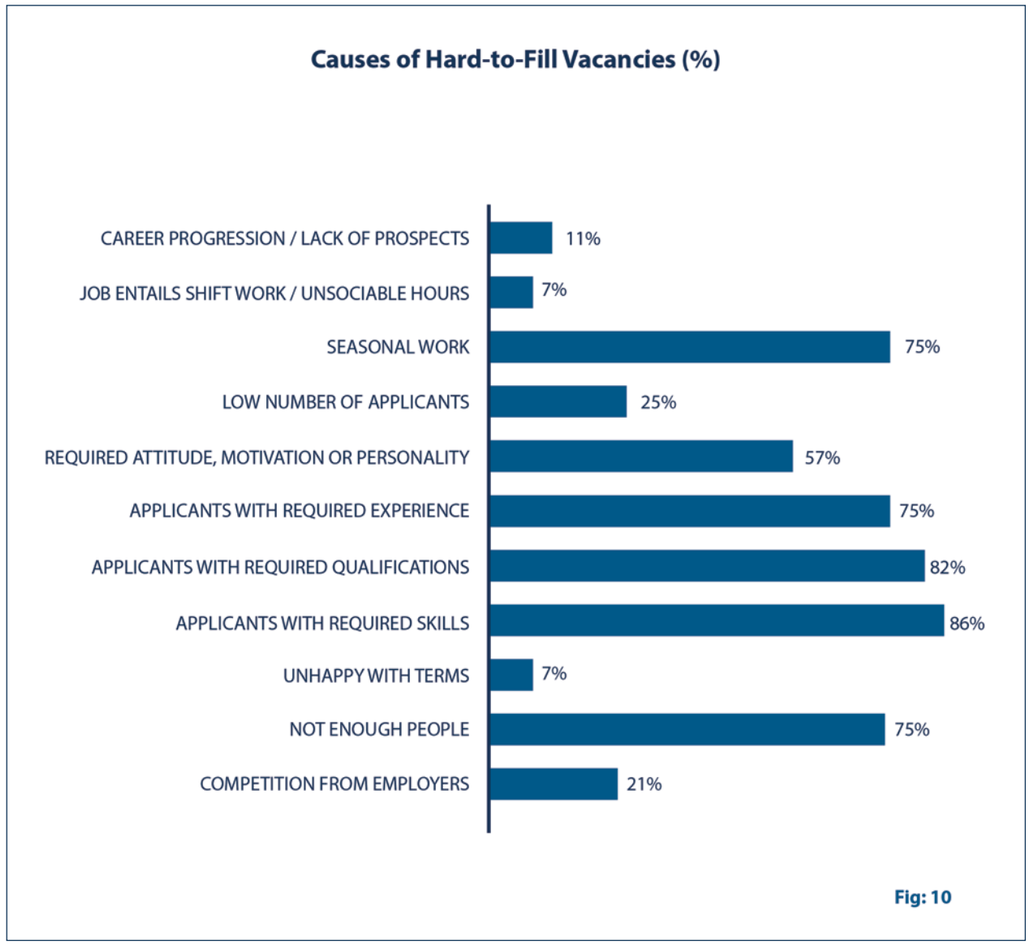


Fig: 10

Transforming Trends in Fan Industry

The respondents chose more than one reason to highlight the three most important changes in the fan sector (Figure 11). The multiple responses (63) generated a mixed feedback with the largest number of entries (18/24) naming *Fan Testing Lab Improvement* changing significantly in the sector, followed by *CNC machines* at 14 whereas 11 of those who responded to this question noted *improvements in painting/paint shop* as the major sector improvements.

It is thus suggested that PSDF and TVET place these changes on the agendas of the training firms as the demand for the staff in the highlighted categories will see an upsurge in the future.

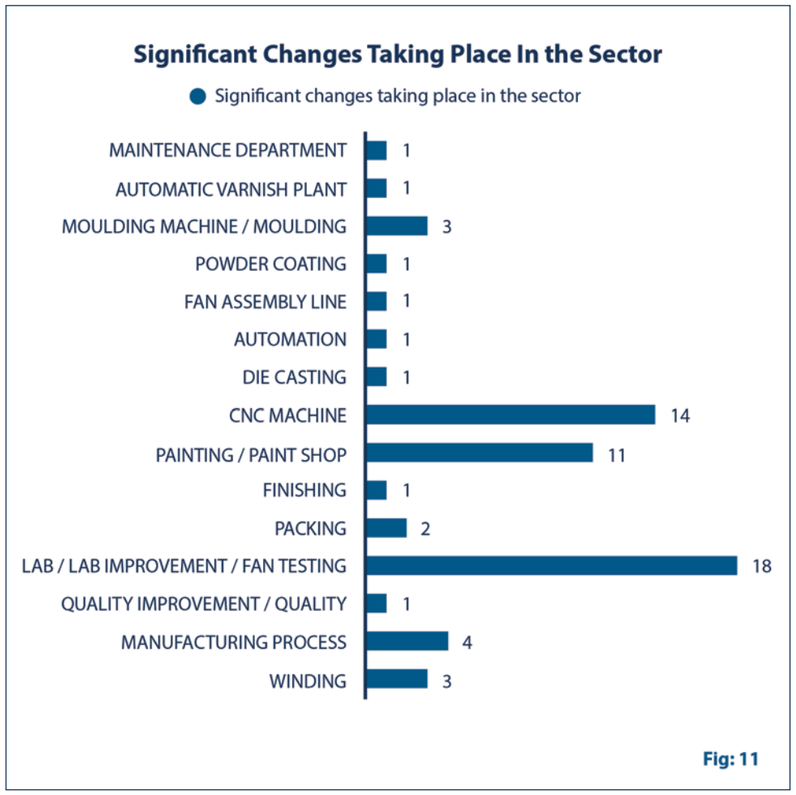
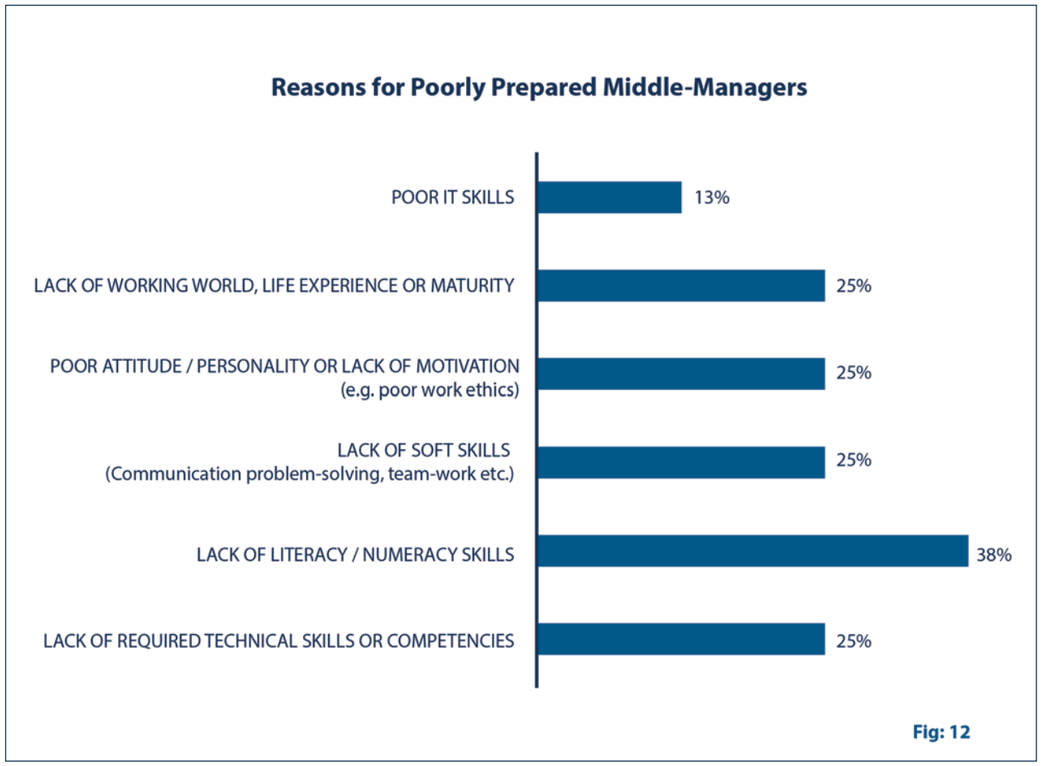


Fig: 11

Skills Set Review of Manager-level Employees:

According to the SMEs engaged by PSDF through their field survey, the respondents were asked to reflect over the last 2-3 years and report on the middle-management quality of the work force and whether their employees have been wellor poorly prepared for work given to them.



21 out of 32 firms showed satisfactions stating they found old recruits well prepared. Same however, does not seem to be the case for the new inductees into the fan management corps.

Multiple responses by the fan firm are tabulated in Figure 12 (above). Majority with 38 percent believe that *lack of literacy* remains the reason for poorly prepared new middle managers. In the same vein, 25 percent companies each also uniformly considered, *lack of soft skills, low technical competencies, general immaturity and poor work ethics* as the underlying factor.

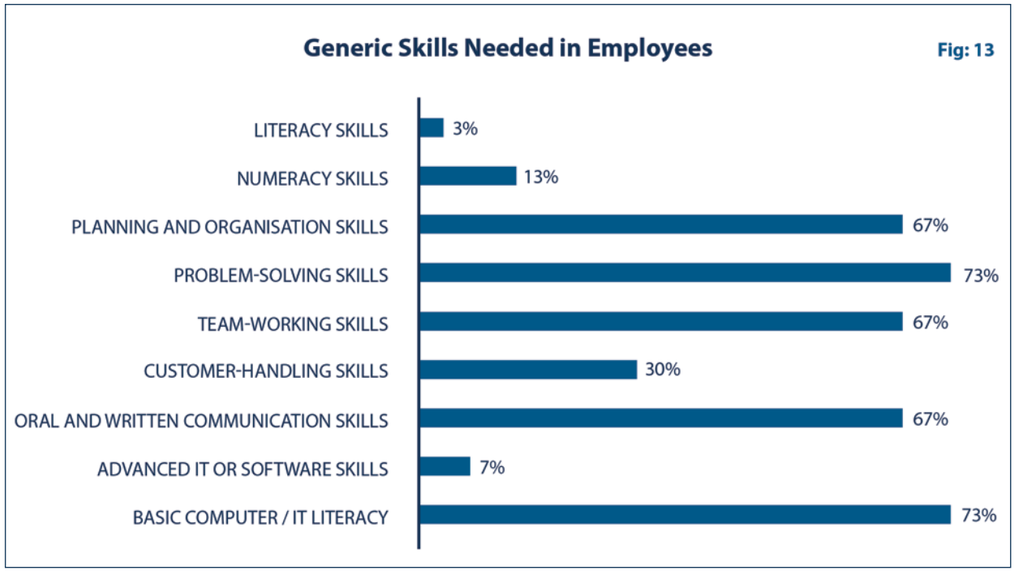
Skills Set Deficiencies in Worker-level Employees

A similar response was observed when the fan entrepreneurs were asked to give reasons behind poorly prepared workers. The twenty-four companies provided multiple reasons confirming that individuals recruited at this level were well prepared. However 3 out of remaining 8 respondents stated that *lack of soft skills* as one of the reasons for poorly prepared workers. A further 3 participants of this survey listed *lack of literacy* as the main factor behind poor workforce. One respondent each were of the view that *low technical know-how* and Lack of *Basic common sense* as the contributory cause.

Generic Skills Required in Fan Industry:

The fan manufacturing companies were asked to further narrow down the generic and sector-specific skill set deficiencies observed in the current employees in the last six months. These are highlighted in Figure 13.

Basic Computer literacy and problem-solving skills were the top generic deficiency identified by 73 percent followed by a 67 percent demand in the three areas namely; *planning and organisation skills, team-working skills besides written and oral communication skills. Customer-handling skills* were also considered a weak area at 30 percent while numeracy skills were accounted or 13percent3 percent believed that Numeracy skills were needed in the current employees. Advanced IT skillsis also considereda weak skills area though the need is felt by a mere 7 percent of the 31 respondents.



Skills Training Trends in Fan Industry

In order to carry out a comprehensive analysis of the demand-driven training programme to be designed by PSDF, the firms were asked several training-specific questions (Figures 15 – 18). When asked if *the companies specifically seek middle managers and workers holding a particular qualification trained by a specific institute,* only one respondent answered this question. It is important to highlight that there exists little emphasis on a trained Middle-level management as compared to the training for the workers. Only 3 percent each were sent to the three below named institutions to train in *Information Technology and Lab Quality Management.*

Preferred Training Institutes for Fan Industry Employees

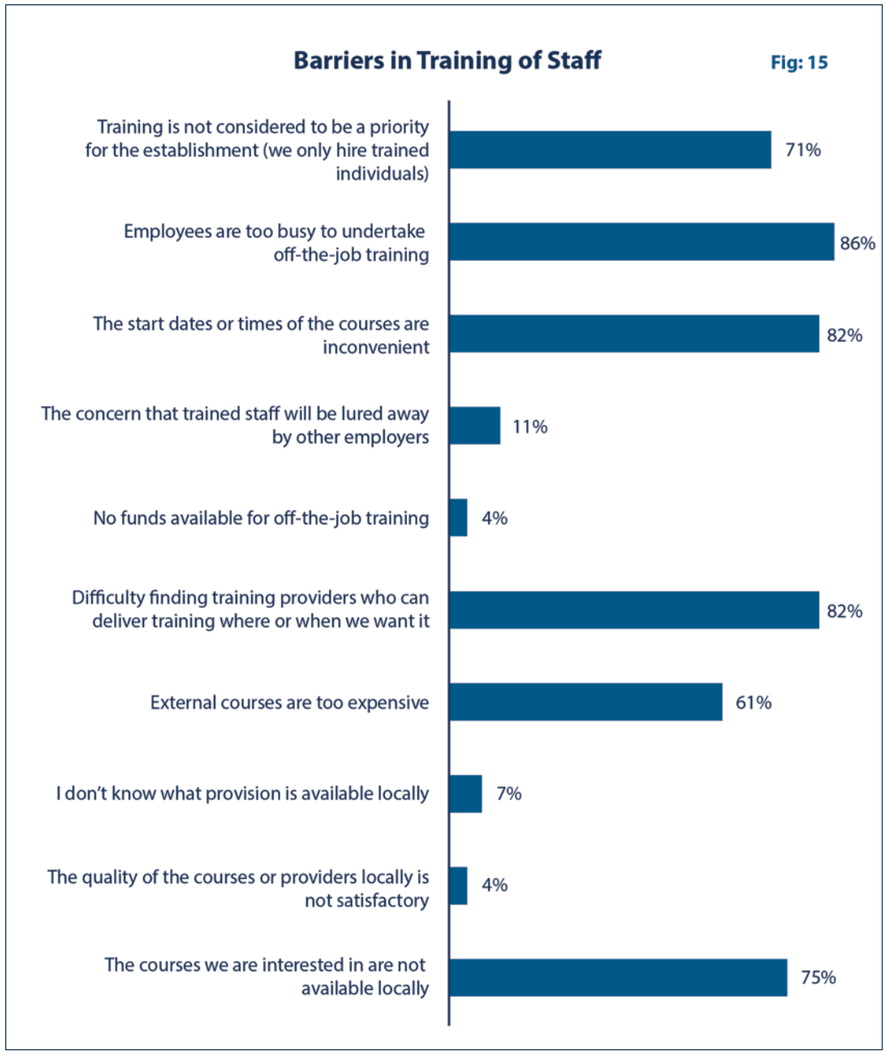
Twenty-Seven of the Thirty-One Fan companies undertake regular training of their staff outside of the on-job training imparted through their firms. When asked to indicate the training institute chosen for the workers, 92 percent preferred Fan Development Institute for the *Lathe Machine Operating Course* to 11 percent were sent for A-Z Fan Manufacturing Course and 4 percent for the CNC Machine Course. About 4 percent of the workers were trained at TESLA for *Machine Operating Course* and 1 percent was sent to *Apprenticeship Training Centre*, Gujranwala for the *Mould Making Course* as seen in (Figure 14).

Identified Challenges in Undergoing Training

After assessing the number, preference and training frequency, the responding firms were asked to choose multiple entries to indicate reasons for low emphasis on staff training and to identify the barriers in doing so (Figure 15). PSDF could draw attention of the trainers specifically to these industry grievances so the maximum can benefit from the available courses. To this end, some recommendations are listed under the *Recommendation* (P.30).

The top-most mentioned barrier is the existing trainings clashing with the staff work timings hence considered unsuitable *as the staff is busy in their day job (86 percent)*. The industry also feels the absence of *tailor-made trainings* as the current courses are considered to take place at inconvenient times (82 percent). The same number of 82 percent encounter difficulties in *finding training providers who candeliver customised training*. A further 75 percent of 28 respondents cited the *non-availability of the relevant courses locally* as another stumbling block although a slightly lower 71 percent felt *staff training to be a low priority* considering the current skill level sufficient for their productivity.

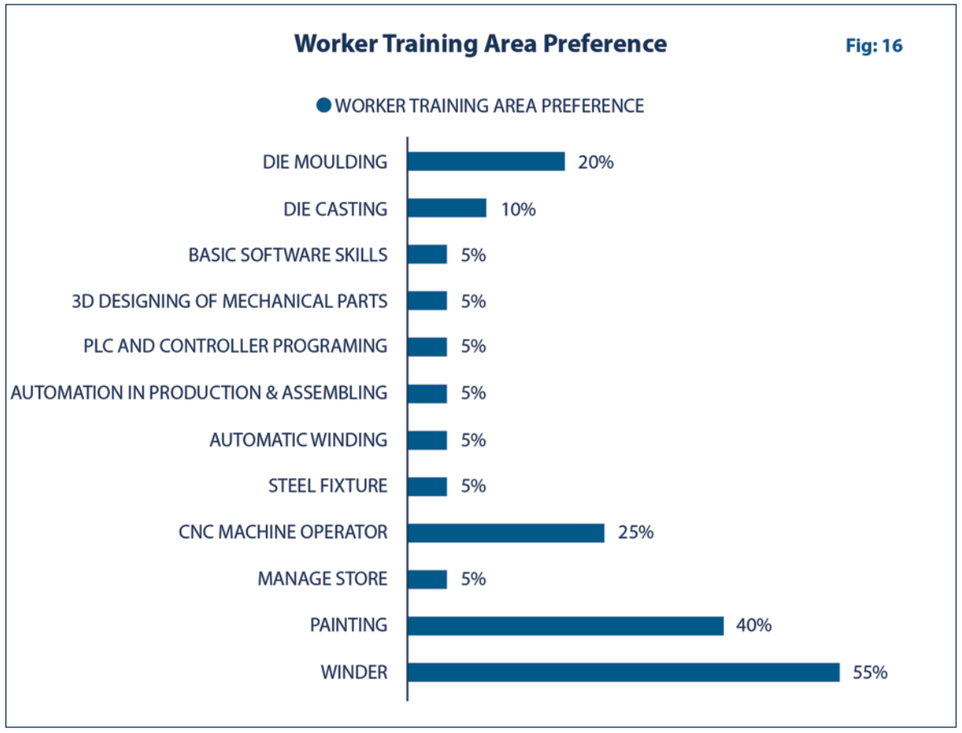
The 61 percent fan firms complained that the *external courses are too expensive* while a relatively minor deterrent was the insecurity felt by 11 percent employers that *other employers would lure their trained staff.*



Training Skills Required in Fan Industry

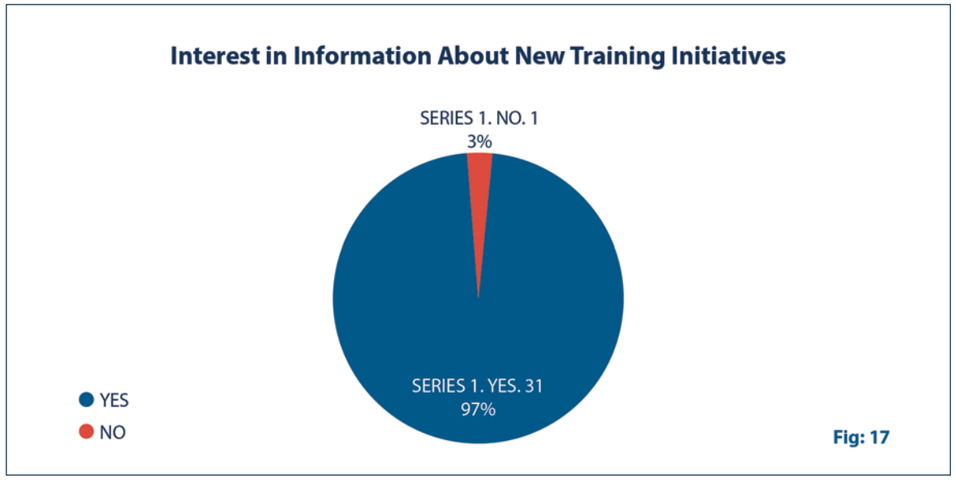
A key PSDF interest area, the Figure 16 (below) represents three most significant skills areas or courses listed by the firms to train their currents employees. It is thus suggested that the future fan trainings are provided in these demand areas possibly scheduled for evening or weekends to ensure maximum trainee turn-out.

Another multiple-response answer shows that half of the respondents 55 percent want to train their *Winders*, while 7 out of 20 respondents (35 percent) want to train their workers in *painting*. A quarter 25 percent have training preference for *CNC Machine Operators* followed by training for the *Dye Moulders* requested by 20 percent and *Dye-Casting* at 10 percent. The singular entries were in the favour of trainings ranging from *Basic Software Skills, and PLC and Controller Programming, Advanced to Store Management at 5 percent each*.



Interest in Training Initiative by PSDF

Figure 17 displays the over-whelming response at 99 percent by 31 of 32 respondents who registered interest in *obtaining information about new training initiatives* by PSDF.



Demand for Training in Next 12 Months

Finally, to tap into the demand by the manufacturers, PSDF provided the firms with a list of fan manufacturing sector-relevant trades, qualification and courses. They were asked to specify their demand for skilled workers in the next 12 months.

The 65 responses were spread over multiple courses with the highest demand 14percentregistered for skilled workers in *electric fan assembling, final inspection and measuring and packing techniques; 11 percent CNC machines operators and programmers* and 8 percent demanded courses for the *mould makers* and *workers* skilled in *Inspection and Measuring Technique*.

The demand thins out for trained *Lab technicians* at 4 percent and *injection mould design* at 6 percent workers. Institute-trained *Tool & Die Makers, DAE Cast Metal & Foundry, CNC Operators, Electricians* are requested by 3 percent employers for the each category. The lowest demand with 2 percent worker required per category is for *Instrumentation Process Control System, Pattern Making, Welding and Fabricating* and *Mechanical and Civil Auto Cads*.

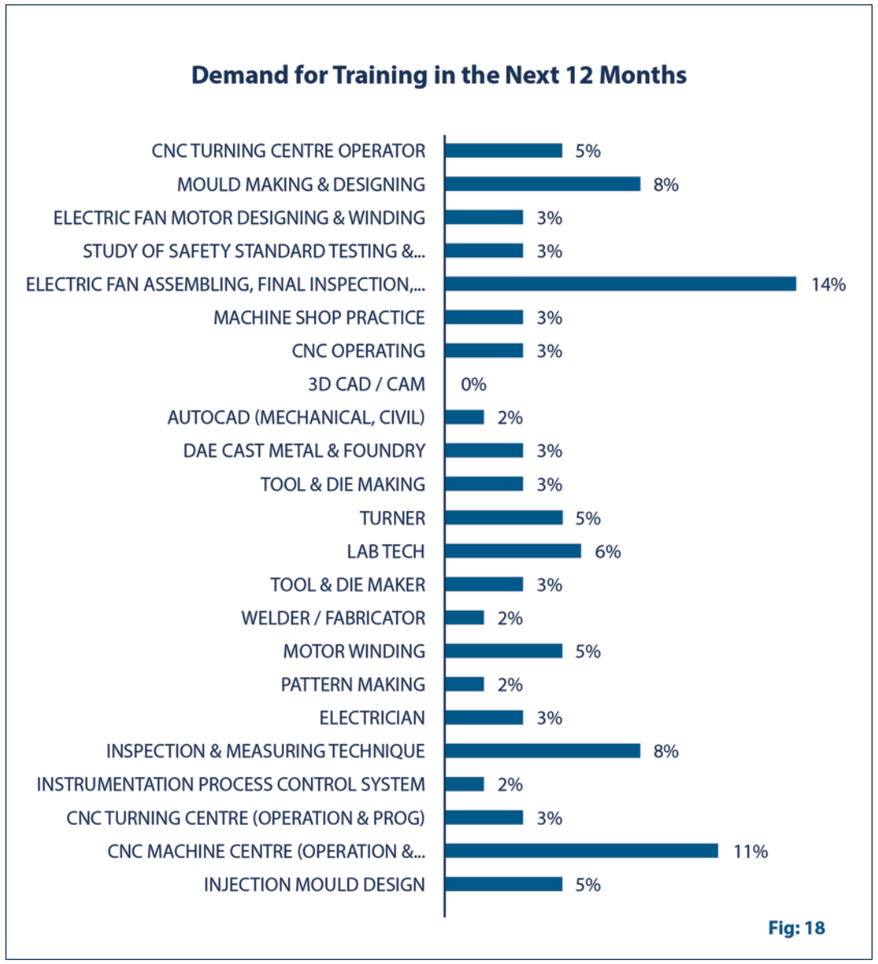
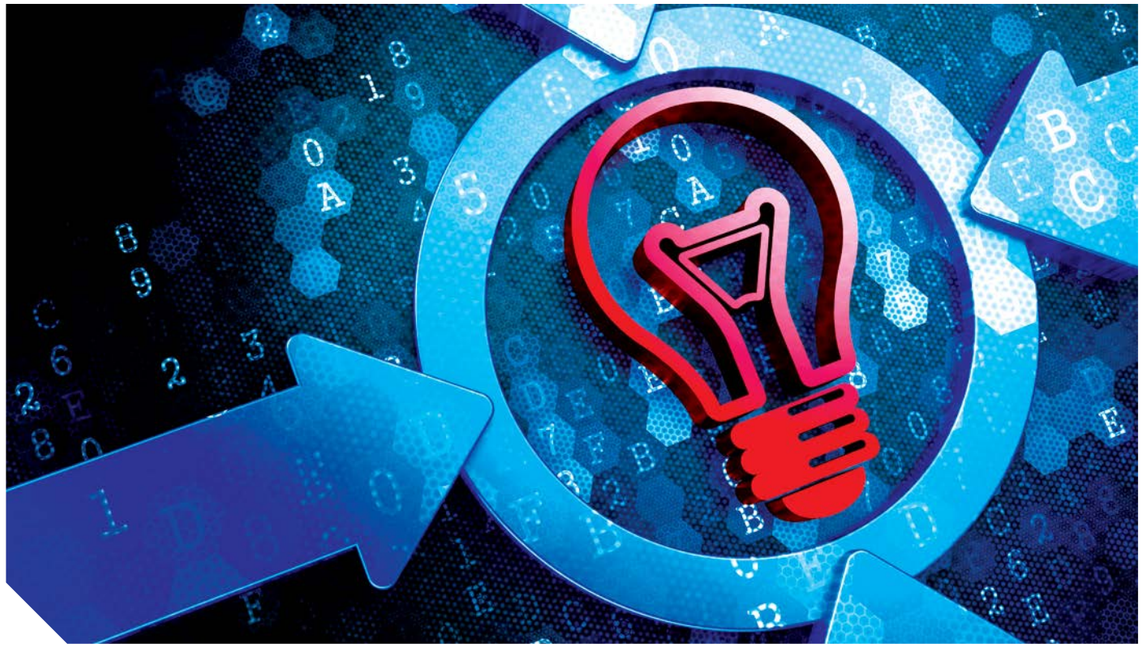


Fig: 18



Key Conclusions

In the light of above discussions, following key assessments could be made about the Fan Industry in Pakistan:

1. As discussed in the first half of this report, the industry will continue to primarily cater to the burgeoning demand of domestic consumers in the foreseeable future. The trade barriers on exports, taxation on inputs and raw material, technological limitations and comparative advantage of the regional economic giants i.e. India and China would substantially compromise the export volume and restrict growth of Pakistan in the international market share for this sector.
2. The micro and small enterprises predominantly constitute 81 percent of the total sector. It is thus implied that the new entrants in this industry are more likely to be the establishments with hiring capacity of fewer than 35 employees.
3. The G2 Cluster will remain the hub of fan industry sector and any growth prospects outside this area are minimal. Given the nature of a classic industry cluster, the employability in this industry is mostly local or from adjoining areas. There does not seem to be any solid indications pointing towards major workforce migration trend from other regions specifically to become part of this industry. Moreover, the enterprises are either hereditary/family business or small-scale units established by individuals splitting from similar establishments after gaining experience in fan manufacturing.
4. Due to seasonality of work in the fan industry there exists lack of motivation for temporary employees who have to look for other jobs during the unemployment season. On other hand, the regular and contractual employees in the fan industry have to perform work on other production lines i.e. geyser and spare parts etc. during the non-production time of the year. Therefore these employees do not have the incentive to develop specialized skill set related to fan manufacturing. Thus engagement of many employees on a temporary basis and seasonal manufacturing of the fan industry becomes an impediment in meaningfully developing the skill set of the work force involved in this sector.
5. In stark contrast, there is clear tendency of nearly all the firms in the fan industry to hire the middle management employees on regular basis. A major proportion of operators and workers are also offered regular employment. The firms do not reduce their employment size and many have exhibited explicit interest in increasing their capacity by hiring more employees albeit most of the firms have not practically undertaken expansion. The fan employers cited competition from employers in luring workers who tend to switch from one firm to the other either upon dismissal or on receiving attractive remuneration and facilities from similar establishments.
6. The fan industry has overwhelmingly complained about unavailability of a qualified market pool to choose employees and workers due to host of factors. Some of which are; dearth of suitably qualified and experience candidates with skills, motivation and attitude. There seems to be a clear indication that the market does not have enough supply of requisite human resource that may be potentially absorbed in this industry.
7. As such, there does not exist any viable focus on research and development by the firms of the Fan Industry. The overall lack of reliance on use of cutting edge modern technology and minimal desire for innovation keep the end products, in general, of basic quality and with basic features.

Recommendations

In the light of above discussions, following recommendations are made to PSDF:

1. As the fan-manufacturing sector has predominantly micro/small enterprises, new entrants are likely to be low scale entrepreneurs as well. The major competitive advantage these existing and fresh enterprises would wish to acquire over each other is high quality skilled labour. The objectives of PSDF will be served more appropriately if the existing and prospective micro/small enterprises could be focused as a priority target group.
2. The fan-manufacturing sector is relatively a closely-knitted industry concentrated in two districts with hardly any major prospects of growth outside this region. PSDF should only focus in the G2 area for the purposes of skills development of the labour in this sector.
3. Keeping in view the firms not downsizing their human resource with few demonstrating desire to expand their respective enterprises, a distinct strategy maybe devised by PSDF in developing skills at both workers and technical mid-supervisory or operational levels. The generic areas include Basic Computer/IT Literacy, Customer-handling and Team-working Skills.
4. The salary variations in the fan sector in particular at the management level and also substantially at the workers level points out to the fact that the skill-set and work reputation in industry is of great importance to the employers. This invites the attention of PSDF that fresh batches of trained and highly skilled workforce along with refresher trainings of existing employees will bring a qualitative impact the way this industry is currently organized.
5. Keeping in view that employers have mainly focused on hiring of accountants, trainee engineers, marketing managers and lathe machine operators in the industry in recent past, PSDF should prioritize these as industry specific requirements for the existing employees and direct the training courses to strengthen this area for a more skilled work force.
6. In recent years, the industry has overall invested substantially in keeping fan testing labs, having paint works stations and staff for maintenance of CNC machines. PSDF would be able to intervene in a substantive manner by funding prospective training of persons who could be absorbed in these particular sections of the enterprises.
7. There exists a need to establish viable and more formal linkages between PEFMA or the individual fan industrial units and the specialized institutes of vocational training, as this will contribute towards steady and ready supply of skilled workers at the time of recruitment.

In sum, given Pakistan's hot climate, population growth and the low energy affordability, the in-country demand for fans will only show an upward trend in times to come. The consequential reliance on local manufacturers would also continue unabated. Having ascertained the skills deficiencies and demands, there is a clear unanimity for diversion of resources and attention of PSDF, in a position to readily facilitate supply of skilled manpower at critical levels in this sector. This is likely to contribute towards healthy and more competitive environment within the industry. Most notably, it would lead to innovative technical approaches and better management of the firms that is generally missing in this sector at present.

ANNEXES

Annex 1: References

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Annex 2: Compilation of Industry Responses to Questions

Question	Responses out of 32
1	32
2	31
3	17
4	32
5	24
6	26
7	7
8	27
9	11
10	22
11	25
12	22
13	28
14	21
14b	8
15	24
15b	8
16	1
17	1
18	30
19	3
20	15
21	28
22	20
23	8
24	32

Source: PSDF

Annex 3: Questionnaire

Labour Market Intelligence Survey
Questionnaire for Fan Manufacturing Sector Skills Needs Assessment

DISCLAIMER: Your answers will be treated with utmost confidentiality and will only be used for designing PSDF schemes. They will not be shared with any governmental or non-governmental third party.

PLEASE FILL IN THE QUESTIONNAIRE USING CAPITAL LETTERS. IN MULTIPLE-CHOICE QUESTIONS, PLACE A ✓ AGAINST RELEVANT CHOICE(S). IN QUESTIONS YOU THINK HAVE MULTIPLE ANSWERS, PLEASE CHOOSE ALL OPTIONS THAT APPLY.

Name of respondent: Designation:
Company:
Year of establishment:
Is your business registered as a company:

Yes	
No	

Address:
City:

E-mail:
Website:

Phone no:
Fax no:

Please choose service categories that are offered by your company:

Foundry / Casting		Inspection & Quality	
Die Casting		Assembling & Fitting	
Injection Molding		Motor Winding, Insulation & Varnish	
Electric Fan Fitting & Testing		Pattern Making	
Plastic parts manufacturer		Vendors	
		Other.....	

BASIC COMPANY AND WORKFORCE DETAILS

1. What is the current number of employees in your company (including permanent, contractual employees, and daily wagers):

Less than 10	
10-35	
36-99	
100 or more	

2. Over the last five years, has the total number of your staff increased, decreased or remained the same?

Increased	
Decreased	
Remained the same	

3.**Does your company plan to grow in the next two to three years?**

Yes	
No	

4. What is the monthly wage/salary range for workers and middle-managers in your company?

Middle-managers		**Operators or Workers**	
Minimum	Maximum	Minimum	Maximum

5. What are the three most important changes (technological or other) currently taking place in your sector?

1	
2	
3	

6. Please list the number of employees in major occupations (job titles) along with employment status.

a. Middle-management level

Job titles	**Number of employees**	**Status** *How many of these belong to the following employment status categories?*		
		Regular	**Contractual**	**Seasonal**

b. Operator and worker level

Job titles	**Number of employees**	**Status** *How many of these belong to the following employment status categories?*		
		Regular	**Contractual**	**Seasonal**

NEW RECRUITMENT

7. What are the current vacancies in your company? Please also list corresponding requirements.

Job title	**Number of individuals**	**Qualification**	**Experience (in years)**

	to be hired		
Middle-management			
Worker or operator level			

8. Below is a list of common educational & vocational qualifications held by people in the Fan Manufacturing sector; which of the following do you generally demand at entry-level for middle-managers and workers?

Middle-managers		**Operators/Workers**	
Vocational qualifications		Vocational qualifications	
Registered Fan Manufacturing professional qualification		Registered Fan Manufacturing professional qualification	
Technical diploma		Technical diploma	
Matriculation		Primary	
Intermediate		Middle	
Bachelors degree		Matriculation	
Post-graduate certificate		Intermediate	
Post-graduate diploma		Bachelors degree	
Masters degree		Post-graduate certificate	
Other _____		Post-graduate diploma	
		Other _____	

9. For which positions in your companydid you hire new individuals over the last 12 months?

Job titles	**Number of new recruits**		
	Number hired as replacements[1]	Number hired against new positions	Total

10. For whichpositions in your company do you expect to hire new staff in the next 12 months?

Job titles	**Expected number of new recruits**
We do not expect to hire any new staff over the next 12 months.	

11. How do you recruit new employees?

Through advertising (including ads in newspapers)		Through labour intermediaries/placement agencies	
Employment notices on company door			
Through training institutions		Through personal contacts or referrals	
Other (please specify):			

12. In the space below, identify hard-to-fill vacancies in your sector.
(Hard-to-fill vacancies are those posts against which companies are unable to find a suitable candidate within a reasonable time, at prevailing wages through normal recruitment procedures)

Job title	**Has your company faced such vacancies in the past 2-3 years as well? (Yes/No)**

1. If you hired against jobs that were already filled

13. Overall, what do you believe to be the main causes of hard-to-fill vacancies?

Too much competition from other employers		Low number of applicants with the required attitude, motivation or personality	
Not enough people interested in doing the job		Low number of applicants generally	
Applicants unhappy with terms and conditions (e.g. pay)		Seasonal work	
Low number of applicants with the required skills		Job entails shift work/unsociable hours	
Low number of applicants with the required qualifications		Poor career progression/lack of prospects	
Low number of applicants with the required experience			
Other:			
No particular reason			

14 a. Of the individuals recruited as middle-level managers in the last 2-3 years, how well-prepared for work do you think they have been:

Well-prepared (proceed to question 15)	
Poorly prepared	

b. In what ways have your new recruits been poorly prepared?

Lack of required technical skills or competencies		Poor attitude/personality or lack of motivation (e.g. poor work ethic, punctuality, appearance, manners)	
Lack of literacy/numeracy skills		Lack of working world, life experience or maturity (including common sense and general knowledge)	
Lack of soft skills (communication, problem-solving, team work etc.)			
Poor IT Skills		English language skills (spoken and written)	
Other:			

15 a. Of the individuals recruited at the worker or operator level in the last 2-3 years, how well-prepared for work do you think they have been:

Well-prepared (proceed to question 22)	
Poorly prepared	

b. In what ways have your new recruits been poorly prepared?

Lack of required technical skills or competencies		Poor attitude/personality or lack of motivation (e.g. poor work ethic, punctuality, appearance, manners)	
Lack of literacy/numeracy skills		Lack of working world, life experience or maturity (including common sense and general knowledge)	
Lack of soft skills (communication, problem-solving, team work etc.)		Poor IT Skills	
Other:.....			

16. Do you specifically seek middle managers and workers holding a particular qualification or trained by a specific institute? If yes, please share the names of courses and institutes.

Employees	Qualifications (degrees or certificates)	Institutes
Middle-level managers		
Workers		

17. What are the areas that you feel are not covered by the qualifications above and for which new qualifications/courses need to be developed?

1	
2	
3	

SKILLS AND QUALIFICATIONS OF IN-SERVICE EMPLOYEES

18. Generally-speaking, which of the following skills have you found to be lacking in applicants and current employees recruited over the last 6 months?

Basic computer/IT literacy		Problem-solving skills	
Advanced IT or software skills		Planning and organisation skills	
Oral and written communication skills		Numeracy skills	
Customer-handling skills		Literacy skills	
Team-working skills		Technical, practical or job specific skills (specify)	
Any other skill(s):			

We do not have a systematic approach to identifying skill discrepancies within our organisation	

19. Which technical or sector-specific skills do you think are required by your existing managers and workers?

Middle-level managers	Workers

20. Have you arranged training or your workers and middle managers outside of your firm?

Yes (see below)	
No (proceed to question 22)	

20 a.If yes, please state the course and trainer.

Middle-level managers		Workers	
Course	*Trainer (person or institute)*	*Course*	*Trainer (person or institute)*

21. By placing a√against appropriate options, indicate possible reasons for not training staff or the barriers you face in doing so. Choose all that apply.

The courses we are interested in are not available locally	
The quality of the courses or providers locally is not satisfactory	
Difficult to obtain information about courses available locally	
I don't know what provision is available locally	
External courses are too expensive	
Difficulty finding training providers who can deliver training where or when we want it	
No funds available for off-the-job training	
The concern that trained staff will be lured away by other employers	
The start dates or times of the courses are inconvenient	
Employees are too busy to undertake off-the-job training	
Training is not considered to be a priority for the establishment (we only hire trained individuals)	
All our staff are fully proficient / no need for training	
Other	

22. What are the three most-significant skills areas or courses for which your company would like to train your current employees?

1	
2	
3	

FIRMS AS TRAINING PROVIDER

23. Will your company be willing to provide on-job training opportunities for newly qualified workers? If yes, in what field and how many?

Area of training	Number of trainees that can be accepted

24. PSDF finances training of pre-employment workers through a competitive process. This entails training a minimum of 20 trainees in a classroom by a qualified instructor with 80% practical content and an external examination at the end. Will your company be interested in obtaining information about the initiative?

Yes	
No	

25. Below is a list of trades, qualifications, and courses relevant to the Fan Manufacturing sector. If you are offered people trained in these areas, please write down the number of new trained workers you would demand in the next 12 months.

Name of course	Name of Training Institute	Duration (Weeks)	Number of Trainees required
Press Tool Design	PITAC	6	
Cutting Tool & Gauge Design	PITAC	10	
Injection Mould Design	PITAC	3	
Auto CAD Electrical	PITAC	6	
Auto Cad Mechanical	PITAC	6	
CNC Machining Centre (Operation & Programing)	PITAC	4	
CNC Turning Centre (Operation & Programing)	PITAC	6	
Instrumentation Process Control system	PITAC	6	
Inspection & Measuring Technique	PITAC	6	
Electrician	PITAC	6	
Machine Shop Practice	PITAC	10	
Pattern Making	PITAC	6	
Motor Winding	PVTC	26	
Machinist + CNC Lathe	PVTC	50	
Welder / Fabricator	PVTC	50	
Tool & Die Maker	NCRC	24	
CAD/CAM Operator	NCRC	24	
Lab Tech	NCRC	48	
Fitter General (GIII)	TEVTA	24	
Machinist (GIII)	TEVTA	24	
Welder (GIII)	TEVTA	24	
Motor Winding(GII)	TEVTA	24	
Turner	TEVTA	24	
Tool & Die Making	NAVTTC	24	
DAE Cast Metal & Foundry	NAVTTC	24	
Industrial Electrician	NACTTC	24	
Machinist	NACTTC	24	
Turner	TEVTA	24	
Auto Cad (Mechanical, Civil)	FDI	12	
3D CAD/CAM	FDI	12	
CNC Operating	FDI	12	
Machine Shop Practice	FDI	12	
Electric Fan Assembling, Final Inspection, Measuring and Packing Techniques	FDI	6	
Study of Safety Standard Testing & Aerodynamic Techniques	FDI	6	
Electric Fan Motor Designing and Winding	FDI	6	
Mould Making & Designing	FDI	12	
CNC Turning Centre Operator	FDI	6	
Engineering Precision Tools and Jigs & Fixture Designing	FDI	6	

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