Working paper

International Growth Centre

Barriers to Growth of Small Firms in Pakistan

A Qualitative Assessment of Selected Light Engineering Industries

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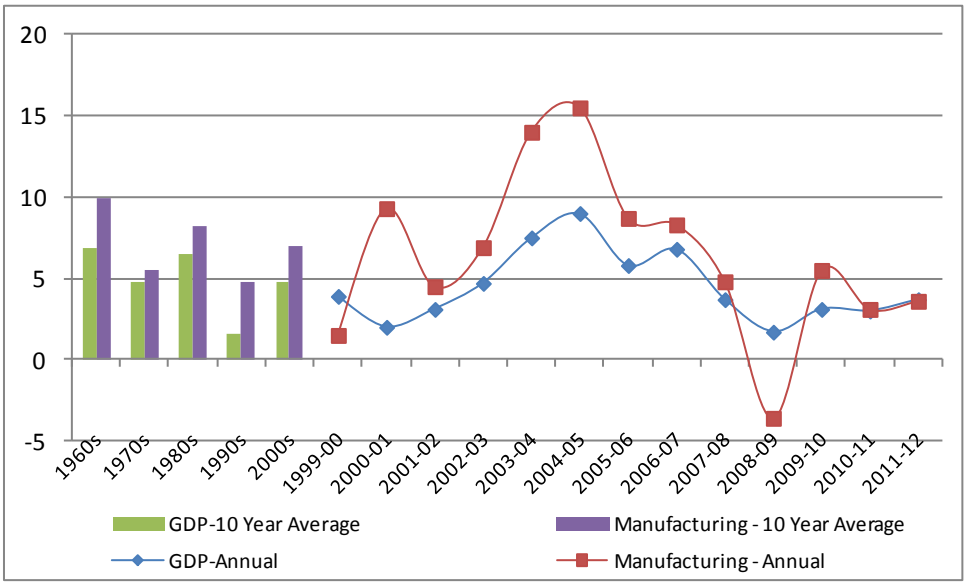
1 Introduction

This report explores the impediments faced by the Small and Medium Enterprise (SME) sector in Pakistan. SMEs in Pakistan constitute 90 per cent of the economic establishments, contributing 30 per cent to GDP and 25 per cent to export earnings. The sector also employs 78 per cent of Pakistan's non-agricultural labour force. Improvements in the SME sector therefore have important repercussions for growth and employment, which makes this sector a focal point for industrial policy.

Pakistan's growth in general and that of the manufacturing sector specifically has remained fairly stagnant in the recent past. During a period spanning the past six decades (1960 – 2012) Pakistan could only achieve an annual average GDP growth of 4.47 per cent with manufacturing sector performance of around 6.3 per cent (Figure 1-1). However, over the same period many regional economies grew much more rapidly, with China leading with phenomenal GDP growth of 9.1 per cent during the period 1970-2009. The manufacturing sector in China grew by over 15 per cent annually in the last twelve years (CIA World Fact Book).

Figure 1-1: Growth of GDP and Manufacturing Sector in Pakistan 1960-2012 (%)

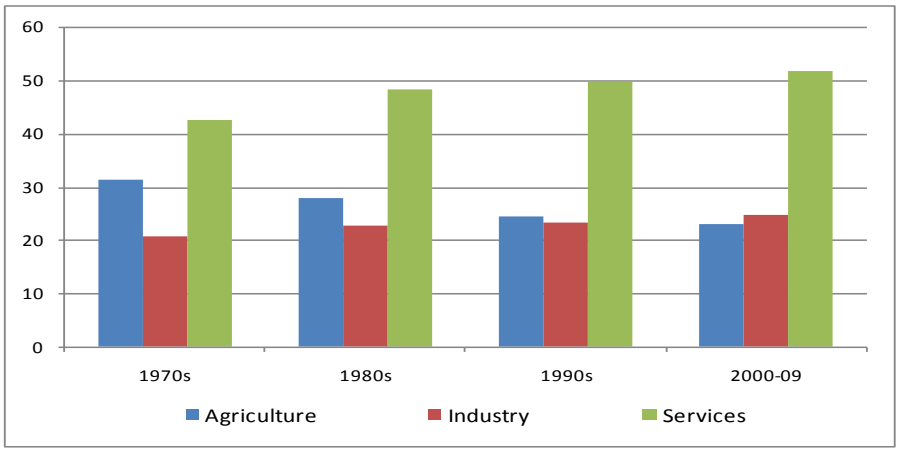


Source: Pakistan Economic Survey 2011-12

A second critical feature of the manufacturing sector in Pakistan has been its inability to increase its share over the years. The structural composition of Pakistan's economy has

remained stagnant. Structural change has been a fundamental characteristic in the growth and development of western economies and the Newly Industrialised Countries (NICs). Structural change entails a gradual shift from low productivity to high productivity activities. As an economy develops, the share of agriculture in GDP declines whereas that of manufacturing and services increases. In addition, empirical evidence suggests a 'U' shaped relationship between a country's income level and its degree of product specialization.[1] Specialization is high at low levels of income per capita but as the country becomes richer it tends to diversify to produce and export a wider range of relatively more sophisticated goods. However, as income level increases further, specialization increases again but now in technologically advanced and high value-added goods. This implies that increased product diversification is a middle stage in the process of structural change and an important driver of sustained growth of a country.

Figure 1-2: Sectoral Shares in GDP of Pakistan, 1970-2009 (%)



Source: Pakistan Economic Survey 2002-03, 2008-09 and Bureau of Statistics data on GDP up to 2009.

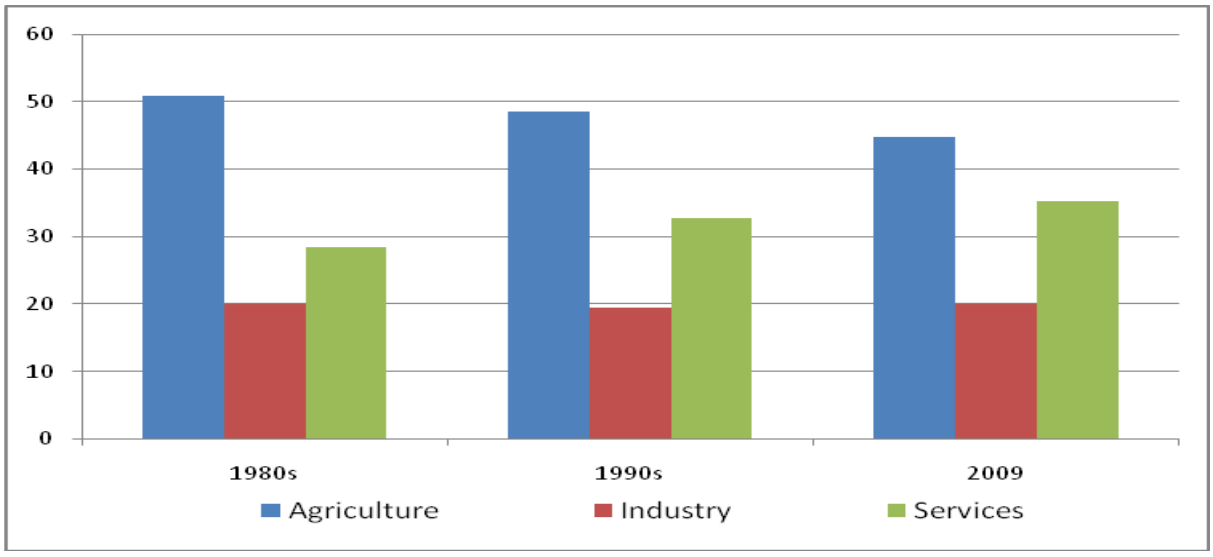
In the case of Pakistan (see Figure 1-2 above), the structural change has been tilted towards the services sector. Pakistan, from being a largely agrarian economy in terms of contribution to GDP, has become a services led economy, with services accounting for more than 50 per cent of the GDP. Manufacturing share, on the other hand, has grown more slowly. Both agriculture and industry have a share of approximately 25 per cent in GDP, with the share of agriculture falling and the share of industry remaining fairly constant over time. This means

[1] See Klinger and Lederman (2004), and Cadot et al., (2007).

that structural transformation in Pakistan has been from agriculture to services, circumventing the manufacturing sector to a large extent.

Even though the services sector has become the main driver of growth in Pakistan, its potential contribution to employment is limited as compared to the manufacturing sector. Therefore, the agriculture sector continues to provide employment to a significant proportion of the country's labor force. The share of employment in Pakistan's agriculture sector has declined over time but it still employs more than 40 per cent of the labor force (Figure 2-8). This shows that a major part of the labor force is stuck in the low productivity sector. The service sector employs above 30 per cent of the labor force while the industrial sector employs only 20 per cent. Given the deteriorating performance of the manufacturing sector in the past years, most of the workers move from the agricultural sector to the services sector implying that the sector with highest value addition has the lowest share in terms of employment. This is a matter of concern since the movement of labor from low productivity sectors (agriculture) to relatively high productivity sectors (such as manufacturing) is what generates the surplus that spurs growth. Even during the recent economic growth spurts in Pakistan, non-agricultural formal sectors, particularly manufacturing, failed to generate employment.

Figure 1-3: Employment Shares by Sector in Pakistan, 1980-2009 (percent)



Source: Pakistan Economic Survey 2002-03, Pakistan Economic Survey 2008-09 and Bureau of Statistics data on GDP up to 2009

If the data is further disaggregated at the level of large scale manufacturing (LSM) and small scale manufacturing (SSM), the stagnant trend continue to persist. Figure 1-4 below shows that the shares relative to GDP for LSM and SSM have not changed much over the last ten years. This evidence shows the manufacturing sector's inability to increase its contribution to the economy over time. This performance by the SSM has resulted in a 'missing medium sector' in Pakistan's manufacturing when compared with international standards. For example, in China, Indonesia and Malaysia the share of value added industry in GDP is over 47 per cent. Firms in Pakistan continue to run at the same size for decades failing to benefit from economies of scale or innovation in technology and hence are rendered uncompetitive internationally.

Figure 1-4: Large Scale and Small Scale Manufacturing Shares relative to GDP 2003-2012 (%)

Source: Pakistan Economic Survey 2011-12

Another peculiar characteristic of the manufacturing sector has been the limited contribution of factor productivity to the growth process of Pakistan. During the period 1960-2005, about 80 per cent of Pakistan's GDP growth rate was explained by capital accumulation and labor expansion, whereas Total Factor Productivity (TFP) contributed the remaining 20 per cent of the overall growth. However, the contribution of TFP in GDP growth has fluctuated considerably during this period. TFP explained almost 38 per cent of the GDP growth rate in the 1980s but this fell to merely 18 per cent in the 1990s. TFP growth then recovered to some extent during 2001-2005 and contributed to 22 per cent of the GDP growth rate (Pakistan:

Poverty reduction strategy paper, 2010). Moreover, during the 1990s, total factor productivity growth in the manufacturing sector was only 1.64 per cent. And over the period 1998-2007, total factor productivity in the overall manufacturing sector increased by only 0.9 per cent (National Industrial Policy 2011). This implies that the growth of the manufacturing sector has been mainly driven by growth in inputs i.e., labor and capital, and the contribution of total factor productivity has been fairly low. This evidence suggests that Pakistani firms have consistently failed to replace less productive assets with more productive ones.

1.1 Aim of this Report

The question of diminished firm performance and limited growth of the manufacturing sector has been addressed by various studies in the past. A vast amount of literature exists on the cost of business in Pakistan which talks about the stagnation of the manufacturing sector, low levels of productivity and a stunted firm size growth. Taking a broader approach, the literature explains how the shortage and high cost of energy; corruption; macroeconomic instability; limited availability of skilled labour; credit market failures; weak institutions; infrastructural constraints and inadequate business management and strategy over the years has inhibited the growth of Pakistani firms.

This report aims to synthesise this literature explaining key barriers to firm growth and augment this analysis with more insightful evidence built through primary information from two pilot industrial sectors. The unstructured and more detailed format of the interviews with stakeholders allows us to complement the aggregated level of analysis provided by standard cost of business type studies. Cost of business studies typically identify factors that are common to all businesses operating in the sector. Our case studies allow us to corroborate and provide details on these factors. In addition the case studies allow us to delve deeper by identifying specific characteristics that allow some firms to succeed *despite* the industry level barriers common to all firms within the industry.

The report develops case studies on the fan and sports goods industries of Pakistan; both of which fall in the light engineering sector. The selection of these industries was based firstly on the critical importance of the light engineering sector in terms of value added and employment generation. Within these two industries the report is able to cover a spectrum of firm types in terms of those solely reliant on export markets and those that are only supplying to the local market. This diversity allows insights into the nature and the size of the business.

While the external validity of the analysis is limited by the small sample size, we are able to identify areas that would benefit from further research and possible policy intervention.

1.2 Structure of this Report

The remaining sections of the report are structured as follows:

- Chapter 2: Methodology & Data: The second chapter discusses the research methodology and sample used to collect qualitative data for analysis.
- Chapter 3: Barriers to Firm Growth: The third chapter discusses the overarching constraints to firm growth in Pakistan, corroborating and supporting this information with case studies on the fan and sports goods industries. The chapter talks about both inter-industry and intra-industry characteristics impacting firm growth.
- Chapter 4: The Way Forward: The last chapter, using information sketched in Chapter 3, discusses limitations, potential for further research and suggests areas that policy makers could focus on to help improve firm productivity in the sectors studied.

2 Methodology and Sample

2.1 Methodology

Much of the research on barriers to growth of small firms has been based on cross sectional surveys that present the owner/manager with a list of barriers and a scale on which they could rate the applicability of that barrier to their own firm. However, this limits the depth of analysis considerably. First of all, it is based on perceptions, which may not match actual experiences. Secondly, it provides limited policy implications as it falls short of identifying the specific parts of the problematic process.

Keeping this in mind, our approach in this paper was to conduct detailed semi-structured interviews with a small representative sample of firms in the light engineering sectors. This allowed a greater depth of analysis, complementing the less detailed but large, cross sectional studies already available.

The focus of the study is on the fans and sports goods sectors of Pakistan. These sectors were chosen because of the variation they provide: the sports goods sector is forward looking, highly enterprising and export oriented while the fan manufacturing sector is largely inward looking and appears to be trapped in a cycle of low quality and low profitability.

Twelve firms were chosen in each sector such that we had a variation in growth paths. We used existing data on the population of firms to identify the distribution of firms within each sector. For the firms in the fan sector we used a data set of 125 firms covering 70 per cent of the sector. Using this distribution, a purposive sample was selected such that we had as adequate a representation as we could manage within the limitations of a small sample size. Firms that responded positively were then interviewed. For Sports Goods we held a focus group at the office of the sports goods association in Sialkot and with their help firms that were suited to the applied methodology were selected out of a total of 450 firms. We interviewed at least one of the top few players in the market, so that we could determine how the obstacles were circumvented and what the key determinants of high growth were in that sector. In addition, we interviewed firms that appeared to be struggling to gauge what the most severe barriers to growth are. The remaining sample was made of firms that lie in between, for example those firms that appear to be on the cusp of breaking into export

markets. This allowed us to establish the characteristics that allow some firms to grow despite the barriers that they face, and compare them to firms that have managed to survive but have had more limited growth.

The interviews were open ended, and the firms were directed to lead by suggesting the barriers that they considered most important. We did not give them a list to choose from, as other cross sectional surveys have done, as we did not want that to influence their responses. In addition, we spoke to the firms not just about their own experiences, but also about perceptions on the industry and the performance of other firms in the sector. We also sought their opinions on the issues flagged up by other interviewees, in order to corroborate the information and get a more accurate and unbiased understanding of the industry. Using this iterative strategy, we are able to minimise the influence of idiosyncratic perceptions, giving more importance to opinions and perceptions that were unanimously held. However, given the small sample size, we do not discard conflicting views, but present them as areas which would benefit from further inquiry.

2.2 Sample

This section of the report provides the basic statistics of the firms interviewed for the report. The sample of firms in each sector was split equally between successes and failures.

2.2.1 Fan Industry

The following firms were part of detailed structured interviews:

Name of Company	Year Established	Product range	Market for exports	Staff Number	Capital Investment	Current Export (Rs.)	Success/Stagnation Reason
Luminar Fans	1991	Only fans	N/A	Production Workers: 10 Non Production Workers: 2	Start: Rs. 0.2 Million End: Rs. 10 Million	N/A	Stagnated mainly due family issues. Unable to establish brand.
NGS Fans	1989	only Fans	N/A	Production Workers: 20 Non Production Workers: 3	Start: Rs. 9 Million End: Rs. 18 Million	N/A	Stagnated due to limited opportunities to sell/produce higher quality products
Golden Star Fans	1986	Only fans	South Africa, Sudan, Iraq, Saudi Arabia, UAE, Afghanistan	Production Workers: 25 Non production Workers	Start: Rs. 15 Million End: Rs. 30 Million	50 percent of sales (171 million)	Success mainly due to focus on export markets and ploughing back of all profits with into business.

Ghousia Fans	1986	Only Fans	Afghanistan, Iraq, Dubai, Middle East	Production Workers: 30 Non Production Workers: 3	Start: 10 Million End: 20 Million	15 % of sales (72 Million)	Moderate growth coming from tapping export markets.
Faisal Fans	1985	Only Fans	UAE andIraq	Production Workers: 35 Non Production Workers: 3	Start: 10 Million End: 30 Million	20 % of sales (65 Million)	Stagnation due to weak management and inability to delegate
Mehwar Fans	1992	Only Fans	N/A	Production Workers: 40 Non Production Workers: 2	Start: Rs 9 Million End: Rs. 18 Million	N/A	Stagnation due to perceived obstacles in improving quality and inability to export
Khurshid Fans	1990	Fans and Washing Machines	Bangladesh, Muscat, UAE, Sudan & Africa	Production workers:55 Non-Production Workers: 4	Around: 100 Million	Rs. 70 million – 40% of sales are exported	Successful, mainly due to investments, better management and innovativeness.
Global Fans	2000	Fans, washing machines, other home appliances, geysers and other electric and assembly products	Kuwait, Iran, Iraq, South Africa	Production workers: 75 Non production workers: 8	Start: Rs. 10 Million End: Rs. 20 Million	40 % of sales (40 million)	Successful, mainly due to product variety and openness to learn and implement new techniques
Starco Fans	1986	Only Fans	UAE, Iraq, Sudan, Saudi Arabia	Production Workers: 120 Non Production Workers: 20	Start: Rs. 10 Million End: Rs. 15 Million	60 Percent of sales (140 Million)	Successful, mainly due to investments, product innovativeness, better marketing and openness to improvements
GFC Fans	1954	Fans, Washing Machines, Other Home Appliances, Geysers	Bangladesh, Muscat, UAE, Sudan & UAE	Production Workers: 850 Non-Production: 100	Around Rs. 800 Million	1500 Million total sale – export over Rs 1000 million	Successful, mainly due to early mover advantage, better education of management, larger investments and strong domestic market brand creation
Royal Fans	1958	Fans, Washing Machines and coolers	Afghanistan, Iraq, Dubai, Middle East	Production Workers: 1000 Non Production Workers: 25-30	End: Rs 700 Million	60 Percent of sales (1300 Million)	Successful, mainly due to early mover advantage, better education of management, larger investments and strong domestic market brand creation
Cornel Fans	1975	Fans	Closed down due to bankruptcy				Failed due to credit and payment mismanagement

2.2.2 Sports Goods Industry

The following firms were part of the structured interviews:

Company Name	Year established	Product range	Market for exports	Staff Number	Capital investment	Current Exports (Annual)	Success/stagnation
Gallant (Pvt) Ltd	1933	Sports: Football, cricketball, cricket accessories	100% exports- Europe, Australia, New Zealand	4-5		Rs. 7-8 Crores	Stagnation – exporting standard sports products.
Seamless Rubber (Pvt) Ltd	Since pre-partition, 1966	Fitness product like weight lifting gloves, footballl gloves etc and footballl	100% exports- USA, UK, Australia	11-12, more than 100 working in factories	Start: Rs. 5 lakhs	Rs. 5 crores	Stagnation – not many new products added to range
Soni Trading Corporation	1970	Fitness articles, football, weight lifting gloves	Europe	15-20, rest in vendors	Start: Rs. 50 Lakhs Now: Rs. 3 Crores	Rs. 1.5 crores , reduced from 7 crores	Decline due to fall in football exports
Sheikhan Corporation	1914	Hi Technology Mechanical gloves, sports good, football, leather garments etc	100 % export to USA, UK	25, 300-400 workers in factories	Start: Rs.25000 Now: Rs 4-5 crores	Rs 25 crores	Stagnation
Centre De Commerce	1953	Before Sporting goods now field Hockey sticks	USA, Canada, Australia, Holland etc. Main distributor in Holland	50 Workers, 8-10 management workers		Rs. 4-5 crores	Stagnated, similar product lines
Shanpak Company (Pvt) Ltd	1984	Martial arts uniform and sports wear	100% exports- UK, New Zealand, Australia etc	70- most factory worker are on piecemeal basis	Start: Rs. 30-40 lakhs Now: Rs. 2 - 3 Crores	Rs.1.2 crores	Stagnated, similar product lines
Maxima Industries	1942, after partition got exporters license in 1957	Sports goods, football, hockey sticks	Europe (Germany), Holland	70	Start: Rs 1000 Now: More than Rs. 50 crores	Rs. 6 crores	Success mainly due to effective collaboration with other hockey manufacturers
Phedra Industries (Pvt) Ltd	1963- family business established since 100 years	Sports item, football, martial art boxing gloves, fitness gloves	Central Europe, eastern Europe, USA, Australia etc	150	Start: Rs. 5 lakh	Rs 20-25 crores	Successful, differentiated product such as martial arts

Malik Sports	50 Years ago	Cricket bat, hockey sticks, Footballs	Gemrany, UK	200 workers		Rs. 20-25 crores	Successful, strong brand in cricket bats.
Capital Sports	1973	Footballs, sportswear	n/a	250-300	n/a	n/a	Successful, investments in technology, product development and maintaining brand contracts
Grays of Cambridge	1960s	Hockey sticks, cricket balls	USA, Europe	300+	n/a	n/a	Successful, joint venture, international brand and investments in technology
Forward Sports	1990	Footballs and sports gear			Initial: 1.5 million	n/a	Successful, brand lead investments in technology and innovation and forward looking vision

3 Barriers to firm growth

3.1 Overview of the constraints faced by firms

In this section we make use of the several recent surveys that have explored the constraints faced by industry in Pakistan.

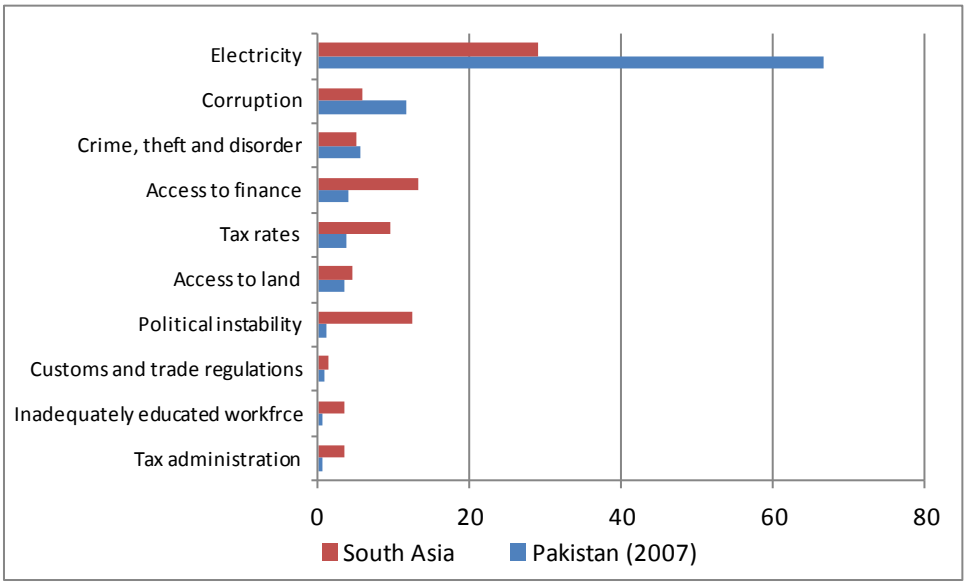
A useful starting point is the World Bank Enterprise Survey, which is administered to a representative sample of private non-agricultural firms across a host of countries. The survey aims to assess and track changes in the business environment by collecting a wide range of qualitative and quantitative information, including perceptions data on obstacles to doing business across a range of factors: infrastructure, trade, finance, regulations, taxes and business licensing, corruption, crime and informality, finance, innovation and labour. Two measures collected by the Enterprise Surveys are of particular interest for the purposes of our study: the "top obstacle" to doing business identified by the firms, and the identification of a factor as a "major constraint". For the former, firms are presented with a list of fifteen factors of which they select the one that is biggest obstacle faced by the firm. For the latter, when investigating a particular factor, the firm is asked if it presents a major constraint to daily operations. The Enterprise Survey was last conducted in Pakistan in 2007, surveying over 900 firms.

Other useful reference points are the World Bank Enterprise Analysis Unit and the Investment Climate Assessment surveys. The Enterprise Analysis Unit administered the WB Enterprise survey questionnaire to a group of 385 Pakistani firms in 2007 and again in 2010. The Investment Climate Survey also collected data on the perceptions of the business environment in 2002 and 2007. The ICS has also been used as the starting point by Hussain at al (2012) to identify the constraints faced by Pakistani firms specifically in Punjab. Together the results from these surveys enable us not just to get a snapshot of the constraints that are most relevant at a point in time, but also to observe trends that facilitate a deeper understanding of the business environment.

The chart below compares the top obstacle reported in the WB Enterprise Survey by businesses in Pakistan compared to other countries in South Asia in 2007. Electricity appears to be the most critical constraint, followed by corruption and crime, all three of which were

considered more severe than they were in other countries in the region. Access to finance, tax rates and access to land are also important obstacles identified.

Figure 3-1: Top 10 Business Environment Constraints for Firms (% of Firms)



Source: WB 2009

Electricity

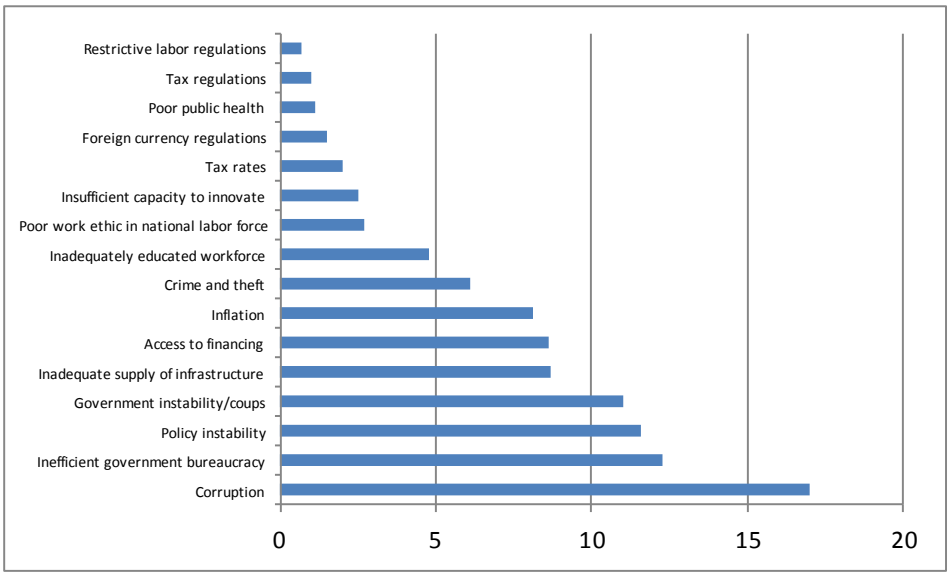
Electricity is not just one of the most important hindrances to manufacturing today, it is also one that has been growing in importance. In 2002, 39.3 per cent of firms reported electricity to be the most severe constraint in the Investment Climate Survey. By 2007, this had increased to 79.6 per cent. Yang (2011) also reports an increase in the percentage of firms reporting electricity to be the top obstacle between 2007 and 2010, from 44 per cent to 65 per cent. This is a reflection of the increase in the number of power outages experienced per month. Hussain et al (2012) report that as a result of these outages, firms in Punjab lost on average more than 10 per cent of total annual sales. Unscheduled outages disrupt operations more severely, and lead to greater wear and tear of machinery, much of which cannot be repaired locally. Their 2012 pilot survey finds that more than half the firms report the number of outages to vary between 45 to 100 times a month, an increase from the 2007 ICA survey. This is compounded by the shortage of gas, which could otherwise have served an important alternative source of energy. The survey finds that 45 per cent of firms report unavailability of gas for more than four days a week.

Firms have come up with several kinds of coping mechanisms: 73 per cent of the firms surveyed use generators to generate their own energy. Over 90% of these generators are run on diesel, which triples the cost per unit of power generated. Most firms also use overtime, increased work timings or hours, all of which also increase costs by increasing overheads and worker payments.

Corruption

The Corruption Perception Index calculated by Transparency International for 2012 ranks Pakistan as 139th out of 176 countries, with a corruption control percentile rank of just 12%[2]. Corruption features heavily in all recent surveys on barriers to business in Pakistan. It is the second most important constraint identified by the Enterprise Surveys (Figure 3.1 above). The ICA also confirms this as a severe constraint, with 56.7 per cent of firms considering it a major obstacle in 2007, an increase from 40.3 per cent in 2002. However, the World Bank Enterprise Unit surveys report a decrease in the next three years, from 27 per cent in 2007 and 14 per cent in 2010. In 2012 Hussain at al (2012) find that more than a third of the firms identified corruption in their top three constraints. These findings are further corroborated by the World Economic Forum's 2012-13 Global Competiveness Report, the results from which are summarized in the chart below.

Figure 3-2: Most Problematic Factors of Doing Business



[2] The Control of Corruption reflects perceptions of the extent to which public power is exercised for private gain. Point estimates range from -2.5 to +2.5, higher scores indicating less corruption. Pakistan score -1.1 on this index.

The chart above lists the factors considered most problematic by Pakistani business executives. From these, respondents were asked to select 5 of the most problematic and rank them between 1 and 5 (5 being the most problematic). The chart summarises the responses weighted by their rankings.

Hussain et al. (2012) find that the most common form of corruption is the inconsistent interpretation and application of regulations and policies across the government departments relevant to manufacturing: tax, labour and licensing. Results from their survey indicate that firms view the process of implementing regulations and policies as deliberately complicated and extractive, to facilitate rent seeking by government officials. The majority of firms report having to make informal payments to government officials in order to get things done, with the most corrupt processes identified as labour and tax inspections. Although a fewer number of firms in Pakistan are actually inspected compared to other comparator countries, there is a higher overall incidence of bribe payments in both departments (ICA 2007). Hussain et al (2012) calculate that on average industry loses 3-7 days resolving a single issue with government officials. Their study confirms that labour inspectors are considered most corrupt, but electricity officials are also added to the list, with firms citing threats of suspension of power and incorrect billing unless side payments are made.

Crime, theft and disorder

Crime and the judicial system is another constraint which dominates the surveys analysed. The percentage of firms reporting crime, theft and disorder as a major constraint increased from 21.4 per cent in 2002 to 32.5 per cent in 2007 (ICA). However, the percentage of firms reporting this as the top obstacle fell from 8 per cent in 2007 to 3 per cent in 2010 (World Bank Enterprise Analysis Unit). The ICA surveys reveal that although crime and security losses are less widespread in Pakistan than in other comparator countries, the intensity of the losses is greater.

The World Enterprise's 2007 survey reveals that fewer than 20 per cent of Pakistani firms view the functioning of courts as fair, a proportion that is half that in other South Asian countries, and in low income countries as a whole. The ICA surveys also find that the functioning of the judiciary is a serious obstacle for a third of Pakistan firms, as compared

with a fifth of firms in comparator countries. This is a serious problem because it hinders business activity to not have an effective and fair system of dispute resolution. It also affects long term investments adversely as the need for investment protection is not fulfilled consistently. As a result of these perceptions about the judicial system, only 5 per cent of Pakistani firms used courts to settle disputes in 2007, a 40 per cent decrease since 2002.

Access to Finance

Access to finance, while still remaining an important obstacle to doing business, has seen improvements in perception recently. In 2007, 17.6 per cent of firms reported access to finance as a major constraint, an improvement from 38.3 per cent in 2002 (ICA 2007). The next three years also see an improvement as reported by the World Bank Enterprise Analysis Unit, from 6 per cent of firms reporting it as their top obstacle in 2007 to 2 per cent in 2010. However, the Milkin Capital Access Index, which scores the access to financial capital for entrepreneurs across the world, ranks Pakistan 74th out of a possible 122 countries in 2009, a reversal in the improvements that were calculated between 2002 and 2006.

The WB Economic Analysis Unit surveys also report that fewer than 15 per cent of firms use external financing for working capital as compared to over 30 per cent in South Asia, which indicates potentially inefficient financial intermediation. In line with this, fewer than 10 per cent of Pakistani firms have bank loans or lines of credit with a bank, as compared to over 30 per cent of firms in South Asia. Hussain et al (2012) report that this is a more severe obstacle for smaller firms.

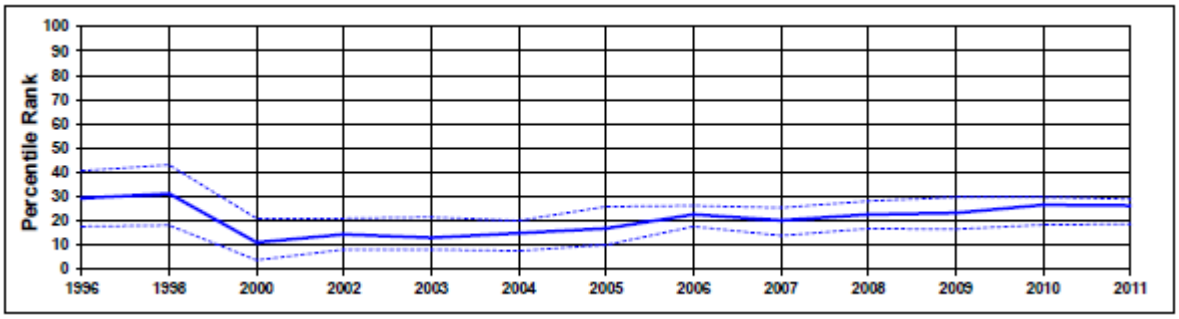
Macroeconomic Stability

Macroeconomic stability has risen in importance, with the percentage of firms declaring it to be the major constraint increasing from 34.5 per cent in 2002 to 56.6 per cent in 2007 (ICA 2007). Hussain et al (2012) report that 7.9 per cent of firms in Lahore identify macroeconomic and political instability as their top most serious constraint, with almost 46 per cent of firms listing it in their top three constraints. Macroeconomic stability is more serious for those firms who are dependent on imported raw material, as the depreciation of the rupee increases their costs of production. Both exchange rate volatility and inflation are seen as impediments to doing business.

Political Instability

Yang (2011) reports that 20 per cent of Pakistan firms see political instability as a top obstacle to growth in 2010, a five-fold increase from 2007. The ICA surveys also find an increase between 2002 and 2007, from 40.4 per cent of firms reporting political instability as a major constraint in 2002 to 46.8 per cent in 2007.

Figure 3-3: Political Stability & Absence of Violence: Pakistan 1996-2011



Source: World Governance Indicators, World Bank

Inadequate workforce

Inadequate workforce does not feature heavily in the national surveys we have examined. Yang et al (2011) for example report that the percentage of firms reporting inadequately trained workforce as a major constraint fell from 2 per cent in 2007 to 1 per cent in 2010, both figures being lower than both global and South Asian averages. The World Enterprise survey (2007) also finds that 8.1 per cent of Pakistan firms reported educated workforce as a major constraint, compared to 14.3 per cent in South Asia and 26.8 per cent globally. However, Hussain et al (2012) identify this factor is a key impediment to industrial performance in Punjab, listing it in their top five constraints for the region. Most sectors view labour as a moderate constraint, except textiles and leather where this is a major obstacle. Husaain et al (2012) find that low levels of educational attainment, both in terms of quality of education and number of years acquired, impede skills development. The low levels of basic literacy mean that written instructions are harder to follow, even at a more basic level of manufacturing. It also means that firms have to offer training programs in-house which raises their costs of production.

Summary

This section flags up and describes the constraints that have been identified by recent perceptions-based surveys. This is an important complement to our own field work because the surveys are larger in scale, and it is therefore easier to identify these constraints as universal enough to have policy implications. However, there are also some serious limitations of these surveys. The data quoted above highlights the fickle nature of using variables such as the top constraint to doing business. This variable identifies a single variable that is, at that time, most problematic for the firm. It cannot be interpreted that other factors are therefore not important. Electricity, for example, is currently singled out as by far the most important constraint at the moment, overshadowing other constraints that affect the long term viability and growth of firms. With this is mind, our own field work aims to discuss the lifetime of the firm retrospectively, identifying not just constraints that are relevance today, but also those that have influenced the growth history of the firms in the sectors studied, and of the industry as a whole. Our intention is to take a longer view of barriers to growth, and also to explore specific features of some firms that make them more resilient to obstacles than others.

3.2 Fan Industry

3.2.1 Overview

Fan manufacturing belongs to the light engineering industry category and is one of the older industries of the country that existed at the time of independence. The industry is clustered in four major cities of Pakistan, namely Gujrat, Gujranwala, Lahore and Karachi. However, 98 per cent of the country's production is centred at Gujrat and Gujranwala. The location of the cluster in these two districts appears to have been a rather arbitrary affair born out of historic path dependencies. However, due to the development of a vibrant cluster over the years, firms have benefitted from external economies such as sufficient access to raw material with over 700 vendors operating within the area.

Over the previous decade, the fan cluster in Pakistan has grown significantly in economic importance, experiencing an average growth of 17 per cent per year since 1999. Currently, production is approximately 10 million fans per year and the cluster enjoys Rs 18 billion in sales. This figure implies that the sector contributes 0.27 per cent to the national GDP. The

fan industry feeds on a wide range of supporting industries including plastic, aluminium casting, steel etc. and hence the potential reverberations in the economy are far greater than what is represented by the figure above. Furthermore, the cluster provides direct employment to 35,000 workers in the area and indirect employment to roughly 4 times this figure. The sector also contributes 0.2 per cent to Pakistan's total exports. In fact, it has recently picked up its performance in the export market, with foreign exchange earnings consistently on the rise. In recent years, Pakistan's exports have reached US$ 40 Million increasing its share in the world fan exports to over 1 per cent. However over the last two years the number of fans exported has fallen.

The fan industry comprises roughly 450 medium, small and micro enterprises. The structure is sharply fragmented with 5-6 largest companies responsible for 70% of the total industrial sales. These are classified as large scale manufacturing units, characterized by higher levels of investment and modern technology. Most of the firms are individual proprietorship firms and small partnerships with over 90 per cent being registered formally. Output consists of a diverse production mix with ceiling fans representing 60 per cent of the total fan production and pedestal fans and other categories accounting for another 30 per cent and 10 per cent respectively. Overall, the fan cluster represents a significantly mature and well established industry with about 72 per cent of the businesses having been established over 10 years ago. In fact, there is a high correlation (0.9) between the age and sales of businesses reflecting the sector's stability in terms of solvency.

In this section, we discuss the features that prevent the industry from reaching its full growth potential. Previous research on the fan industry has flagged up barriers to growth such as low levels of investment in research and development, the myopic entrepreneurial mindset of the firms, problems of seasonal production, quality constraints and limited access to viable credit (State Bank 2011). Using our case study approach, we were able to explore these barriers in greater depth and isolate some of their root causes. In addition, we find that institutional features, poor factor markets and management issues all contribute to an environment which impedes growth. This section discusses these constraints, and details the factors that make these constraints so hard to overcome at the individual firm level.

3.2.2 Constraints

Standardisation

Quality constraints have restricted the expansion of the fan industry and limited its potential for growth, particularly in the international market. Exports over the last two years have fallen because of the sale of sub-standard products, which is a severe setback for the fan industry.

As an electrical product, fans have to comply with certain minimum electricity safety and performance requirements and this compliance is a key to maintaining a successful fan business. The firms in the fan industry do not have a standardized quality product, and in fact do not even use standardized inputs. For example, each firm uses parts that are not necessarily substitutable in other fans. The result of this is a market flooded with unregulated parts and products. Larger firms are able to circumvent the problem of quality assurance by exporting directly and by getting their products certified privately by international labs that their clients trust. However, for the large majority of small firms, standardization remains an insurmountable problem.

State Bank (2011) find that the key reasons for low standardization and compliance include lack of capital and lax enforcement of standards in local markets. Probing this further, we have found that the lack of unity amongst the firms and the pressure to compete on price remain the most severe impediments towards standardization of a basic minimum quality. A case in point is the recent failure of a large order sent jointly by several firms to Iraq. The order was received by a trader, who then auctioned off the order to several small firms, each of whom was to deliver an unbranded product to the trader. The pressure was to compete on price, and there were no repercussions to an individual company of sending poor quality fans. A poor quality shipment was dispatched, with the result that the reputation for Pakistani fans in Iraq was ruined and the demand shifted to China and India.

This recent failure was mentioned by several firms, and it highlights the difficulties small firms face in reaching international markets. They are too small to export directly and have to rely on traders. The traders have no incentive to develop a brand reputation and to ensure that quality standards are met. The firms themselves are fragmented and operate in an intensely competitive environment which prevents them from uniting in the domestic market. They cannot export without certification, but without an export order already in place they find it difficult to justify the expenditure on private foreign certification (which costs approximately Rs. 80,000 per product line).

The PCSIR (Pakistan Council of Scientific and Industrial Research) does exist to address these issues but the perception of the industry is that it is a corrupt body where sub-standard products are certified based on payments rather than lab tests.

These firms are aware that standardization is now a prerequisite to exporting successfully and therefore finding a way to achieve these standards jointly is at the forefront of the agenda of the small firms we interviewed.

Access to International Markets

The large majority of small fan manufacturers target only the local market. Larger firms export a small proportion of the output via traders, where they are not always even aware of the final destination of their products, or the modifications that the product will undergo before being shipped. Only the largest few firms export a significant portion of their production directly. Barriers to entry in the domestic market are low, with the result that the market is saturated with small firms operating on thin profit margins. The firms that we interviewed were all well aware that tapping into foreign markets was the only way to break out of the incremental growth path that comes from expanding one machine at a time to make fans for domestic markets. However, they appear to be trapped in a cycle of low capability, poor quality and poor investment because of which they cannot break into the export market.

Their low capacity and capability means that if they were to try to manufacture fans for export, they would need to divert all their resources towards it, tying up capital in purchasing, for example, electric sheet instead of recycling scrap metal as they do for local markets. However, the export business is risky, and if that order did not result in a sustained demand for the new high quality product, they would also lose their established local market, a risk that the smaller firms are not prepared to take.

Small firms also lack the know-how and the human resource needed for the paper work and handling of government departments and banks. For some firms this discourages them from even attempting to export directly. For others, the lack of information means that the chances of failure are higher (See Box 3-1 below).

Box 3-1: Case of Golden Star Fan Manufacturer

The Case of Golden Star

Malik Zulfiqar Anwar's motto "Making the impossible possible" is well suited to the history of his firm. He started off as an uneducated worker at Famous Fans. In 1960, he purchased a broken machine from his employer, using Rs. 4000 that he had received as a bonus to make a down payment. In the evenings, he started to manufacture fans, using the repaired machine to perform two different operations by changing the end tool. In 1986-87 he created Gold Star as a partnership. He sold the small number of family assets that he had: his motorcycle and his wife's jewelry and put all the money into his fledgling business. For a long time, neither partner drew a salary and worked around the clock to make the firm a success. By 2000, Gold Star was producing 36,000 a year.

Shortly afterwards they faced a series of personal setbacks in which the partnership was split and the brand went to his partner. However, in 2001 Malik started business again as Golden Star, producing 18,000 fans with two machines. As before, he clawed back all profits into production. The determination to succeed was so strong that he personally went out to market his fans door-to-door, competing so heavily on price that he was making barely Rs. 50/fan. With the brand name established, volumes picked up and business stabilised. His next obstacle was to export. He is not educated and had no idea how to get the required licenses and certifications. He asked PEFMA and one of the leading fan manufacturers who was already exporting, but to no avail. Eventually, he dispatched a 20ft container to Dubai without the necessary paperwork. The shipment was held, and his payment stalled, but he still dispatched another 40ft container to Jeddah. That too ended up in Riyadh instead of Jeddah, and payments for both containers were received a full three years after the container had been sent. Slowly, he learnt how to export the hard way. Today his exports stand at Rs. 120 million, he now operates two factories and has several small diversified businesses on the side.

By his own evaluation, Malik Zulfiqar has succeeded. While his firm is still small, he has made some successful inroads into foreign markets and can see the potential for growth ahead. However, his history shows how every step of his journey was fraught with obstacles, and illustrates how frustrating and discouraging the efforts to grow beyond the domestic market can be when external support is missing.

Larger firms usually employ someone exclusively to deal with these requirements. They are also able to undercut the orders obtained by smaller firms, which acts as another major disincentive for the small firm to attempt to export. For smaller firms therefore, risk aversion, driven by low capacity and low profitability, is the biggest impediment to venturing into foreign markets.

Management and Succession Planning

Many of the small firms struggle with management issues. The CEO of the firm typically manages the firm single-handedly, with minimum delegation to other staff. Some management is sometimes shared with other family relations successfully, but this is not always the case. The ability to grow is therefore constrained by the capacity of the single individual.

Several factors contribute to this practice: low profit margins, the inability to retain staff and low trust and contract enforcement.

Low profit margins mean that firms simply cannot afford to hire professional accountants and managers. The scale of operations is too low to justify it, and the lack of vision that comes from the absence of professionals further constrains growth and output. These firms appear to be stuck in a vicious cycle of low profits and low investment in firm capabilities. Many firms quoted the main reason for the success of the large firms as their ability to pay large salaries to the professional staff. However, even these large salaries are not enough to retain high end professionals in Gujrat. The fact that it is a small city means that there is a paucity of educated locals that can be hired. Professionals hired from outside Gujrat do not consider it a long term option, as they do not wish to live in a small city.

In addition, poor contract enforcement and a weak law and order situation mean that pilferage, deceit and deflection to competitors are common. This problem is faced by small and large manufacturers alike. They attempt recovery at a personal level, but do not involve the courts or the police, due to a perception that the exercise is almost guaranteed to be futile. As a result, the CEO retains all information and authority, for fear of leaking confidential information.

As a result of the lack of professional management, the success of a firm depends heavily on the vision and management skills of the CEO. Lack of management skills has caused even large and very successful firms to fail, for example, while transitioning between generations. Several examples of firm failure due to poor management are found in the industry, one of which is National Fans, which had a very advanced manufacturing facility and was a market

leader at one time, but the new generation was not able to manage it and consequently the firm shut down. One of the interviewees, the CEO of a successful enterprise, claimed that the failure rates in transitioning from one generation to the next are probably twice those in other countries.

Some firms are able to circumvent this problem by dividing various roles successfully between brothers and/or children. For example, supplies, exports and operations are all managed by different people. This allows them to specialize and complement each other and reach a higher growth path than could be achieved by one person alone. On the other hand, we have an equal number of examples of firms where the joint running of a firm by family members has led to its demise. Lack of unity and trust amongst the family members operating the business led to the accumulation of personal wealth rather than investments in the business. Eventually the firms and families both collapsed.

The market is rife with such examples of inefficiencies arising out of weak succession planning, and this is quoted as one of the most important reasons for the failure of firms in the industry. Other examples include fragmentation into small units, each replicating the existing business model rather than consolidation and specialization that could come from pooling resources and human capital.

Research and Development

Lack of investment in research and development via a strong support sector emerges as one of the top constraints that impede the competitiveness of the fan industry in Pakistan. A value chain and productivity analysis undertaken by State Bank (2011) reveals that the sector faces several supply side constraints and weaknesses in value addition. Specifically, the industry typically adds around 20 per cent in value addition which amounts to a mere Rs 450 per fan. This low level of productivity is a result of a lack of modern technology and weak production process flow management. Around 80 per cent of the costs are material costs which can easily be circumvented by developing new materials that are cost effective. For instance, the development of alternate materials has enabled the Chinese industry to reduce their production costs significantly. However, the Pakistani fan cluster suffers from weak academia-industry linkages and low investment in research and development. Techniques used in local industry are old and outdated with 42 per cent of the firms utilizing technology

installed over 10 years ago. This seriously prevents the realization of significant opportunities for value addition.

Moreover, it also precludes the development of a strong and viable ancillary and support sector for the industry. Specifically, there is no capacity in the industry, nor any support linked to the industry which can work on product designs, development, quality standards and marketing. Also, there is a strong desire among manufacturers to increase the quality of their vendors since 92 per cent of the firms outsource some of their production processes.

This technological set back is further contributing to a lack of support institutions and common services technology institutions. The Fan Development Institute (FDI) was introduced in the cluster to provide a smooth transition to the industries from manufacturing units into a cluster with internal innovation capability; however it has failed to achieve its objectives so far. To make matters worse, there is a general lack of information among firms regarding external support sources to increase competitiveness with almost all of the firms being unaware of any support activity being provided in the cluster.

Alongside limited investment in technology and cutting edge research, the myopic entrepreneurial mindset of the fan industry has caused the agglomeration to remain far behind in realizing true economies of scale that result from clustering. According to Porter's Diamond Model, the way that firms are organized, created and managed within a cluster has a significant bearing on its national competitive advantage. This domestic rivalry is also important in stimulating pressure to innovate thus determining the development of successful industries in a cluster.

Our case studies reveal that the most important reasons for the low investment in R&D are the low level of education and professional skills, the narrow profit margin that the firms work on, and the low level of trust and cooperation in the sector.

The low level of education and professional skills limits how firms visualize growth in the sector. This has meant that most small firms know just one way of growing: increasing production and sales by scaling up the existing infrastructure. In addition, since the primary source of funding for scaling up is their own accumulated funds, they usually grow one machine at a time, with little room for process innovation or large scale overhauls of the production technology.

There also appears to be little scope for collaborative research as the culture in which the fan industry conducts its business is one of secrecy, suspicion and market warfare. The underlying lack of trust means that firms do not wish to contribute to programs that do not benefit them individually as they believe that their individual efforts will benefit the entire sector rather than themselves. A diversion of resources towards an investment that will not improve their competitive edge over other domestic players is not considered attractive. This precludes peer group learning as a result of which the industry is dominated by small firms that do not benefit from economies of scale.

The larger firms do engage in some R&D, for example Royal Fans are in the process of developing a fan that is not sensitive to power variation while being run on low quality UPS systems. However, even amongst the largest firms, most R&D takes the shape of reverse engineering.

Seasonal production

The issue of seasonal production also presents a critical hindrance for the growth of the industry. Most firms perceive their capacity utilization in the region of about 80%, however, this is an inadequate indicator of demand since the industry only operates near full production capacity in the first 5 months of the year. Factories suffer from a lack of capital to maintain production in off season and have excess supply capacity during the season. This seasonal production is not only an impediment to investment but is also draining out skilled workers from the industry. As a result of this, production is far below its potential since the cyclical labor is not willing to invest in training and human capital development for an industry that only provides employment for 5 months during the year. This, coupled with the inadequate training facilities has further constrained human resource availability with over 30 per cent of the firms facing a problem in procuring skilled workforce. This is further corroborated by a lack of management capacity with poorly documented production and monitoring activity which makes it difficult to track performance. Seasonal demand and production also complicate the accounting process as prices and costs both vary over the year. The very basic accounting systems in place by small firms cannot handle costing and pricing exercises effectively under these circumstances.

Factor Markets

Labour

Labor of a reasonable suitability for fan manufacturing is easily available in Gujrat, as fan is one of the home industries of Gujrat. However, skilled and educated labour is harder to find and retain in Gujrat. This acts as an impediment to the adoption of more complicated machinery. The operations for most small firms are currently focused around basic manufacturing techniques and machinery. There are also issues with pilferage and law enforcement which lead to an erosion of trust.

Credit

Like all SMEs, lack of access to viable credit is also a critical issue for the fan industry in Pakistan. This problem is exacerbated because of the paucity of reliable financial data. A survey conducted by the Asian Development Bank suggests that in Pakistan only 6 per cent of fixed investment finance for SMEs comes from commercial banks and development finance institutions. The problem of access to credit is more acute for the smaller sized firms in the fan cluster which are virtually shut out from access to bank credit. In fact, about 85 per cent of the firms in the cluster reported 'self financing' as their primary source of funding (State Bank, 2011). This limited availability of viable bank credit is due to capacity issues faced by the firms and banks alike.

The firms suffer from typical SME asymmetric information issues and limited capacity to provide reliable financial data. In fact, most of the financial transactions of firms are recorded informally with almost 70 per cent of the firms using no audited financial statements. This creates a classic case of information asymmetries and moral hazard since the banks can not differentiate between high quality and low quality projects and cannot ascertain whether the funds given to the firms are being utilized in some appropriate way. This was verified by our own interviews, where examples were given of firms that had obtained bank loans for a planned default, or for purposes other than those for which the loan was sanctioned.

To make matters worse, SMEs face a more uncertain competitive environment and are less equipped to deal with economic adversities and risks. To circumvent this problem, banks

require financing to be collateralized with the collateral often exceeding 100 per cent of the loan. This further bars out firms' access to credit since they do not possess the requisite assets that can be collateralized.

Details from the case studies allow us to tease out additional demand side issues with financing investment using bank loans. Most firms interviewed do use banks for ordinary transactions and the overdraft facility for working capital. However, the preference is still to use "market credit[3]", even though firms recognize that this is an expensive way to finance their operations, with prices that are approximately 10 per cent higher for supplies purchased on credit.

Market credit is not just expensive, but it is also a fragile system to depend on. Credit cycles of different lengths involving several players exist, increasing the co-dependence of the firms. Default by a single firm can lead to a domino effect so severe that several firms have been reported to go out of business as a result. Market credit also complicates the accounting process. The multi-party overlapping system of credit was quoted as a cause of failure as some firms misinterpreted the balances of the spreadsheets as profits. This led to selling below cost and an eventual collapse as the credit bubble became unsustainable.

Another reason quoted for the low demand for credit is that the return to the invested capital for many small firms is not higher than the bank rates and charges, and therefore it was not worth their while to borrow from the bank to invest in their business. In addition firms do not like the formality and rigidity of dealing with a bank. Some firms interviewed claimed that they simply do not want to owe that kind of money. Other firms also quoted bad experiences with prior bank loans where they found the repayment schedule too burdensome.

From this it appears that the commercial banks are not currently serving the requirements of the SMEs in the fan cluster. There has never been a pressure on the commercial banks to extend long term credit to the SME sector and, as a result, commercial lending is too expensive, inflexible and complicated for these firms.

Capital

[3] Market credit is the practice of buying raw material on credit. Re-payments are only required once the final product has been sold. A chain of credit is thereby created in the market.

The smaller firms in the sample all work on recycled material and machinery. Typically, used machinery is purchased in the second hand market at Daroga, where it arrives as factories around the world discard them as obsolete or shut down operations. The firms purchase these machines, repair them and make adjustments locally. This way the machinery typically costs less than half the price of a new machine. However, these machines also have a much smaller capacity than the ones employed by larger factories. For firms serving the local market, this machinery and installed capacity is sufficient, but it acts as a deterrent in bidding for foreign orders independently. They are well aware that their capacity is insufficient on their own, and that they lack the unity and standardization to work together.

Branding

The establishment of a brand name is an important factor in the success of the large firms in the fan industry. The first few entrants in the market started with more substantial capital, and were able to develop a brand name associated with a high quality fan. These firms are now able to charge a premium for their products and consequently have a greater outlay on advertising and maintaining their brand name.

The smaller firms are able to produce a higher quality fan, but they are not able to get the required price for it. This acts as a disincentive to invest in improved quality. The firms engage in small scale low end marketing, but with so many small firms competing with each other using similar marketing strategies, it is difficult for one firm to stand out. Here again the intense price competition and low profit margins emerge as the underlying factors behind the inability to establish a high quality product with an established brand name.

Institutions

The firms in the fan industry operate in an environment of little institutional support: they are not able to rely on courts and law enforcement agencies, have little in the way of consistent support from the research and other support institutions set up specifically to assist them, and face corrupt and inefficient government departments. This section discusses how these institutional features set the firms up to remain small.

Courts and law enforcement

The firms face several legal issues such as theft, outright robberies and breaches of contract. However, they unanimously reported having to absorb and accept the losses, or deal with such cases in their limited personal capacity. Since it is common knowledge that these agencies are not effective, the repercussions of reneging on a contract or stealing from an employer are low, and thus the practice is rampant. Although much of the pilferage is at a low level and is more of an irritant than a major obstacle, the underlying trust issues that it creates are much more serious. This means that the firms cannot effectively delegate authority and control to their labour, which is a major barrier to their ability to grow.

PEFMA

The Pakistan Electric Fan Manufacturers Association (PEFMA) is a platform by which the fan manufacturers could address the issues that they face jointly, and could potentially have paved the way to greater standardisation, quality control and export opportunities. However, this remains a controversial organisation. Originally, the association was created and managed by the largest few companies. At that time, some firms claim that the benefits of any orders, inquiries and information that come via PEFMA were not circulated widely and disproportionately benefitted the larger firms. For example, SMEDA workshops on brand development and media planning were organised via PEFMA, but the small firms were not informed. The larger firms were therefore able to develop an even greater competitive edge over the small firms. The association is now managed by the smaller firms. However, the organisation has since lost the main benefits, possibly due to lack of connections and knowledge.

Currently, most firms agree that PEFMA is a fair, equal opportunities organisation. Even the smallest firms reported attending workshops there. The support, however limited, is available and firms that have the ability and aptitude can benefit from it.

Government departments

Most firms interviewed reported that tax and labour department officers actively encourage under-reporting income and employment, going as far as to suggest what kind of fictional

numbers would mutually suit the officer and the firm most. In the short run, this might appear to benefit the firms as it allows them to evade tax, but in the long run it is extremely harmful – a fact that most firms seem to recognise. It prevents them from keeping a transparent set of financial records which would allow them to benefit from accurate accounting and access to formal credit. It also leaves open an avenue for blackmail and extortion, the fear of which keeps them in the grey. They would all like to be clean, but for an individual firm the barriers to this are insurmountable: it renders them uncompetitive if other firms continue the practice of under-reporting, and it also means that all prior accounts might be questioned which would expose the firms to more legal inquiry. This fear of being checked keeps many firms small, so they can stay under the radar of enforcement agencies.

There is also a view that larger firms have an edge in handling government departments – they have better established contacts by which they can get their work cleared easily, for example at customs. Other benefits also include being able to hire or allocate someone exclusively for lobbying and handling government departments and bureaucratic procedures, something that is outside the scope of the smaller firms. Some small firms also claimed that the effective lobbying by the large firms meant that they can get policies approved at the CBR that benefit the large firms – such as income tax commissions, which are the same amount for everyone, regardless of size. One of the firms went so far as to claim that some institutional officers are on the payroll of certain companies. These officers then actively create obstacles and delays in processing the applications for competing firms.

Lack of formality in the supply chain is also a problem faced by the fan industry in Pakistan. Even though some firms are themselves registered for sales tax, the material they purchase has no proof of sales tax having been paid because all receipts from suppliers are informal. These suppliers only provide proper receipts to the large firms, with the result that the large firms can get tax rebates, but the smaller ones cannot.

Electricity

Energy shortages, too, are particularly severe for smaller firms. While all firms have made alternative arrangements, they hit the small firms the hardest due to their already low margins. The cost of alternative fuel can be debilitating. We were told that natural gas is available for the first 20 days of each month. Furnace oil has to be substituted for the next ten

days. The cost of furnace oil on those ten days easily exceeds the expenditure on gas in the whole month. He explained that furnaces use a large amount of gas to get to the requisite temperature. As gas pressure falls, the furnaces begin to cool. Therefore availability and consistent pressure are both issues that they have to deal with on a regular basis.

For electricity too, although the firms are all equipped with UPS systems or generators, it raises their cost of production. Furthermore, unscheduled and elongated load shedding cannot be sustained, causing problems for even the large firms.

In summary, the smaller firms in the fan industry seem to be stuck in a vicious cycle perpetuated by their low profit margins. This leads to low investments in professional management, brand establishment, installed capacity and certifications. Without these investments, they cannot tap into the higher margin export market. However, without the revenue boost of exports, the firms cannot generate enough profit locally, as they operate in an intensively competitive domestic market, where competition is on price rather than quality. The institutional features of the environment in which they operate also perpetuates this cycle by being more accessible to larger firms and by creating disincentives to becoming transparent.

For these reasons, although the fan cluster in Pakistan has emerged as a vibrant agglomeration promoting growth of incumbent firms and attracting new entrants because of low barriers to entry, there still exists a lot of potential for creating economic value which has not been exploited. The scale of production remains small with an average production of a median size factory being 500 fans per day as compared to 35,000 fans for a comparable sized factory in China. There is hence a need to move away from these closed ownership patterns towards greater informal and formal collaboration within the cluster.

3.2.3 Value Chain synthesis

This section of the chapter develops a basic value chain for the fan industry (product: Ceiling Fan) and uses it to highlight the factors that are causing inefficiencies and impeding growth at the aggregate level. The value chain has been developed using secondary data (TRTA II Fan Sector Study 2011) updated through interviews conducted during the research study.

Business Model

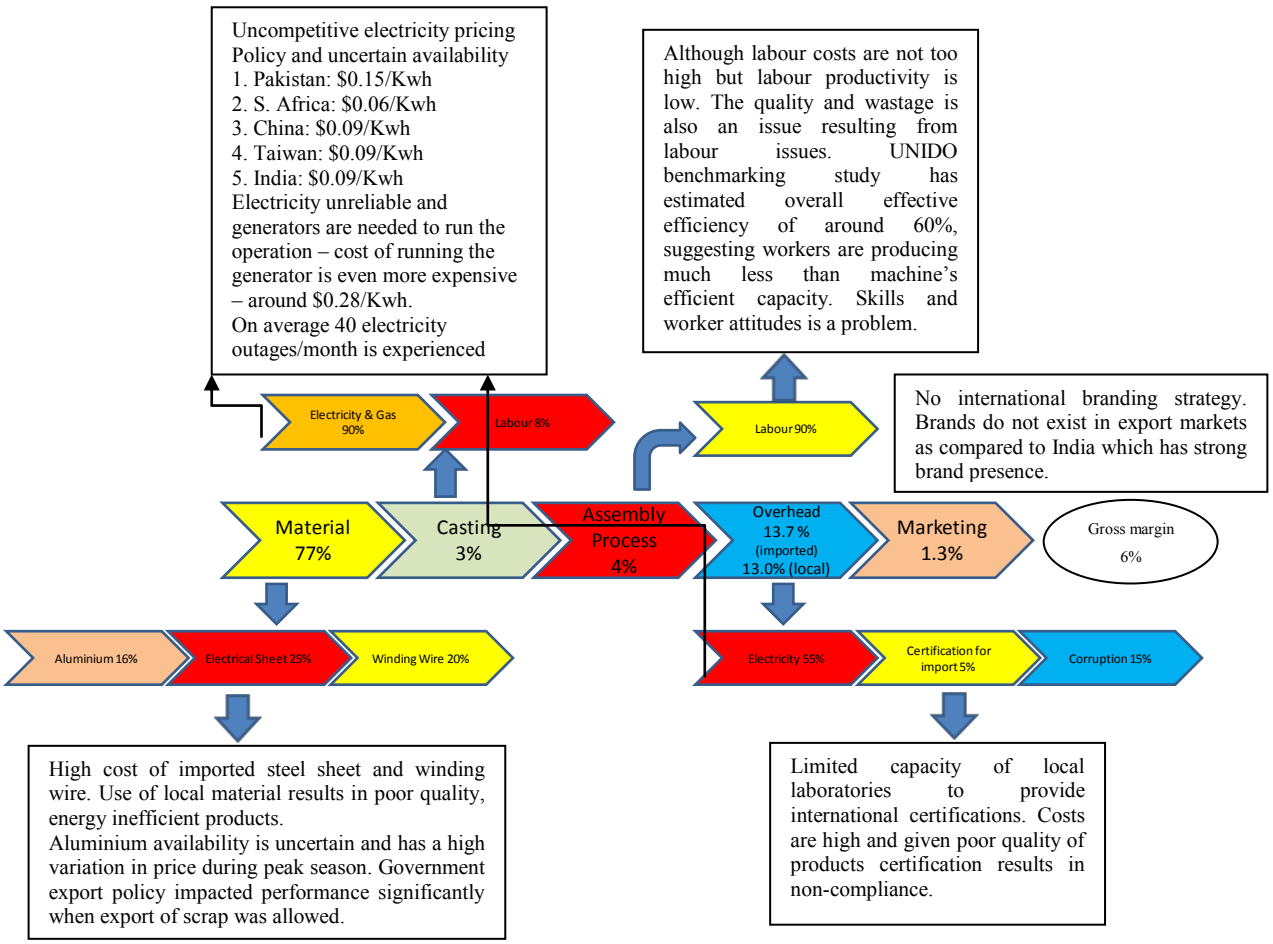
The fan industry operates as an assembly line with large as well as small producers relying on key inputs from vendors. The larger units have some level of vertical integration with some

initial processes (body making and rotor making) in house whilst the majority of the manufacturers purchase body and rotor from vendors. The value chain presented below on average represents a more integrated unit, manufacturing body and rotor within firm.

Benchmarking

Despite inefficiencies in the value chain, the cost structure of the Pakistan fan industry in not hindering its competitiveness, as Pakistani fans are price competitive in international markets and also in local markets where they were able to resist fierce onslaught by the Chinese after the FTA agreement. The key problem when compared to other global players is the need to produce higher quality and better designed fans. Pakistani fans fail to meet international quality standards and testing/certification requirements which have limited the potential for export. Moreover, the product categories are limited and simple (standard metal pedestal and ceiling fans) as compared to the Chinese that have diversified in plastic fans and Indians who are doing extremely well at decor and fashion fans (high value). The fans made in Pakistan also lag in terms of energy efficiency due to limited availability of quality inputs for construction of electric motor (electric sheet). Finally, a major drag on quality has been fierce local market competition that continuously puts pressure to lower prices which are managed by using poorer quality inputs reducing fan quality further. This happens as there is negligible enforcement of standards in local market by PSQCA.

Figure 3-4: Fan Industry Value Chain



Lack of Ancillary Industry

The quality and energy efficiency of fans is highly dependent on the quality of the motor which is made from electrical steel sheet and copper wire winding. There is no production of pure electrical steel sheet in Pakistan and hence the industry has to rely on expensive imports. Given the fierce price competition in the local market, it is not viable for firms to use electrical steel sheet, especially when producing for the local markets. As a result, manufacturers use re-rolled scrap iron to manufacture motors which result in production of highly energy inefficient fans failing to meet quality requirements for most export markets. Even for local market consumption, the fans are not suitable as they use more electricity than required hence causing high wastage of an already scarce and expensive resource in the country.

High Cost and Uncertain Availability of Electricity

The industrial tariff for electricity in Pakistan is generally higher than its competitors. While electricity is not a major cost for the fan industry, a lack of consistent supply severely damages the production capacity and quality; especially in processes where heating equipment is used (casting and painting).

Limited Availability of Long Term Credit

The production technology used in the fan industry is significantly labor intensive. Due to lack of viable long term credit available to the firms, even the progressive manufacturers are unable to upgrade their technology. Mechanization at certain stages for example at casting, tolling and turning and winding can help improve efficiency and quality significantly.

Issue of Skilled Workforce

As mentioned above, the production technologies are extremely labour intensive and hence the productivity of firms depends on skill of workers. The skill level in Gujrat has lowered over time due to workers leaving the profession because of its seasonal production cycle. Moreover, worker's attitude towards work is also careless and as such firms find it hard to reduce wastages and reworks on production. This not only reduces the speed of production but also increases the factory overhead costs.

Institutional Issues

The industry suffers from its small scale which is a direct result of lack of standardization of parts in the industry. Lack of standardization also results in expensive inputs as vendors are also incapacitated to enhance scale. This results from manufacturers being too over protective and secretive about their production techniques and methods because of lack of trust that has developed due to weak institutions of contract enforcement. This mistrust is not only limited to outsiders but is also between family members making succession planning a critical issue for the industry. Hence, the firms prefer to stay small.

Moreover, industry academia linkage is non-existent and hence the industry has failed to innovate or come up with more value added and technically efficient fans. Investment in

R&D is negligible which has resulted in Pakistan being behind the curve in making products for more sophisticated markets such as Europe and the US.

Marketing & Branding

International competitors, especially India has invested significantly in branding and marketing its products. As a result of this, their fans are able to fetch much higher prices and demands from export markets. Pakistani fans, though cost competitive with their Indian counterparts, are unable to fetch higher prices due to lack of branding and marketing.

3.3 Sports Goods Industry

3.3.1 Overview

The sports goods industry in Pakistan is mainly clustered around the city of Sialkot which accounts for nearly 95 per cent of the industry's total production. The location of this cluster is largely a result of agglomeration economies with Sialkot being the center of excellence for the production of sporting goods for more than a hundred years. This has been attributed to the availability of skilled artisans and entrepreneurs in the city, which also possesses favorable indicators in literacy, health, electricity and water facilities. In addition to this, Sialkot also benefits from the availability of basic infrastructure for industry including a dry port and an international airport which serves as an export hub for manufactured goods.

Sports goods producers in Sialkot are predominantly small and medium sized firms comprising over 360 formal and over 10,000 informal units. The main sports goods produced can be divided into five categories that include articles and equipment for physical exercise/gymnastics/athletics, articles and equipment for fishing, sports gloves, articles and accessories for billiards as well as articles for funfair. Among these, articles for gymnastics/athletics and articles for funfair have been the key drivers of the sports sector's growth in the world. Moreover, the country is considered a leading manufacturer of footballs, cricket balls, hockey sticks and cricket bats. These products enjoy market recognition around the world. As a result of this reputation, the Sialkot cluster has been very successful in establishing linkages with major international brands which source a large portion of their supplies of sporting goods from the city.

The sporting goods industry has therefore been an integral part of Pakistan's economy providing employment to 300,000 to 350,000 skilled and unskilled laborers. In addition to this, the sector also represents roughly 1.42 per cent of the country's total export base.

In spite of the current and potential importance of this sector to Pakistan's economy, it remains mired in difficulties due to limited opportunities for growth. For instance, most of the companies in Sialkot fall under the commercial exporters' category which have minimal staff and resultantly operate with a very short term orientation, facing high failure rates. In addition to this, the recent energy shortages have adversely affected the sector's competitiveness and have been a serious impediment to its overall growth.

Therefore the industry has failed to perform to its capacity and hence faces a decline in its share of sports goods exports. Although Pakistan's sporting goods have enjoyed a good reputation world-wide, the industry has failed to convert this into a sustainable and growing share in the global market, with Pakistan accounting for less than 1 per cent of the total worldwide sale of sporting goods. While Pakistan's global exports increased more than 100 per cent from US$ 7.5 billion in 1999 to US$ 18 billion in 2009,[4] sporting goods exports have remained stagnant and currently stand at US$ 256 million. This is evident in the stark differences between the average market share of exporting goods of China (32.5%) and Pakistan (1.37%).

Part of this less than satisfactory performance can be attributed to the effects of the financial crises in the US that had an adverse impact on Pakistan's trade since the sporting goods industry is largely consumer driven, with major importers being the United States, the United Kingdom, Germany and France. However, a greater cause for concern is that in recent years, not only has Pakistan's share of sports goods exports declined, the sector has also registered the highest negative annual growth of exports relative to its competitors. This is true for three of the five sports goods categories namely articles of gymnastics/athletics, articles and equipment for fishing, and articles for funfair.

The following analysis of the sports goods sector identifies some critical issues at the level of the firm and the industry constraining both firm growth and overall industry development.

[4]State of Pakistan's competitiveness report 2008.

3.3.2 Constraints

Credit market

In the interviews conducted of twelve sports goods firms, which ranged from small, medium to large, it was found that the small and medium firms do not borrow from the formal credit market i.e. commercial banks. Borrowing from commercial banks is generally limited to letter of credit, over-drafts or short term working capital finance. None of the small and medium sized firms interviewed had ever resorted to long term financing for capital investment purposes.

The main reason cited for this was the high interest rate charged by commercial banks which according to some firms is greater than their expected return from business. According to them, there is uncertainty inherent in the sector, especially for smaller enterprises. The majority of the small firms are wholly reliant on foreign buyers which means that a couple of defaults on large shipments can potentially result in closure of business. Hence, factory owners are generally risk averse and tend to diversify investments in assets which are perceived to be more secure.

The recent energy shortages, weak law and order situation, increasing security concerns and general uncertainty are also reasons given by firms which inhibit formal borrowing or even use of retained earnings for investment into their own businesses. Instead, money is channelled into what are considered safe investments such as land and gold.

This behaviour has a perverse outcome – small firms which make profits and are more risk averse do not invest and grow but chose to diversify out of the sector, which to some extent explains why many of them remain small.

There were very few large firms which took recourse to formal long term financing for setting up their factory or plant. Most of these, however, used retained earnings to increase their plant size or upgrade machinery and technology.

Entrepreneurship, Management and Succession planning

Sialkot's strength is in the versatility, dynamism and enterprising nature of its population. With relatively better education than the rest of the country and exposure to international markets, potential entrepreneurs start early in life. The entry into business is via trading -

getting orders on the internet is relatively easy and so is finding manufacturers to meet the orders. This requires a very low level of initial capital investment and has low barriers to entry otherwise as well. Profits made through trade are most often invested into small scale manufacturing and export. By the time these young traders get into manufacturing, their potential international clientele is already established through previous trading relations and contacts. Thus the general transition in Sialkot is from trading to manufacturing for export. This particular feature makes the emergence of small enterprises easier and more frequent in the cluster.

Although there is no dearth of entrepreneurs in the sports goods sector there are issues when it comes to firms' management practices. Generally small and medium sized firms are managed and run by the owner. This limits expansion beyond a certain point and makes the business highly sensitive and vulnerable to the abilities and decisions of one individual. From the interviews it was evident that the management and production activity of most firms is ill-organized. There was hardly any standard management practices employed even in some of the larger units.

Firms generally lack a well-educated, socially aware and professional middle management due to which they tend to lag behind in areas like efficiency, workforce productivity and marketing. Also, as a consequence of inefficient management, there is little to no attention paid to meeting social standards such as hiring fixed wage workers or maintaining a good working environment. As firms in Sialkot grow and start catering to international brands, they start facing difficulties in adhering to and complying with social standards imposed by the concerned brands. For instance, when Silver Star, a leading local manufacturer of inflatable balls, became suppliers for Nike, they were forced to adopt Nike's business model which included converting piece rate employees to salaried workers, offering workers better incentives, establishing fixed times, not allowing people to work from home and establishing a proper monitoring system. Although there is a growing realization that if local firms are to compete internationally they must bear the costs incurred in meeting the standards of international brands, still efforts to comply remain fairly weak.

However, there are some important exceptions – these are the firms which have established themselves as major suppliers of large international brand names. These brands closely monitor the production and management of their international supply chain to ensure that the

required quality standards are met. The successful firms are those which have been able to comply with these standards and have changed their management style and production methods according to the specified standards of the large brands.

In the sports goods sector, none of the small or medium sized firms interviewed were new entrants. Their average age was almost fifty years. Most of the firms had started as a single establishment which over successive generations had been divided amongst the family. Similar to other sectors, succession planning is a critical issue in sports goods and one of the factors differentiating success stories from failures. Firms in this sector are usually owned by members of one or two families where the head of the family is in charge of running the entire business. Therefore, in case the head of the family is incapacitated, there is usually a complete absence of a succession plan creating major problems for firm survival.

Those companies which had a more systematic and professional approach to succession – where the younger generation is gradually trained into business and given room to innovate and change – have been more resilient. Moreover, firms which have established export markets and have the ability to diversify and differentiate products for the international market have tended to grow in spite of division. In such cases it was quite rare to find a parent company fragmenting into inefficient smaller units each facing diseconomies of scale and scope.

Labour market issues

According to most of the firms interviewed, a major competitive advantage which Sialkot has over other manufacturing and export hubs across the world is availability of cheap labour. However, this competitive edge is blunted if we compare the average skill levels of Pakistani workers to workers in other developing countries. Thus it might be the case that labour is cheaper relative to China but perhaps it's not as productive. This lack of human capital is a result of low levels of primary and secondary education in the country resulting in difficulties in training labor. Hence, whereas Pakistan has a large and growing pool of workers whether this translates into a competitive advantage is questionable, especially since there are few if any training facilities or degrees in educational institutions that are geared towards the industry in general and sports goods in particular.

Also, a major challenge for the firms which invest in new machines and technology is the training of workers. For firms which are direct suppliers to major brands this is not a problem. In fact for them it's a requirement to upgrade and improve worker skills and comply with international labour regulations. However, for smaller firms who export indirectly (through buying houses) and have workers with low skills, investing in training is perceived as a risky and costly activity especially in the absence of labour contract enforcement. Thus for such firms low labour skills become a binding constraint for further growth.

For larger enterprises, the main issue is retention of highly skilled staff such as engineers – who generally prefer moving to bigger cities such as Lahore or Karachi. Some of these firms have resorted to hiring diploma holders who are trained on the job and are easier to retain.

Another major issue relating to labour which was raised by the firms interviewed was the voluntary signing of ILO regulations by the government of Pakistan. Interestingly, India and China have not signed these ILO regulations and hence the buyers do not seek compliance from them. However, exporters from Pakistan are bound to comply with a host of ILO regulations. This compliance increases the costs of production making them relatively less competitive.

Supply of raw material and absence of ancillary industry

There was a global shift in technology in the Sports goods industry in the 1980s which was the introduction of composites in sports rackets and hockey sticks. This change in technology hit the Pakistani industry hard which was slow in moving to composite materials hence resulting in the shutting down of many tennis, squash and badminton racket manufacturers. There has been no domestic investment in composites since and the manufacturers have to import 100% of the raw material (e.g. papers, lacquer, resin, carbon fibre and glass fibre). Complete reliance on imported raw material makes these firms susceptible to exchange rate shocks, customs duties and bureaucratic rent seeking. Also, there are regulatory issues in the case of import of carbon fibre due to its potential use in the defence industry.

It was reported by one of the firms that India has allowed exports of carbon fibre to Pakistan but the Pakistani government has not allowed these imports for reasons best known to itself. According to the firms interviewed, importing raw material from India would be much cheaper but regular instances of delay in releasing shipment at the Wagah border deters them

from doing so. These delays are primarily due to customs procedures/red tape which sometimes requires negotiations at the highest bureaucratic level for a release of shipment.

Furthermore, the quality and the price of the final exportable product hinges completely on the availability, consistency and quality of raw materials. Almost 90% of raw materials and inputs are imported from China, Japan, Taiwan and Europe. As stated above, government policy has failed to encourage any investments in large scale input industries. Absence of such primary industries – chemical, latex – and also of designing houses and quality testing and certification facilities has seriously hampered the overall growth of the sector.

Innovation and Product Diversification – the challenge of remaining in sync with global demand

The sports goods industry is constrained due to a lack of investment in R&D and shortage of proper scientific and technological infrastructure as a result of which it suffers from low levels of innovation and a lack of competitiveness and productivity. The country is currently ranked 118 out of 142 countries on the 2011-12 Global Competitiveness Index ranking. This indicates that most sectors have failed to keep up with global trends, innovations in product development, new designs, modern manufacturing techniques and diversification into growing product lines. The sports goods industry also lacks competitiveness due to inadequacy of specialized factors such as modern technology, training institutes and research centres. In comparison to major players in the global sports goods market like China, India and Thailand, Pakistan is far behind in technology and modern production processes. The introduction of new technologies, production methods and materials wiped out some product categories (tennis, badminton and squash rackets) from Pakistan's product profile and is now threatening Pakistan's core product i.e. inflatable balls.

In the interviews conducted of the twelve sports goods firms, ranging from small, medium to large, the most serious obstacle identified to growth of small firms was their limited ability to innovate and diversify their product range. As mentioned before, in comparison to international standards, the industry is still at a basic level of production technology involving cut and stitch (balls, bags and apparel) and relying primarily on imported inputs. The firms which have been able to get onto a high growth trajectory and have literally doubled in size over the last 10 years are those which have innovated and effectively diversified their product

range. According to these successful firms, the global sports goods market is now all about 'lifestyle' – and 95 per cent of the market demand in the sector is for sporting accessories (sports ware) and apparel. The firms which have made a timely and strategic move towards manufacturing a wider range of products in line with changing patterns of global demand have grown significantly.

For example, a medium to large sized firm which used to make soccer balls for a major international brand has diversified into apparel in a joint venture with a Dutch firm. Recently this firm has begun manufacturing sports shoes in association with an Italian firm which is also a potential client. The firm has been able to establish links with sports clubs and retailers in Australia and is supplying products directly to them. This is a niche market, according to them, with low volume but very high margins. The strategy that they are following in shoe

Box: The Case of Forward Sports: Linkages with the global market

Forward was started in 1990 with an initial capital of Rs. 1.5 million. The firm had an edge from the very beginning: The CEO of Forward had worked at his father's firm, Capital Sports, for 15 years prior to starting Forward. Capital Sports had been manufacturing footballs for Adidas since 1975. An established client, Adidas continued working with both Capital Sports and Forward sports after the split. Initially, Forward produced hand stitched footballs. In 1998, as a consequence of child labour issues, most foreign brands exited the Pakistani market. As a result, Forward starting moving towards technology based production so as to become less dependent on labour. They steadily invested in foreign machinery and also developed local machinery where possible. They realized that labour laws were making it harder to maintain a competitive edge in hand stitched balls. In 2003 the international market demand switched to machine stitched and thermo bonded balls. In 2007 Forward followed suit, making thermo-bonded balls and became the first and only firm in Sialkot to make thermo-bonded balls. In 2011 they added machine stitched balls to their product range. Currently Forward produces all three categories: 250,000 machine stitched balls, 75,000 thermo bonded and 600,000 hand stitched balls/month.

They have an established in-house R&D process which reverse engineers all imported machines as soon as they arrive; with the result that manufacturing is almost entirely on locally built machines. The firm has also identified key parameters of performance and quality and has moved to 3D visualization and virtual sampling. This enables it to enhance whichever parameter the client requires and produce it for sampling in just 4 weeks.

The key to their success in the industry is their innovative and forward looking behaviour. They are constantly pre-empting market demand, driven by a clear understanding of product and technology life cycles. As they approach the point when a particular product or production technique is declining, they innovate and move onto new products and techniques. Their patronage by Adidas as their main client is a constant source of knowledge and technology spillovers, and the established demand for their product allows them the margins to invest in labour, machinery and most importantly, R&D. These investments, in turn, ensure that they are able to retain Adidas football manufacturing at Forward, and are part of the global changes in technology rather than be the ones left behind.

manufacturing is to import the raw material first, experiment with production for the local market and then gradually bring quality up to international export standards.

The essential ingredients for product diversification were stated to be investing in modern machinery and technology, good dying and knitting facilities and firm level R&D. Given the trends in global demand towards sporting apparel, there is a dire need for ancillary industries i.e., polyester, dying/knitting firms to be developed.

As in the example mentioned above, partnerships and joint ventures with foreign brands/investors have led to diversification and has also been a source of finance and knowledge/technology spillovers.

The Hockey manufacturers in Sialkot, with the help of a foreign consultant have been able to establish links with local universities for the purpose of product innovation. In collaboration with NUST/GIK, they have helped resolve many of their problems such as new resin development and breakage issues. Interestingly, prior to this, they were not aware that these local universities had the required labs and facilities to help them with product development. This underscores the critical need to establish industry-academia linkages which is currently limited to just a few cases.

Finally, there are many advantages of being a major supplier for an international brand. These range from constant upgrading and investments in labour training programs, introduction of lean manufacturing processes, logistics training, environmental training to conducting audits and measuring performance indicators. The following statement by a firm owner/manager encapsulates the importance of working closely with big brands:

"Success is entirely dependent on relationships with the brand. Any firm that is able to cling on to a major brand grows phenomenally."

Branding – a viable option?

Most of the sports goods firms, including those interviewed, manufacture products either directly or indirectly for a particular international brand name. Although there are huge margins to be made in establishing one's own brand name internationally, the perceived costs of doing so are exorbitant. Branding is considered a completely different ball game requiring very different set of skills and resources from what the majority of established firms in

Sialkot have. According to the firms interviewed, the industry's strength or comparative advantage squarely lies in manufacturing and not in branding – thus there is a lack of willingness to move towards that objective.

Absence of branding for the domestic market

The sector has made little effort to promote the establishment of a local market. The negligible market for sports goods that currently exists in the country is quite unsophisticated and has been taken over by low quality and low price Chinese products. None of the firms interviewed were selling in the domestic market. The reason given is the proliferation of fake brand names and low quality goods in the domestic market which makes it very difficult for domestic producers to penetrate.

Institutions and Infrastructure

There are no competition laws that govern Pakistan's manufacturing sectors due to which predatory pricing is common. Firms in this sector are engaged in stiff competition with one another and regularly engage in price cutting in order to attract buyers; in fact in a significant number of cases, the undercutting is so substantial that they are barely able to recoup their production costs. Such predatory tactics are very damaging and have contributed to the overall decline of the sports sector.

In the interviews conducted, there emerged contrasting opinions on the role and effectiveness of industry associations. According to some firms, there was inadequate information sharing among firms and because of weak contract enforcement they had failed to jointly export in order to meet large import orders. Many were of the opinion that the negative nature of competition in the industry with severe price cutting and active poaching of customers was hurting the long term development of the industry.

In sharp contrast to this was the Hockey Association which has a membership of about twenty firms. The association platform is used effectively for the benefit of all its members through joint activities such as the purchase of imported raw material, joint sponsorships of national hockey players, fixing labour rates and employment of lawyers for legal representation. The central reason behind this cooperation is the fact that these firms do not

compete with each other – the international market and the brands they're manufacturing for are large enough to absorb many players without any threat of market stealing.

There is a dearth of supporting public sector institutions for the sports industry. This includes limited quality testing and certification facilities, independent research and development capacities, and outdated capacity of training and vocational institutes.

According to most of the firms interviewed, the government collects billions of rupees from exporters through the Export Development Fund (EDF), however, to date nothing significant has been spent to upgrade technological knowhow, or in the development of technology in sports goods sector. A pertinent example of the inefficiency of government departments in supporting innovation and technology in the sports good sector was in the mechanization of football manufacturing. According to the firms interviewed, approximately 10 manufacturers got together to work on producing a mechanized and composite based football. They requested the government for support and started working with SMEDA and subsequently a total of Rs. 187 million was approved for this project in 2004. However, due to a lapse in funding there has been no progress made in that initiative resulting in a huge loss to the football manufacturers – in particular the small and medium firms which lack the capacity or resources to invest in mechanization.

Another major Public Sector initiative to promote innovation in the industry was the establishment of the Gujranwala Tools and Dye Moulding Centre (GTDMC). However, the machinery and tools manufactured by the Centre are reportedly outdated, of poor quality and very expensive. As a consequence, the majority of the firms prefer to buy machines and tools from the private sector. There has been a repeated demand by the Sialkot Chamber to hand over management of the Center to them.

Government departments, particularly customs are considered extremely inefficient by most of the firms interviewed. There is also no facility to trace imports. EMS doesn't have the standard system employed by international courier firms that allows importers to trace their order and manage their production schedule accordingly. Although rent seeking by customs officials was identified as a problem, the more pressing issue highlighted was the sheer inefficiency and incompetency of officials.

The inadequate support provided by the public sector is coupled with policy uncertainty. So far, policies made by the government for the sector have lacked focus since the government is still unaware of which stakeholders it should engage. There is also a great deal of confusion in the sector with regards to existing government policies like customs regulations and duties. In the past, some inconsistent policies of the government have included disconnection of gas without prior notice as well as a lack of satisfactory policy implementation with regards to R&D and export rebates. Lack of focus, confusing policies and frequent changes in those policies have therefore been counterproductive for the sector inhibiting the growth of firms and the development of the industry as a whole.

The failure of the government to provide requisite infrastructure to industry led the private sector in Sialkot to address this problem directly. The establishment of a dry port and an international airport by the private sector are unprecedented examples of private sector cooperation and initiative to relieve infrastructural constraints.

Finally, for the past couple of years, energy shortage has been highlighted by all firms across the country, including those in Sialkot, as the most serious constraint impeding growth and productivity. This is evident from the various cost of doing business surveys conducted periodically in the country. Although the continued energy crisis is a major constraint to firms across the sports good sector, the interviews did not focus specifically on this for two important reasons. First, the energy crisis, albeit a serious issue, has not been a chronic problem inhibiting firm growth. As this study exclusively focuses on impediments to firm growth identified retrospectively since the inception of a firm – this particular impediment does not figure as an endemic issue over this long term time frame. Secondly, the cost of doing business surveys have already dealt with the energy issue in considerable detail, looking at its impact across sectors, across firm size and also estimating impact on costs of production. A focus on this here would have therefore been a mere repetition.

Conclusion

In conclusion, this focused study of firms indicates that perhaps the foremost impediment to growth of small firms in the Sports good sector is their lack of ability to innovate and diversify their product range in accordance to the changing patterns of world demand. The firms which are closely connected with large international brands have on average fared

better and grown over time. The ones which export through buying houses have tended to remain small. Availability of raw material and credit along with inadequate human capital and labor rules and regulations are more of a binding constraint for smaller units relative to the larger ones. The latter have access to technology, capital resources and training because of their close connection with the international brands or the global value chain.

Better managerial skills and succession planning is also a major factor distinguishing high performance firms from low performers. The firms which have been poorly or unprofessionally managed and have fragmented into smaller units over generations have generally stagnated and eventually gone out of business.

Smaller firms which are less diversified tend to engage in fiercer competition involving price cutting to poach potential buyers/brands. This results in a low survival rate of businesses in the sector. In contrast, the firms which have been able to innovate in production and diversify their product range face no such threat.

Finally, public sector interventions in the sector to promote innovation and technology have been unsuccessful. In fact Sialkot is a great example of private sector coordination and cooperation in the private provision of infrastructure such as the dry port and the airport. There is also a lack of policy direction and general policy uncertainty emanating from the government. This not only impedes growth of small firms but also is a major obstacle for the growth and development of the overall sports industry in Sialkot.

3.3.3 Value Chain synthesis

This section of the chapter develops a basic value chain for the sports goods industry (football) and uses it to highlight the factors that are causing inefficiencies and impeding growth at the aggregate level. The value chain has been developed using secondary data (SMEDA Sports Goods Sector Strategy 2011) updated through interviews conducted during the research study.

Business Model

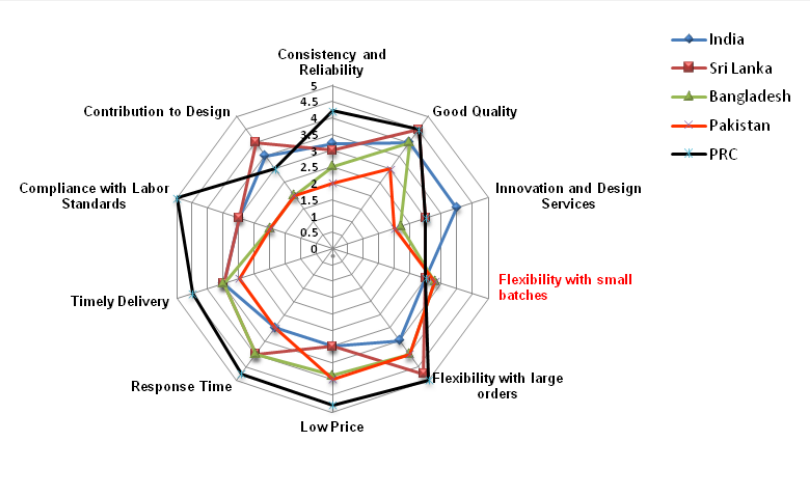
The sports goods industry comprises manufacturing of basic and high end speciality and professional sports equipment and sports gear. The larger units have relatively more sophisticated production equipment and manufacture for leading sports brands such as NIKE,

Adidas etc. Most of the inputs are imported - smaller firms procure these from either the larger firms or commercial importers, whereas larger firms import material themselves. The value chain presented below represents on average a standard medium-large unit, manufacturing hand stitched exhibition quality football.

Benchmarking

Despite inefficiencies in the value chain, the relative cost structure of the Pakistan sport goods industry does not significantly hinder its competitiveness. Sports goods manufactured in Pakistan are price competitive internationally and are also preferred for their flexibility in terms of production (see figure below). The key problem in comparison to other global players is in product innovation and design. Another important constraint stems from the fact that Pakistan is a signatory to a host of ILO labour conventions while in practice most of the firms in the sector do not have the ability or wherewithal to comply with many of these standards. Hence in labour compliance Pakistan ranks low relative to countries such as India and China which, unlike Pakistan, are not signatories to as many labour laws. Also, products from Pakistan lag in quality, consistency, reliability and timely delivery, reducing the competitiveness of the products produced in the Sports goods sector.

Figure 3-5: Sports Goods Buyer Comparison of South Asian Countries

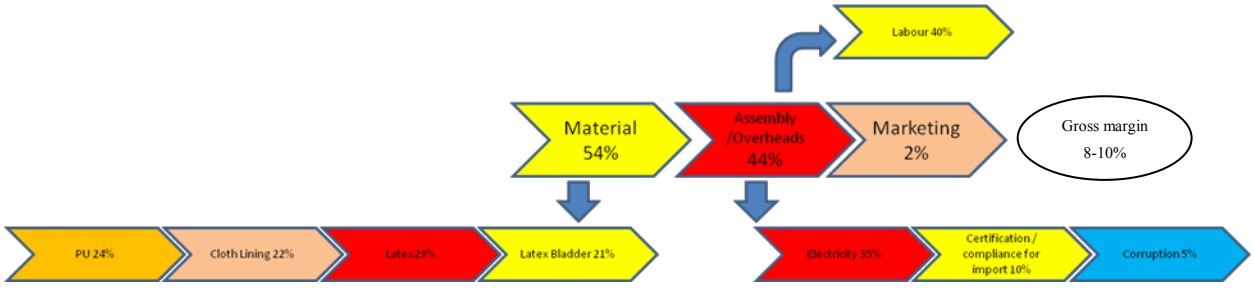


Source: Study on intraregional trade and investment in south Asia 2008-2009, ADB by Tewari/ ICRIER.

Lack of Ancillary Industry

As evident in **Fig 3-5,** football manufacturing in Pakistan is entirely dependent on imported inputs. Inputs ranging from latex to adhesives to ink are all imported from China, Taiwan and Japan. Reliance on key inputs reduces to some extent the competitiveness of the products manufactured in Pakistan. For example, Chinese are able to sell basic footballs at around $1.2, which is approximately the cost of production of a football in Pakistan. Thus the absence of large scale latex, composite, adhesive and ink industry has made the sports goods sector heavily reliant on imports. Any break in the supply chain of imports results in delayed production and increased cost of production. The cost of production also increases as companies need to maintain significant stocks (in case of larger firms stock up to 6-8 months is kept as inventory) which ties up large amount of working capital that can alternatively be used to expand production or improve technology. This reliance on imports is therefore a significant barrier to growth for firms in the Sports goods sector.

Figure 3-6: Sports Goods Industry Value Chin (Hand Stitched Football)



1. It is very hard to get access to good quality materials.
2. Over 70% of the materials are imported including Latex and ink. Importing materials creates long lead times, higher prices and logistics challenges.
3. Materials which are available locally are of very low quality.
4. Prices of materials especially cotton yarn and latex fluctuate (sometimes on an hourly basis).

1. Due to a rise in minimum wage by the government and the high cost of living, labor costs have increased.
2. Labor turnover and accessibility is a huge problem due to inconsistent nature of demand.
3. Unavailability of skilled labor trained in modern production techniques.
4. Stitching is still being done by hand which is highly inefficient. A person can hand stitch a maximum of 4 balls per day, while competitors like China are using machines to stitch balls. With the help of a machine that number can increase to 50 balls per day.
5. Electricity supply is inconsistent and its costs continue to sky rocket due to which overheads are increasing at an alarming rate.

Limited Research & Development

Due to limited investment and focus on research and development, the sports goods industry has stayed behind the technology ladder in comparison to its key competitors. Pakistan has lost a significant share of the football export market since the introduction of machine stitched and thermo bonded footballs. There is only one factory in Sialkot that has the capacity and technology to produce thermo-bonded footballs. Government support for technology acquisition has been limited even after the private sector had made their promised share of investments. Limited research and development results in low value added products and in some cases also impacts the quality of the products. Being behind the technology curve implies that Pakistan continues to export products whose global demand is on a decline. This significantly reduces the potential for growth.

Compliance with International Conventions

Pakistan is signatory to several voluntary compliance standards on labour rights including child protection and child labour. While this sends a positive social message in some cases, it hurts the competitiveness of industry by diverting investments into non-productive assets. Moreover, even after attaining compliance, the industry in Pakistan has failed to score any gain on price points attained for its products. For example, child labour has been a critical issue in Sialkot as Pakistan is signatory to ILO conventions on Child Rights. Being a signatory, manufacturers in Pakistan are required to comply with ILO regulations on child rights. In complying with these requirements factories have to invest significantly in constructing additional infrastructure and support units. While this has added to the cost, it has not necessarily increased the price fetched by Pakistani products. On the other hand, competitors such as India and China are not signatory to as many ILO conventions and hence do not have to meet all those requirements. Although their products fetch similar prices their average cost of production is lower due to relatively lower compliance costs, which puts the Pakistani products at a disadvantage. Therefore Pakistan will have to market its high social compliance score in such a way that it becomes a competitive advantage rather than a disadvantage.

Diminishing Worker Skills

Improvements in productivity, innovation and product quality are constrained by the level of skills of the workers in the sector. The price a product fetches in the international market is a function of its quality. Over time, due to lack of training and vocational institutions along with the issue of compliance to child labour laws, the supply of specialised skills is on the decline in Sialkot. There are no training institutes for labour that can effectively train the youth in the area for the sports industry. Labour costs form a significant part of the football (sport goods) value chain. Diminishing quality of human capital and skill is limiting the scope for growth and impeding productivity in the sector.

4 Policy Recommendations

The fan and sports goods industries provide an interesting and contrasting comparison of barriers to firm growth. The fan industry appears to be stuck in a trap of low profitability, poor quality production and an inability to access international markets. With the important exception of a few large firms, the sector is characterised by many small firms supplying to a relatively unsophisticated domestic market where competition is on price rather than product quality. Survival rates of firms in the sector are low and very few firms have been able to grow into successful medium to large scale enterprises. Along with other factors, this vicious cycle is perpetuated by lack of access to formal credit markets. This prohibits the financing of capital investments that could potentially enable small firms in the sector to move from the present low level equilibrium onto a higher growth trajectory. Even the most persevering and enterprising firms in the sector have been able to make only limited inroads into products and markets which give higher margins and profits. The fan sector therefore requires a much greater degree of institutional support from the government in order to break out of this trap, and it is hard to visualise a scenario in which they could manage this independently of such support.

The sports sector on the other hand is outward oriented – with most firms either supplying directly for major international brands or indirectly through buying houses. What limits firm growth in this sector is the degree of product diversification and innovation, which, from the interviews conducted, seems dependant to a great extent on whether or not a firm is a direct supplier to a major brand. In terms of government support to the sector, Sialkot is an exceptional case of private provision of infrastructure. The private sector in Sialkot has successfully cooperated to finance the development of infrastructure e.g., dry port, international airport. In addition they have sought financing through their major buyers - foreign brands - for labour training and product development purposes. Nonetheless it would be difficult for firms in the sector to remain competitive internationally if the burden of infrastructural development was solely theirs and not shared by the public sector. Hence the role of government policy in filling the major gaps in infrastructure provision and in facilitating product development and innovation remains.

This section draws on the case study analysis and the value chain synthesis conducted to identify areas where the government can potentially intervene in order to increase the

productivity of smaller firms and hence improve their growth prospects. Some of these suggested policy interventions are common to both industries while others address the more specific issues of each sector.

4.1 Cross-cutting

Weak contract enforcement

The study reports that weak contract enforcement result in multiple problems that severely impede firm growth and expansion. There is a lack of trust evident in the system that prevents the formation of successful partnerships and hence reduces opportunities for businesses to expand beyond a certain point.

In order to address this issue the government should make an effort to improve the functioning of the lower courts to enable them to enforce contracts. The government would also need to strengthen Alternative Dispute Settlement (ADR) mechanisms. Finally there needs to be a significant improvement in the role and credibility of the police as the first point of contact with the private sector. These institutions need to work effectively and in tandem in order to make commercial arbitration more speedy and transparent.

Limited Research and Development

The study shows that both sectors with few exceptions operate behind the technology curve. The fan manufacturers produce output that is of low quality, weak design and poor performance in terms of electricity efficiency. Similarly, the Sports goods sector, with the exception of a few successes, lost its global position in rackets industry and is now fast losing its position in footballs as it failed to keep up with the changing technology and products. The behaviour of firms in both sectors to consistently supply products with declining global demands has been a major growth impediment to firms in Pakistan.

In order to address this issue the government should try and provide a more conducive environment where businesses are willing to invest in technology. One way of doing this is to strengthen local research institutes to work closely with the industry. The research grants of the Public Sector Universities such as NUST, GIT etc. must be linked up with the innovative research they conduct suiting the needs of the local industry. Moreover, agencies such as SMEDA and TUSDEC should help link the sectors with best research institutions globally to

help induce technology. Moreover, technology development incubators may be developed as PPP's to work on newer production methods, technology and products. We would strongly suggest that the government fund/facilitate privately managed initiatives as government managed setups suffer from lack of ownership dynamism and leads to progress that is too slow to be useful.

Simplification of Tax Regime

Both the cost of business surveys and the case studies indentify corruption as one of the most serious obstacles to firm growth. This generally stems rent seeking by government officials and creates a perverse incentive for businesses to remain small and informal. From our case studies an interesting consensus that emerged was that firms would like to operate in an environment where all firms pay their full tax liability and reneging firms do not have an unfair advantage. For this we propose a simplified tax system with minimal contact with public sector offices that makes it easy and quick to calculate and pay tax liabilities. The current tax regime for exports could be used as a potential model.

Energy Shortages

Section 3.1 above highlights the importance of electricity as a major barrier to firm productivity across sectors. However, this particular issue is relatively recent and consequently does not come up as an endemic issue in our case studies where the focus was on firm growth from a longer term perspective. However it has to be stated that chronic energy shortages have a significant impact on the future growth potential of firms across sectors.

Shortage of power hits industry at multiple levels. It increases production times and overheads and reduces worker productivity. The cost of self-generation is about 3.5 times the cost of power from the grid. Moreover, the tariffs are not industry friendly. The industry ends up subsidizing the cost of electricity for domestic and commercial users, whereas, internationally the practice is the reverse. The electricity tariffs keep on increasing in arrears, with instances where the firms have had to pay increased cost of electricity of the past 6-9 months. These ex-post tariff changes make it impossible to do appropriate costing for businesses leaving them with uncertain profit margins. In order to address the issue the government needs to resolve the energy crisis and rationalise power tariffs. In the interim

further research is required on cost effective coping mechanisms that allow firms to remain competitive internationally.

Availability of credit

Credit rationing for SMEs emerges due to asymmetric information stemming from their limited capacity to manage and provide reliable financial information and collateral. Small firms in particular do not have the capacity to comply with the bank's documentation requirements. Moreover, the cost of finance in terms of the high rate of interest has also been reported as a critical issue impeding access to credit.

Policy suggestions which could potentially improve credit disbursement to SMEs are the encouragement and introduction of product and programme based lending at a subsidised single digit mark-up with flexible repayment schedules.

Moreover the credit application process could be simplified with reduced red tape and alternative forms of collateral accepted for SMEs.

4.2 Fan Industry

This research study uncovers certain key factors that have been an impediment to firm growth in the fan industry of Pakistan. Some of these issues can be resolved efficiently through the market mechanism; others may have to be addressed over the medium to longer term and may require a certain degree of government intervention. Below we have provided a few policy options which can be considered by the government to improve growth in the fan industry.

Low Barriers to Entry and Sub-standard Product Quality

The study finds that there are extremely low barriers to entry into the fan industry. This has resulted in a large number of very small manufacturers producing, on average, fans which are of extremely low quality. This 'cut throat' price competition in the domestic market tends to generate a perverse incentive for producers to minimise cost at the expense of quality. This lack of quality filters to the export markets and the industry finds it costlier and extremely difficult to meet quality standards and compliance requirements to sell its products internationally. A related issue is the complete lack of standardization of common parts in fan

manufacturing which precludes the development of support industry that could lead to economies of scale.

To address this issue the government should strengthen the capacity and transparency of PSQCA to develop a consumer watchdog that periodically rates the quality parameters of fan manufacturers. The rating system should list the top quality fans based on their reliability, energy consumption, design and overall quality. Introduction of such a system may initially result in closure of some low quality manufacturers; however, it will result in opening up space for progressive and quality conscious manufacturers. It will also increase the incentives to invest in better technology and better management systems. Rationalisation of the industry might also lead to a reduction in price competition in local markets and thus increase the return on investment of an average firm.

Moreover having local standards strictly enforced for both products and parts will significantly improve the quality of the Pakistani fans, reduce costs due to scale economies and make it easier for industry to meet the export requirements.

Limited Knowledge and Management Skills

The study also finds that with the exception of a few firms the literacy levels of the owners of businesses is extremely low. One of the major reasons that firms are unable to grow is poor management skills such as succession planning and lack of delegation. Both the low levels of literacy and weak management result in many basic shortcomings such as; (i) poor account keeping; (ii) lack of capacity and confidence to export; (iii) limited expansion and diversification of business; and (iv) problems in dealing with service providers such as commercial banks.

In order to address this, government needs to ensure that opportunities for systematic training of owners are created. Training courses on business management, business strategy, business record keeping, export procedures, banking procedures, succession planning and consumer rights can be held in Gujrat jointly or individually by government bodies such as National Productivity Organisation (NPO), Engineering Development Board (EDB), Trade Development Authority of Pakistan (TDAP) and Small and Medium Enterprises Development Authority (SMEDA). These courses should be provided at cost basis to ensure serious participation by the course attendees. The organisation providing the course should

also continue to monitor its participants and provide support to manufacturers in implementing the changes learnt.

Seasonal Production Reducing Number of Skilled Workers

Seasonal production in the fan industry has resulted in more skilled workers leaving the industry for alternatives. This has created a shortage of trained workers especially at the level of supervisors and factory floor managers.

In order to address this issue the government (TEVTA) needs to work with PEFMA to initiate training programmes for these particular skill levels (process supervisors and factory managers). Additionally, the above programme of capacity building will have to impact capacity to export quickly in order for firms to maintain production throughout the year. In doing so, TDAP should provide information on markets with opposite weather cycles to Pakistan ensuring consistent demand throughout the year. We would propose facilitating and funding privately owned and managed centers which would benefit from greater dynamism.

Access to International Markets

One of the obstacles identified has been the lack of information and confidence required to export. This stems from the lack of clarity regarding requirements for export and the counter-productive role played by commercial exporters. Areas for policy interventions include the provision of an export enquiry point for small / new exporters which consolidates and facilitates all the financial and logistical information required to export. In addition, trade road shows may be arranged to market products in potential export destinations, particularly those with opposite climate cycles. In arranging road shows the fan sector could potentially collaborate with the furniture sector which is slightly more developed and fans could be marketed as a higher value decor item along with home furnishing.

4.3 Sports Goods Industry

Lack of Innovation and product diversification

The Sports Goods industry is outward oriented and hence much more dynamic than the fan industry. However, the world demand for sports goods keeps on changing rapidly and in order to keep pace with these changing demand patterns the industry has to continuously improve and alter its products and also invest in future research and development. With the

exception of a few successful firms, majority of the producers in Pakistan are reactive rather than proactive to both product demand and technology changes. The resultant lack of diversification in the export base limits growth opportunities and has resulted in a loss of world market share over time.

In order to address this issue there is a need to develop an innovation and design centre that works jointly with the sports goods industry and external research institutes to help bridge the knowledge and technology gap. The private sector has already initiated a technology center and has made investments in creating the infrastructure and in procuring the equipment. However, the deliverables of the project from the government side are still missing.

Inadequacy of the Ancillary Industry

The Sports Goods industry of Pakistan is highly dependent on imported inputs. Over 70 per cent of the raw materials are imported. These imports include carbon, composites, latex, chemicals, dyes and adhesives. The small firms struggle both due to limited and uncertain availability and also high cost of importing these inputs. For larger firms, which import materials directly, the availability issue is somewhat circumvented as they keep a stock of inventory. However this translates into a much higher cost with inventory of 6-8 months being tied up indefinitely as firm keep replenishing the stocks periodically. Thus input and support industry is a major concern for almost the entire value added sector of Pakistan.

To address this issue the government needs to introduce appropriate incentives so that large scale manufacturing in key inputs such as latex and composites is established within the country.

4.4 Areas of further research

The Cost of Business surveys and other similar studies identify major cross cutting issues and constraints which hamper firm productivity and impact industrial development. As these studies have a very large sample size and cover all industries they are unable to delve deeper into the firm level constraints identified. Also, these studies are based on cross sectional data reflecting the perception of firms at a particular point in time. Thus they are unable to capture the historic and endemic issues which have resulted in firm success or failure. The methodology adopted in this report was an attempt to fill this gap in research on firm level constraints. By focusing on just two but very different clusters and restricting the sample size

to a relatively smaller number of firms the study was able to adopt a more detailed and retrospective method of extracting information about specific ingredients behind firm success or failure. This case study method or stake holder analysis gave a richer and deeper insight to the chronic problems inhibiting firm growth. Some of these were of course similar to what has been identified by the cost of business surveys reviewed in section 3.1 but this study explores these constraints more comprehensively such as corruption, access to finance, taxation etc.

Although this study identified areas which need policy attention, further research is needed to fine tune specific and implementable policy interventions which account for the inefficiency and weakness inherent in the public sector. Broadly, the guiding principle behind these interventions should be incentivising and facilitating the private sector. We suggest that this policy design focused research be undertaken in collaboration with the industry.

Another interesting aspect which emerged from our case studies was the very divergent characteristics and trajectories of two geographically proximate clusters. It would be an interesting area of research to identify the factors which have led to the clusters operating in apparent isolation without the expected spillovers which literature on industry and economic geography predicts.

The study could also be easily expanded in scale and scope to additional sectors so that a more comprehensive picture of firm constraints can be established particularly in industries or clusters which are categorised as ‘sunrise’ and have a potential that is not being fully exploited.

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