

Chapter 5: Industrial Growth and Competitiveness

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5. Overview

This chapter documents the current state and recent development of the industrial sector in Punjab. Section 1 analyzes changes in the structure and spatial distribution of industrial units in Punjab including performance in terms of exports, value-addition and productivity. It also maps out changes in investment climate and competitiveness that have contributed to the trends observed.

Section 2 examines the regulatory structure that governs industry in Punjab, while Section 3 documents and evaluates key government initiatives in the last 10 years in light of the articulated policy statements of Punjab government. Section 4 discusses two important priorities, one arising in the immediate future, and one for which longer term planning is required: CPEC and innovation. The section analyzes Pakistan's current position and charts out an action plan for the Government of Punjab to leverage these opportunities. Finally Section 6 summarizes and provides recommendations.

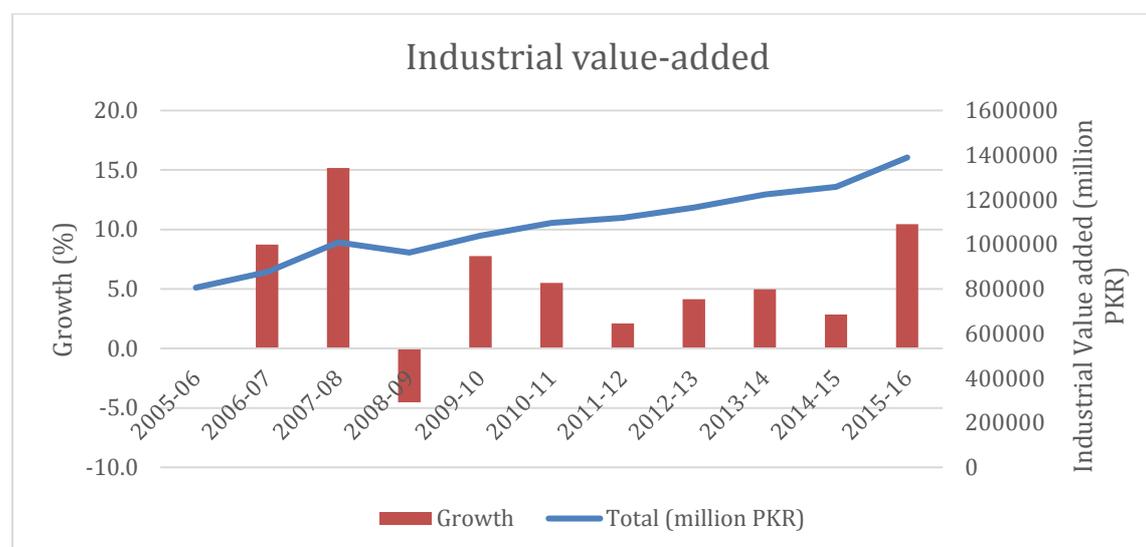
5.1 Current Profile and historical development

5.1.1 Structure and growth of the industrial sector

As documented earlier in Chapter 1, industry in Punjab contributes approximately 22% to GPP, a share that has remained stagnant in the ten-year period under consideration.

Data from the Punjab Bureau of Statistics indicates, however, that value added in the industrial sector in Punjab has increased steadily over the last ten years, with the exception of 2008-09 (Figure 1). While all sub-sectors have grown, small and household sector manufacturing, and electricity generation and electricity/gas distribution have been major contributors to this expansion (Table 1). The share of manufacturing in industrial value added has increased marginally, from 74% in 2005-6 to 76% in 2015-16.

Figure 1: Industrial value-added, Punjab, 2005-2016



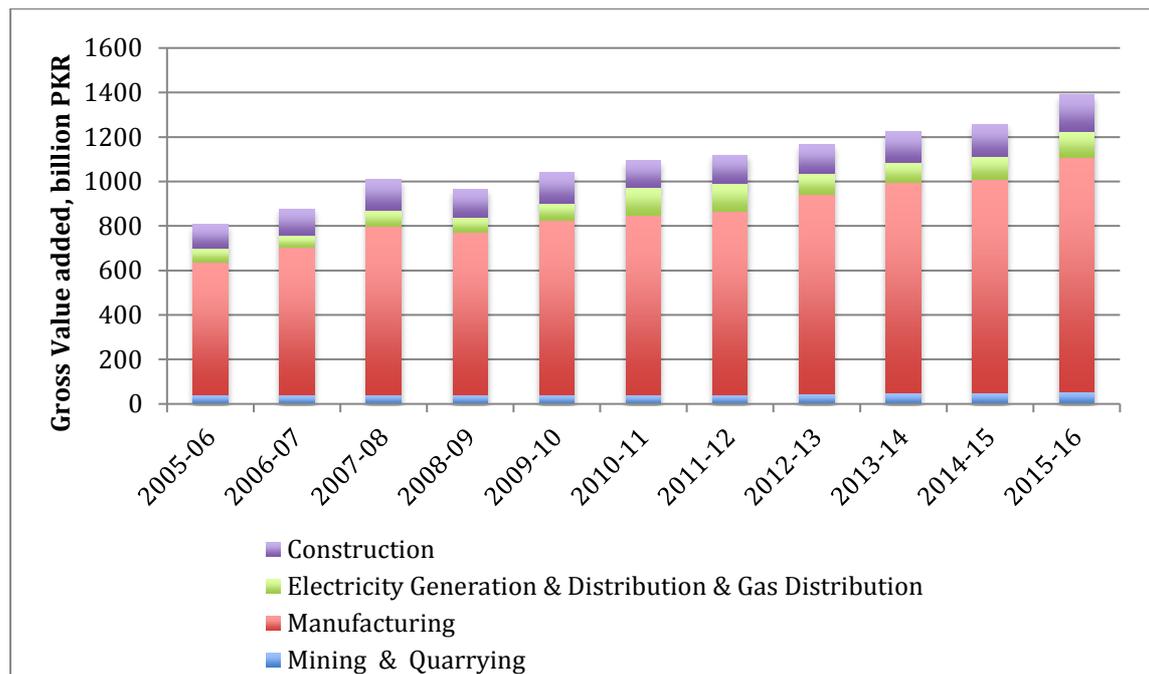
Source: Punjab Bureau of Statistics, 2017

Table 1: Industrial value-added: decomposition of growth rates

Year	Mining & Quarrying	Manufacturing	Large - Scale	Small & Household	Slaughtering	Electricity Generation & Distribution & Gas Distribution	Construction	Aggregate
	1	2=i+ii+iii	i	ii	iii	3	4	1+2+3+4
2005-06								
2006-07	-3	11	12	8	3	-12	13	9
2007-08	7	14	16	7	3	37	15	15
2008-09	-4	-3	-5	8	4	-12	-10	-5
2009-10	0	7	8	8	3	17	8	8
2010-11	-2	3	2	7	4	64	-9	6
2011-12	5	2	1	8	4	1	3	2
2012-13	9	9	10	8	4	-26	1	4
2013-14	5	5	5	7	3	-1	6	5
2014-15	6	1	0	7	3	12	6	3
2015-16	10	10	11	8	4	12	13	10
Average	3	6	6	8	3	9	5	6
Growth 2005-2016	34	77	75	106	41	88	54	72

Source: Punjab Bureau of Statistics, 2017

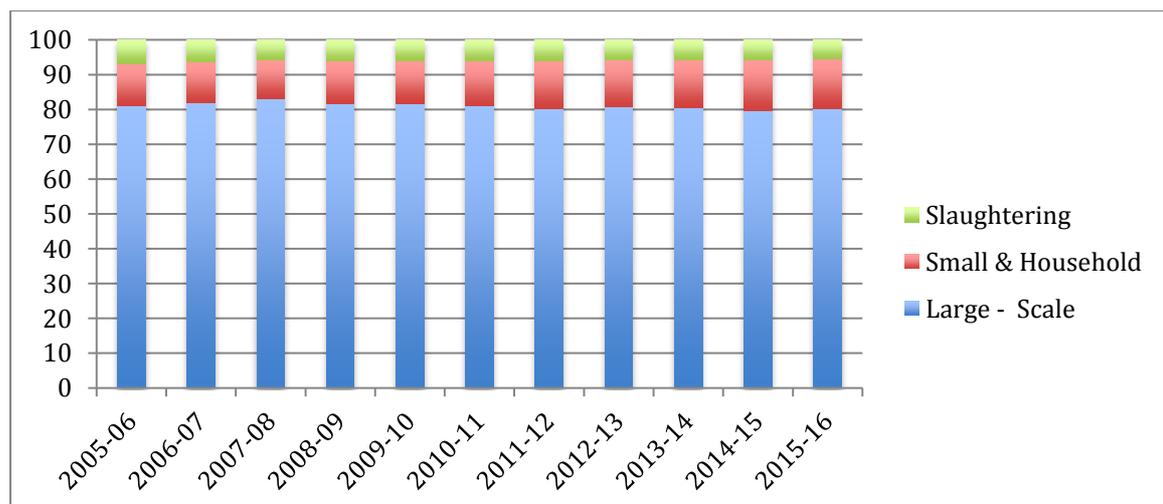
Figure 2: Gross Value added in constant basic prices of 2005-06



Source: Punjab Bureau of Statistics, 2017

The manufacturing sector, while declining slightly in terms of share over the last ten years, has not seen substantial changes in structure. The contribution of large-scale manufacturing to manufacturing value addition has declined marginally from 81% in 2005-6 to 80.3% in 2015-16. The contribution of small and household value added increased by 2 percentage points in the same period while that of slaughtering declined 1.2 percentage points.

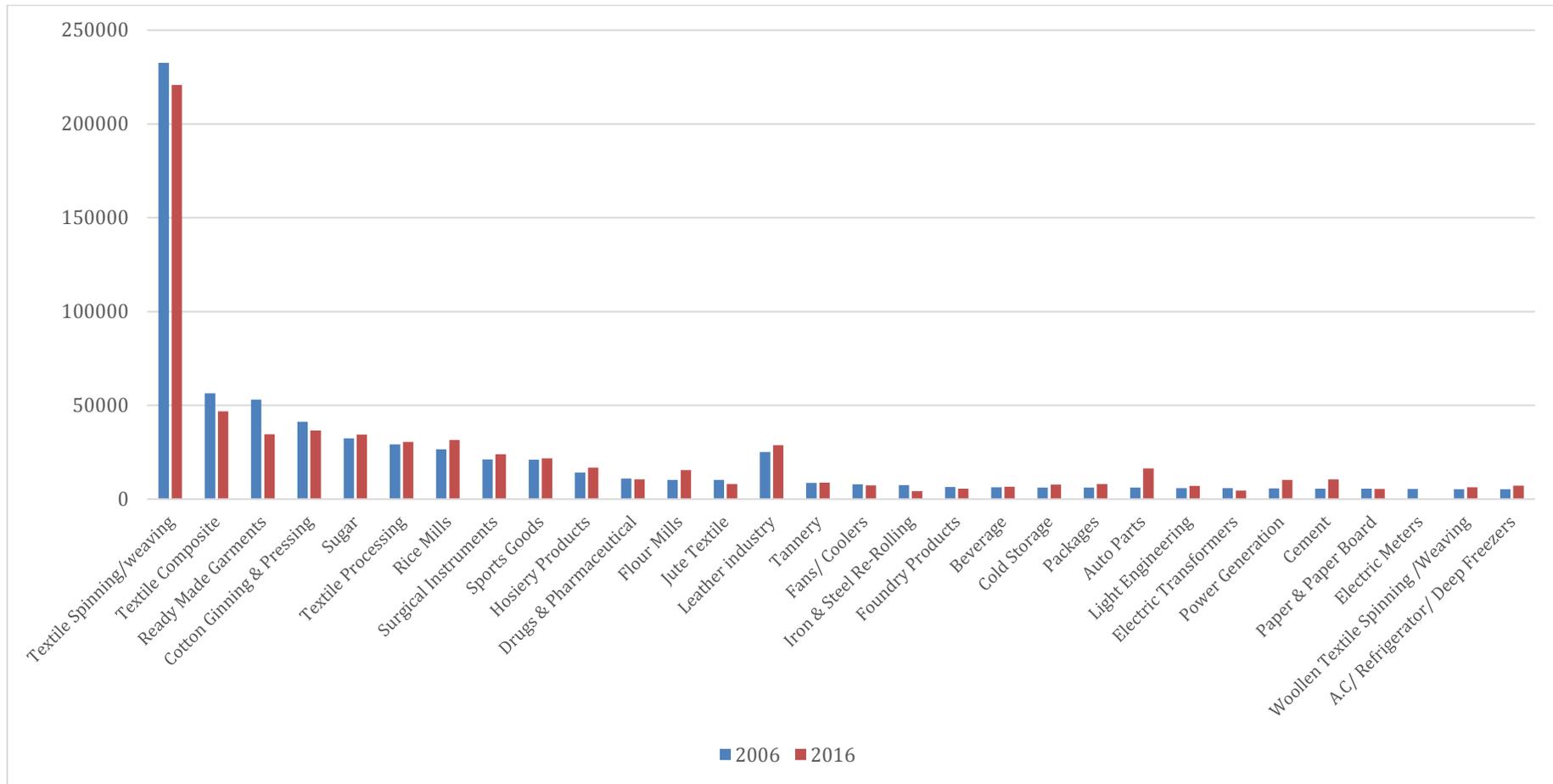
Figure 3: Composition of manufacturing, 2005-2016



Source: Punjab Bureau of statistics

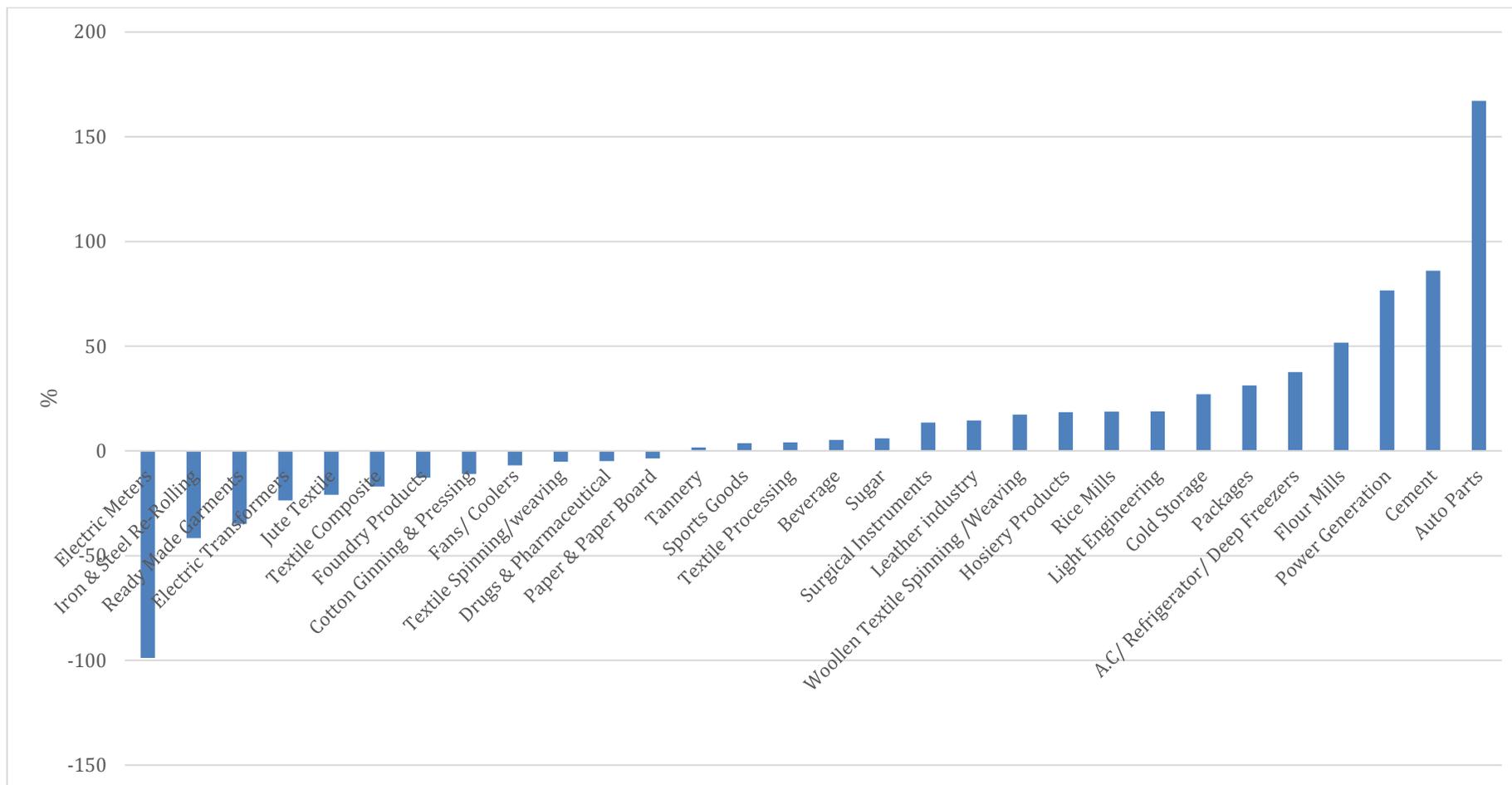
Within manufacturing, the largest industrial groups by employment have been textile related, with cotton ginning and pressing, textile spinning and weaving, knitted and woven garments, towels and hosiery accounting for 46% of Punjab's industrial employment. The trends in employment by industry are shown in Figure 4 and Figure 5. Electric meters and transformers, ready-made garments and iron and steel rolling have seen the most substantial decline in employment in the last 10 years, whereas auto parts, cement and power generation have seen the sharpest increases. Trends in investment show a similar pattern (Figure 6 and Figure 7). It is particularly noteworthy that Punjab's main manufacturing contributor, the textile and textile related industry, has contributed declining quantities to employment in the time period under consideration.

Figure 4: Top 30 employers by industrial group, Punjab 2006 and 2016



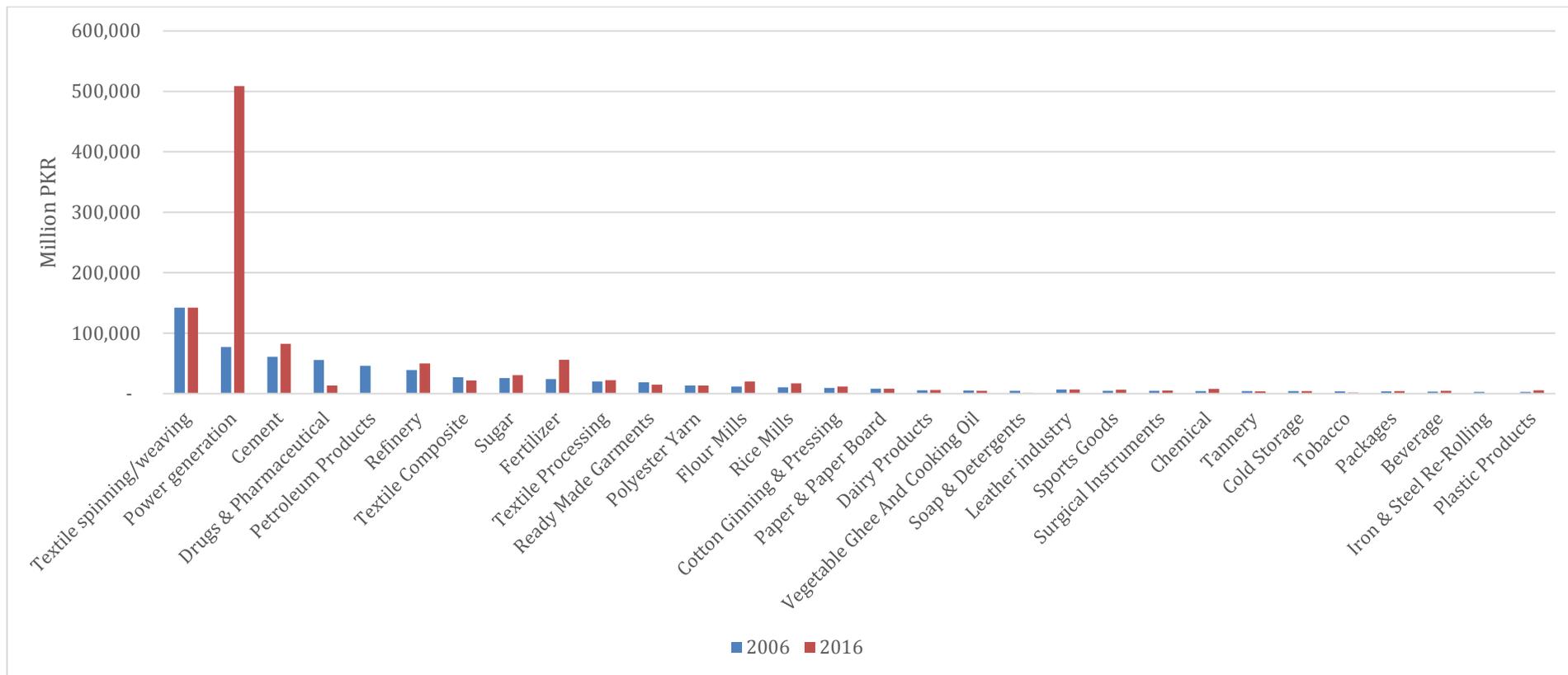
Source: Directorate of Industries, 2006 and 2016

Figure 5: Change in employment in the top 30 Industrial sectors between 2006 and 2016, Punjab.



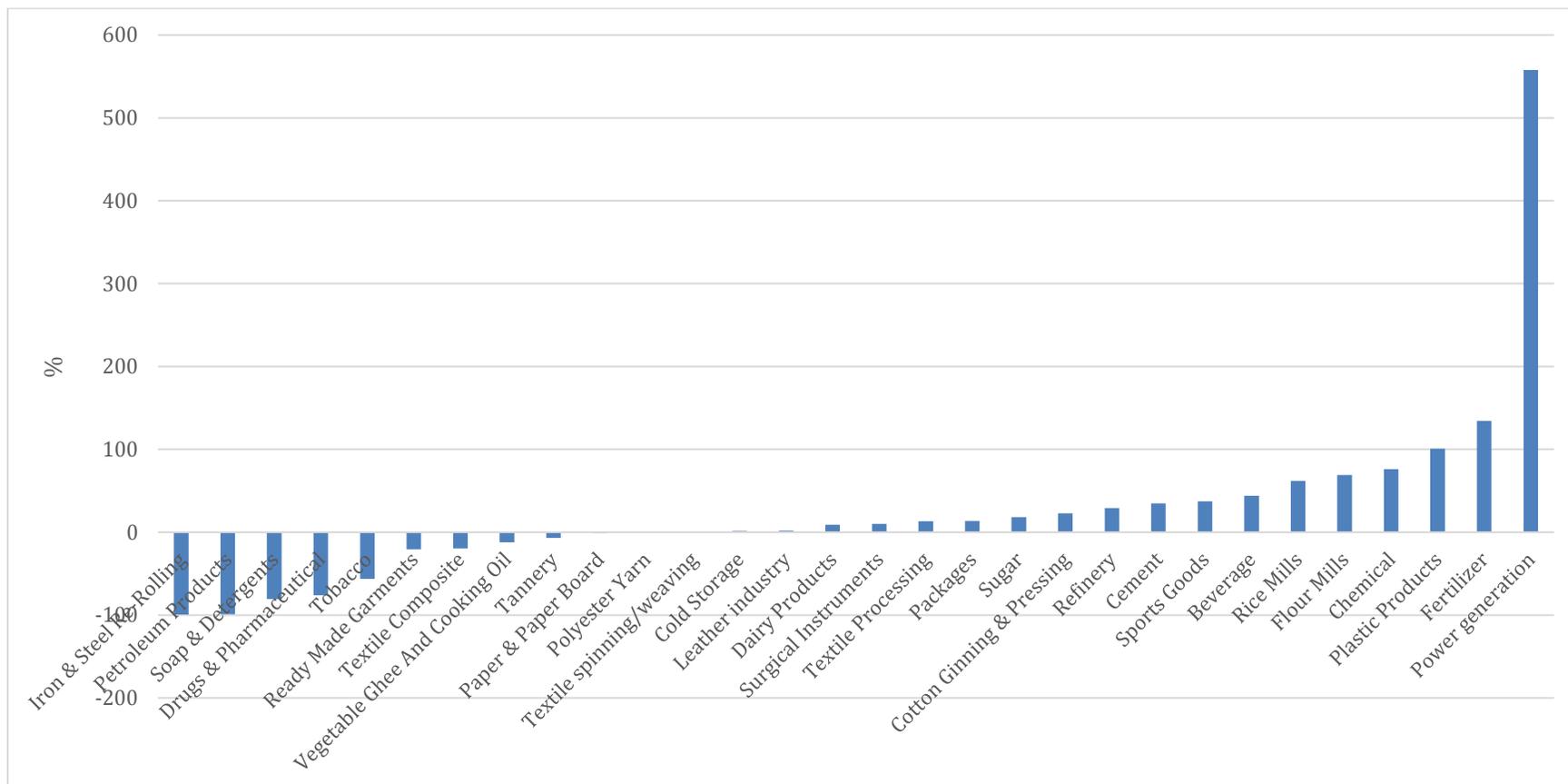
Source: Directory of Industries, 2006 and 2016

Figure 6: Investment in Punjab in top 30 industries, 2006 and 2016



Source: Directory of Industries, 2006 and 2016

Figure 7: Change in investment by industry, 2006-2016



Source: Directory of Industries, 2006 and 2016

5.1.2 Spatial aspects

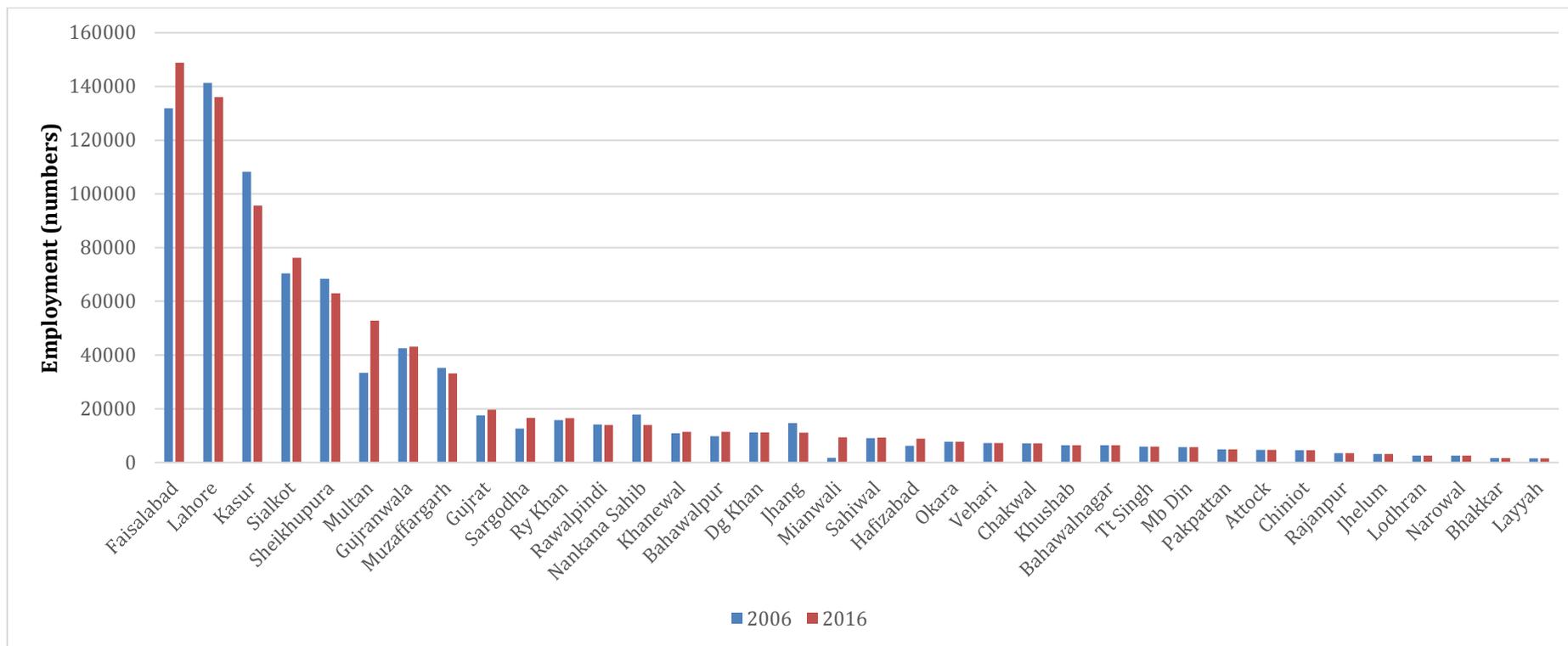
Industrial units in Punjab have remained largely concentrated in a few districts.

Faisalabad, Lahore and Kasur together employed 45.2% of Punjab's industrial labour in 2006, which has dropped marginally to 43% in 2016. On the other end of the spectrum, Rajanpur, Jhelum, Lodhran, Narowal, Bhakkar and Layyah each continue to provide less than 0.5% of industrial employment in Punjab (Figure 8).

Figure 9 depicts this on a map of Punjab. Districts with higher industrial employment are concentrated in the north east of the province. Similarly Figure 11 shows the concentrations of large-scale industries by district and by tehsil, again showing that industrial units are concentrated largely in the north east of the province. The concentrations of large scale industries is in line with the night light data illustrated in Figure 12, which shows large swathes of Punjab immersed in darkness - the same regions that have low presence of industrial employment.

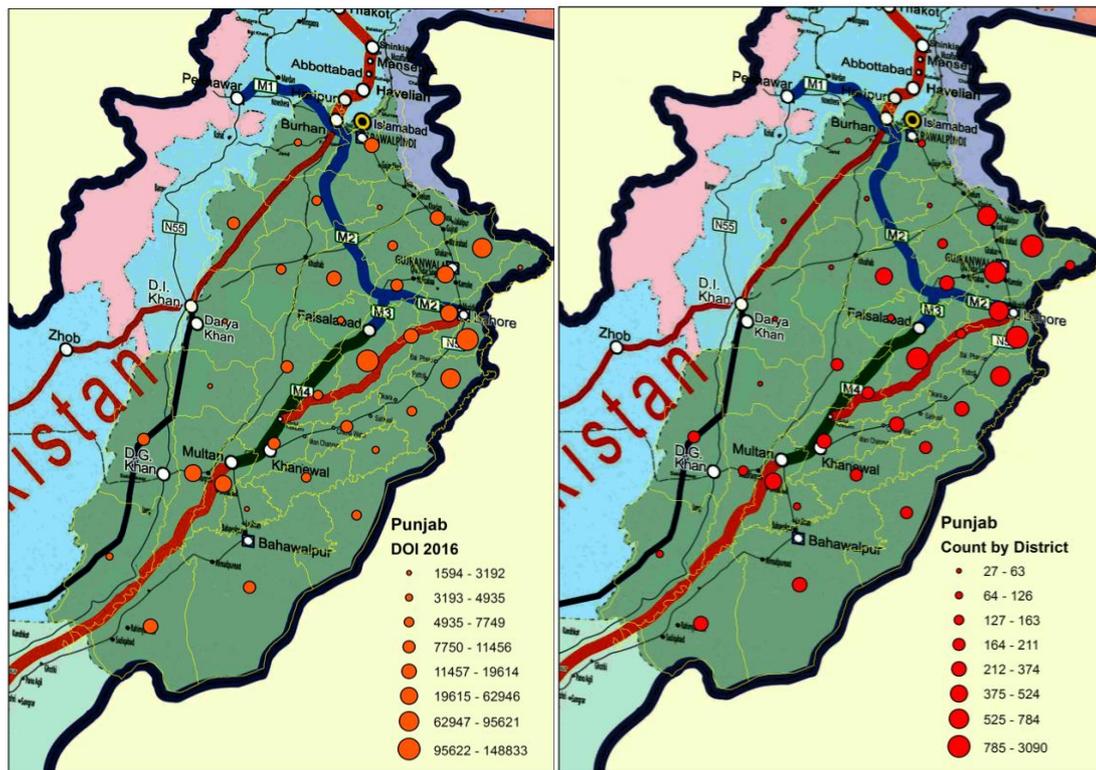
Table 2 shows the district where each industrial product is concentrated within Punjab. Lahore is the district with the highest concentration of industrial units for ten of the products (one third of the products listed), while Gujranwala has the highest concentration for six. Sialkot and Faisalabad have three each. This reinforces the idea that there are a handful of successful industrial centers where firms benefit from agglomeration, rather than an even spread of successful cities across the province.

Figure 8: Employment in industrial units by district in top 20 districts by employment, 2006 and 2016



Source: Directorate of Industries, 2006 and 2016

Figure 9: District-wise employment and count of large scale industries

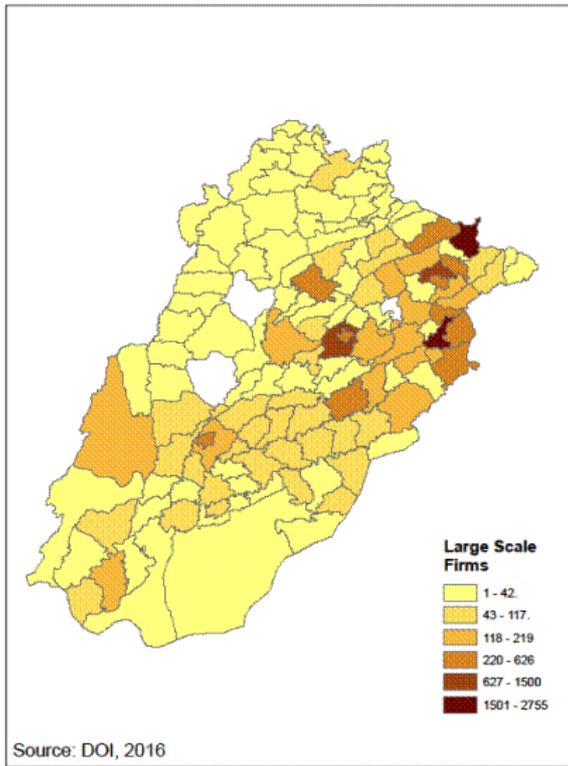


Source: Directorate of Industries, 2016 data

Pottery									
Drugs & Pharmaceuticals									
Sizing of Yarn									
Cold Storage									
Packages									
Printing Press									
Iron & Steel Re-rolling Mills									
Tractor Parts									
Cutlery									
Ceramic									
Agricultural Implements									
Number of products for which the district has highest concentration	3	3	6	2	2	1	10	2	1

Source: Directorate of Industries, 2016

Figure 10: Number of large scale firms by tehsil, 2016



Source: Directorate of Industries, 2016

Figure 11: Night light data, 2013

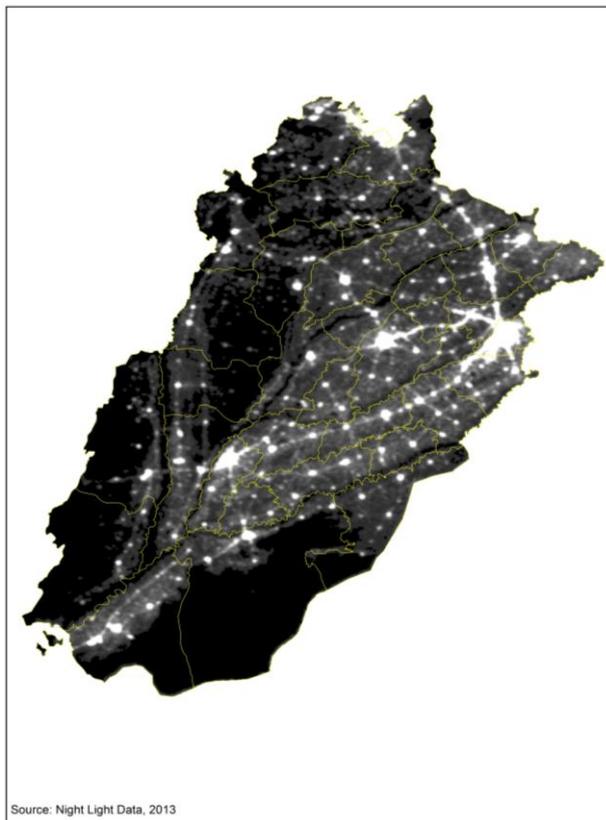
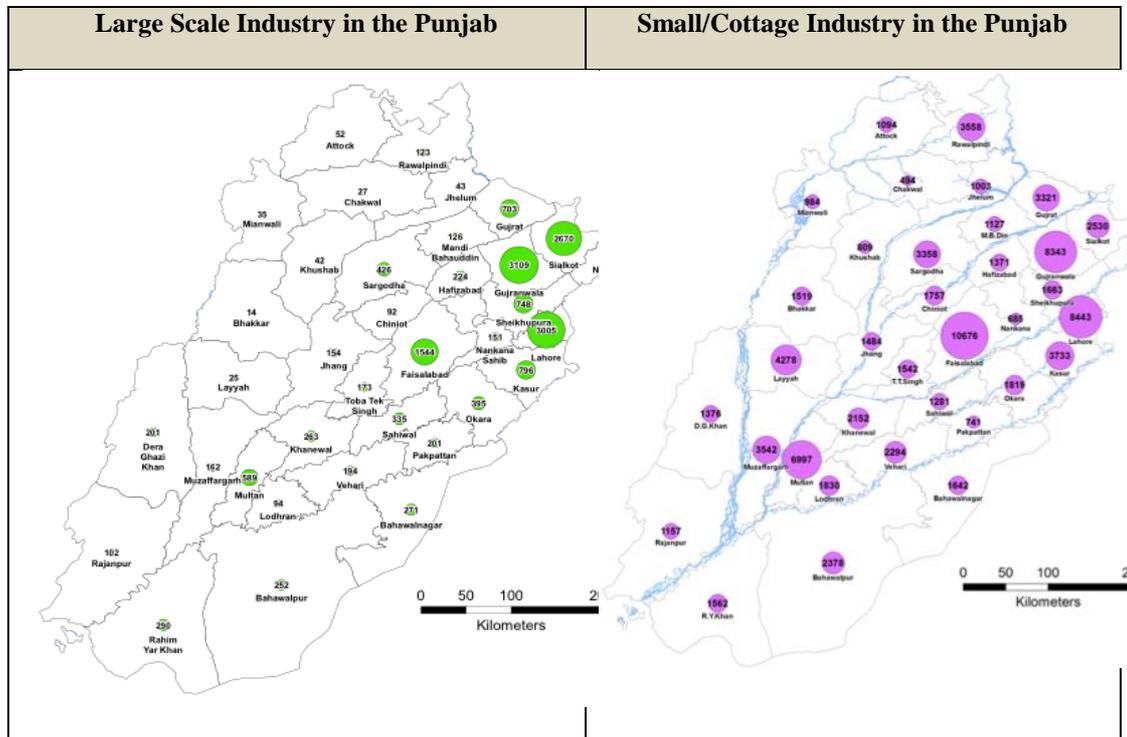


Figure 12 compares the spatial spread of large-scale industries to the spatial spread of small and medium enterprises. Small-scale manufacturing is spread out more evenly across the province, in contrast with the restricted spread of large scale industries.

Figure 12: Spatial spread of industrial units across Punjab



Source: Industries, Commerce & Investment Department, Government of the Punjab

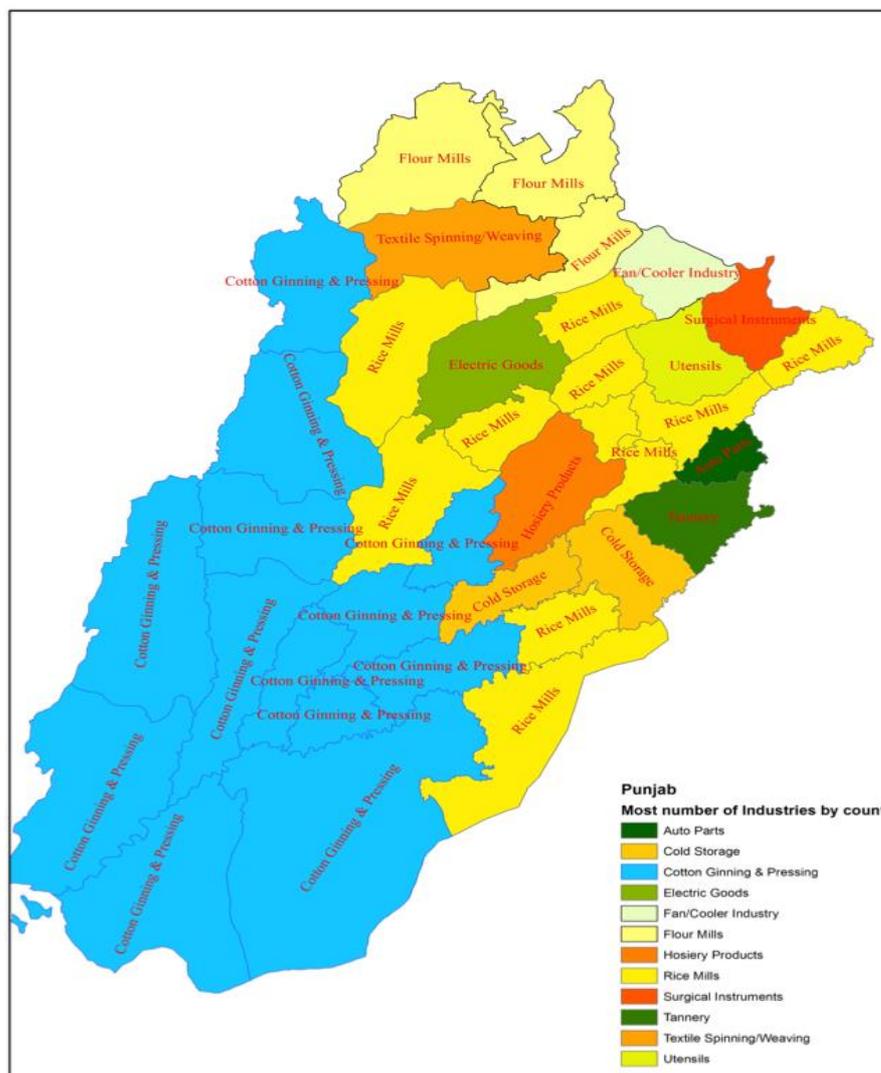
Agglomeration in Pakistan, as measured by the concentration of employment in the top five districts, has also not changed appreciably in the last ten years, similar to other South Asian countries (Table 2). In contrast, the trend in other industrialized countries has been that manufacturing initially develops in concentrated locations, often where there is better access to international markets. As the country develops, these locations become congested and expensive. Benefits too begin to decline as the manufacturing process becomes more standardized with less dependence on the learning benefits of large cities. Manufacturing plants relocate typically to suburban locations, and then to secondary cities.

However, as indicated in Table 3, this trend has not been followed in South Asia (Lopez-Acevedo (2017)). In Pakistan in particular, apart from the virtually unchanged concentration in the top five districts, the actual cities themselves are also unchanged. In other South Asian countries, different cities have risen to the top five as new industrial centres emerge. Coimbatre and Gurgaon in India, for example, have been fast growing cities that have replaced other cities in the top five.

The Punjab Economic Report 2005 emphasizes the development of the ten cities in Punjab that had over two hundred thousand residents as mini-growth engines, apart from the traditional million plus cities of Lahore, Faisalabad, Rawalpindi, Multan and Gujranwala. The Punjab Growth Strategy 2014-18 builds on this, offering specific recommendations to enable cities to become growth enablers. However, as shown in Figure 8, except for a substantial increase in industrial employment in Multan and Faisalabad, there appears to be no indication of new growth engines in Punjab.

The other interesting geographical aspect of Punjab’s industry is that the Northeast of the province is also more diversified in its industrial offering. The majority industry in the southern districts is cotton ginning and pressing, while flour and rice mills and light engineering are dominant in the Northeast. The Northeast also has a higher concentration of Punjab’s industrial parks, as shown in Figure 13.

Figure 13: Industrial concentration by district, Punjab 2016



Source: Directorate of Industries

Table 3: Employment agglomeration in Pakistan compared with other South Asian countries

Rank	District Name	% of employment (2006)	District Name	% of employment (2016)	Rank in 2006
Pakistan					
1	Lahore	16.74	Faisalabad	16.95	2
2	Faisalabad	15.62	Lahore	15.49	1
3	Kasur	12.82	Kasur	10.89	3
4	Sialkot	8.34	Sialkot	8.68	4
5	Sheikhupura	8.11	Sheikhupura	7.17	5
61.64			59.17		

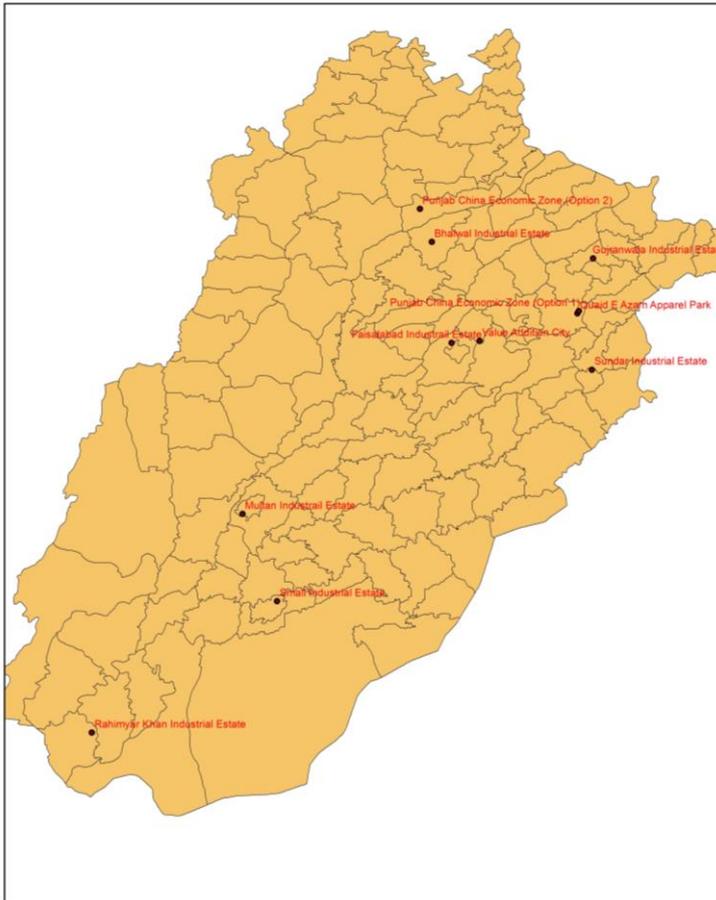
India		1991		2009	Rank in 1991
1	Greater Bombay	5	Madras	4.7	3
2	Nizamabad	4.1	Bangalore	4.4	4
3	Madras	3.3	Coimbatore	3.7	8
4	Bangalore	2.6	Mahendragarh/Gurgaon	2.9	77
5	24 Parganas (North)	2.5	Rupnagar/Patiala	2.8	6
17.50			18.50		

Bangladesh		1995		2012	Rank in 1995
1	Dhaka	36.6	Dhaka	35.4	1
2	Chittagong	15.9	Gazipur	16.6	6
3	Narayanganj	8.6	Chittagong	16.2	2
4	Sirajganj	5	Narayanganj	9.3	3
5	Khulna	3.8	Sirajganj	2.8	4
69.90			80.30		

Sri Lanka		1995		2009	Rank in 1995
1	Colombo	37.4	Gampaha	27.7	2
2	Gampaha	29.7	Colombo	24.1	1
3	Galle	3.9	Kurunegala	9.4	5
4	Kandy	3.8	Kalutara	7.2	9
5	Kurunegala	3.1	Kandy	5.9	4
77.90			74.30		

Data source: Lopez-Acevedo et al (2017) and Directorate of Industries

Figure 14: Punjab Industrial estates (not including those for small industries run by PSIC)



5.2 Performance

5.2.1 Trade

Trade and investment data is not available for the provinces separately. This section documents Pakistan's trade performance, keeping in mind Punjab's share in Pakistan's manufactured products as shown in Table 4.

Table 4: Punjab's share in Pakistan's manufactured production

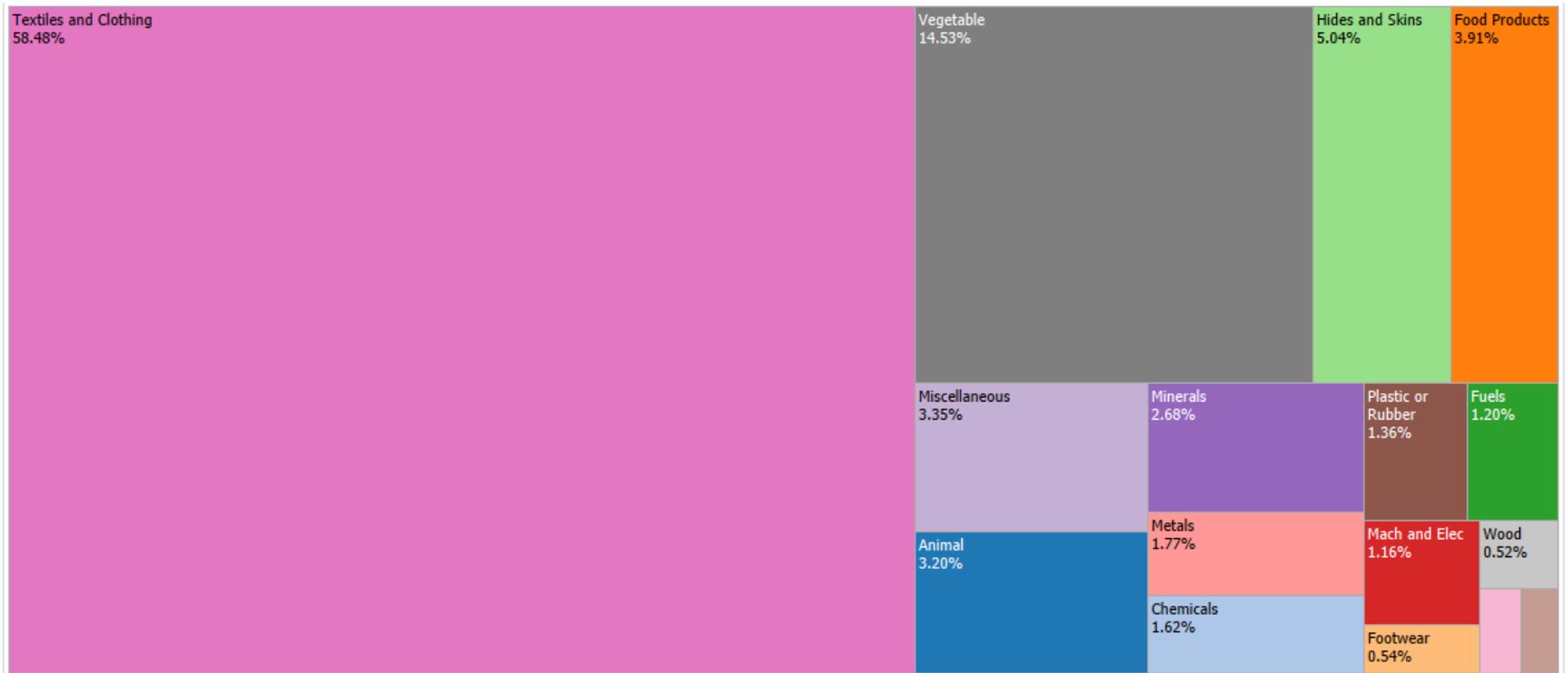
Manufactured items	% share of Punjab in Pakistan's production 2013-14
Cotton yarn	28.2
Cotton cloth	40.1
Sugar	56.1
Vegetable ghee	58.6
Fertilizers	47.4
Cement	53.2
Caustic soda	100
Sulphuric acid	54.7
Soda Ash	100
Paper and paper board	97.2
Cigarettes	51.3

Source: Punjab Development Statistics, 2015. Data for 2013-14. Available at <http://www.bos.gop.pk/system/files/Dev-2015.pdf>

Textiles and clothing makes up nearly two-thirds of Pakistan's exports (Figure 15). This mirrors the findings of Punjab's employment share by industry, which also shows concentration in textiles. Pakistan's largest export is cotton (which includes cotton yarn and cotton cloth), and as shown earlier in Figure 4, cotton processing is the major industrial activity in Punjab, particularly in southern Punjab.

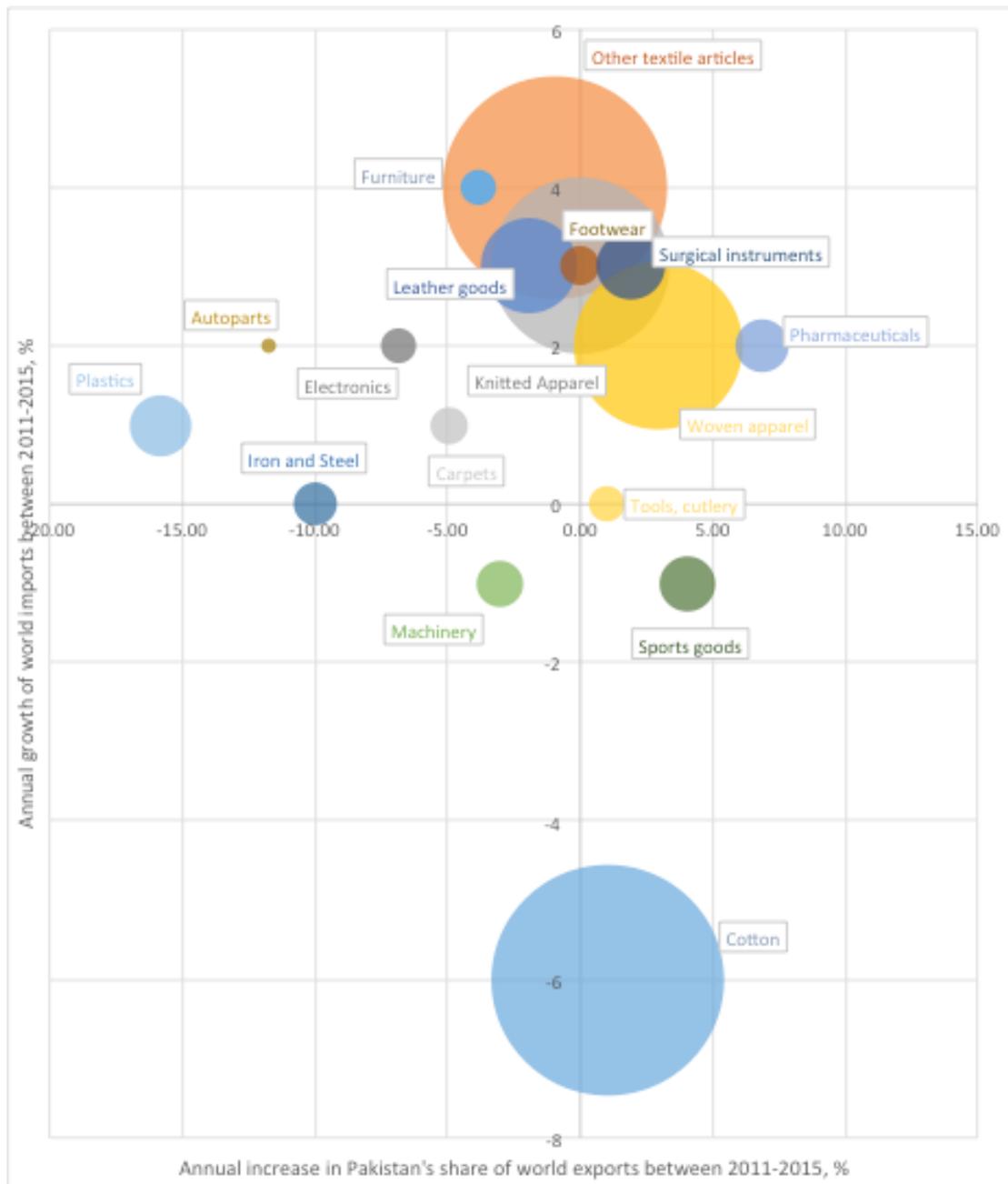
However, globally, cotton demand is declining by 6% every year. This is shown in Figure 16, which maps out trends in Pakistan's share of the product globally (on the x-axis) against global growth rates in the product (on the y-axis). The size of the bubble represents the share in Pakistan's exports. Cotton, Pakistan's largest export, is also the product that is declining the most in terms of international demand.

Figure 15: Pakistan's top exports, 2015



Source: WITS World Bank <http://wits.worldbank.org>

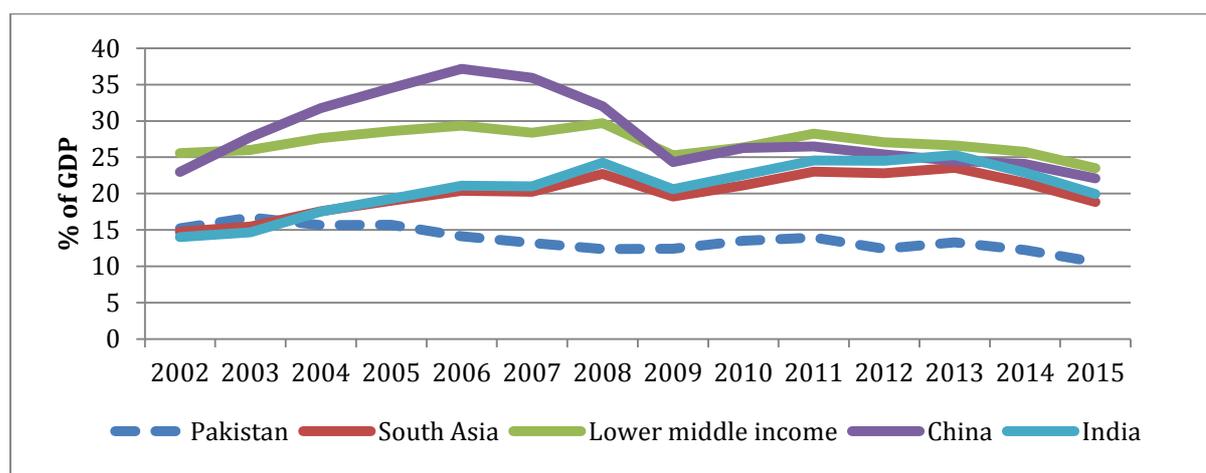
Figure 16: Pakistan's supply and international demand for manufactured products, 2016



Data source: ITC Trade Maps, 2016

This can be seen in the context of Pakistan's overall declining export performance. Figure 17 shows that Pakistan's exports (as a percentage of GDP) have fallen steadily in the last twelve years and are now considerably lower than the average for South Asia and for other countries in a comparable income category.

Figure 17: Exports of goods and services, as a percentage of GDP, Pakistan



Source: World Development Indicators, World Bank

For Punjab to contribute to Pakistan’s export growth, it will be important to focus on those industries that exhibit strong international demand. Figure 16 shows that the three most important categories in Pakistan’s exports after cotton – woven apparel, knitted apparel and other textile articles – all have increasing global demand. And, while Pakistan is losing global market share in knitted apparel and other textile articles, it is gaining global market share in woven textile apparel.

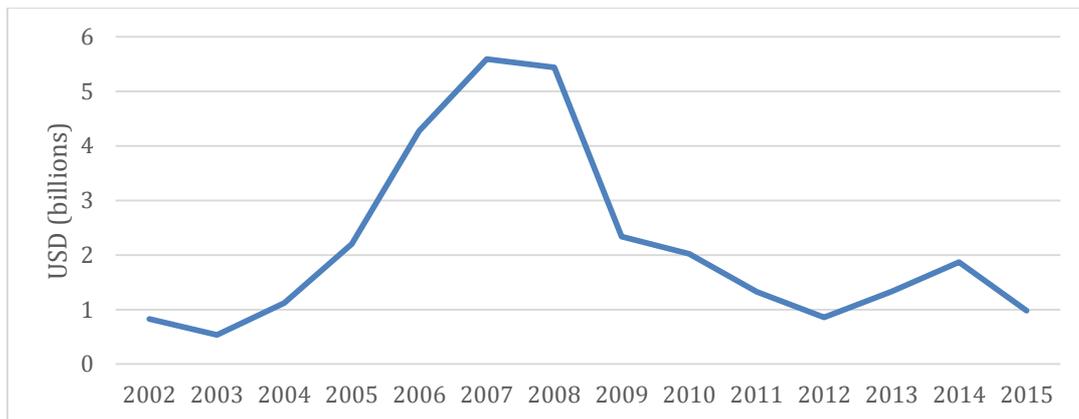
From the perspective of positioning Punjab for export markets therefore, apparel is a promising and realistic opportunity, as it is already an established strength. Apparel has also been singled out as Punjab’s priority sector in the Punjab Growth Strategy. From the point of view of long run export led growth and diversification, therefore, it will be important to facilitate a movement towards adding greater value to Punjab’s existing strength in cotton by developing the apparel sector in Punjab.

Other internationally growing sectors that emerge from the analysis presented in Figure 16 include furniture, footwear, surgical instruments, pharmaceuticals and leather goods. Some of these sectors are ones in which Pakistan already has a foothold in a growing sector, but is losing market share. These sectors include plastics, electronics, auto parts, carpets, leather goods and furniture. In these sectors, it is particularly important to stem the decline in global export share urgently, and to facilitate growth in these sectors as they help diversify and grow Pakistan’s export offering.

5.2.2 Investment, value addition and productivity

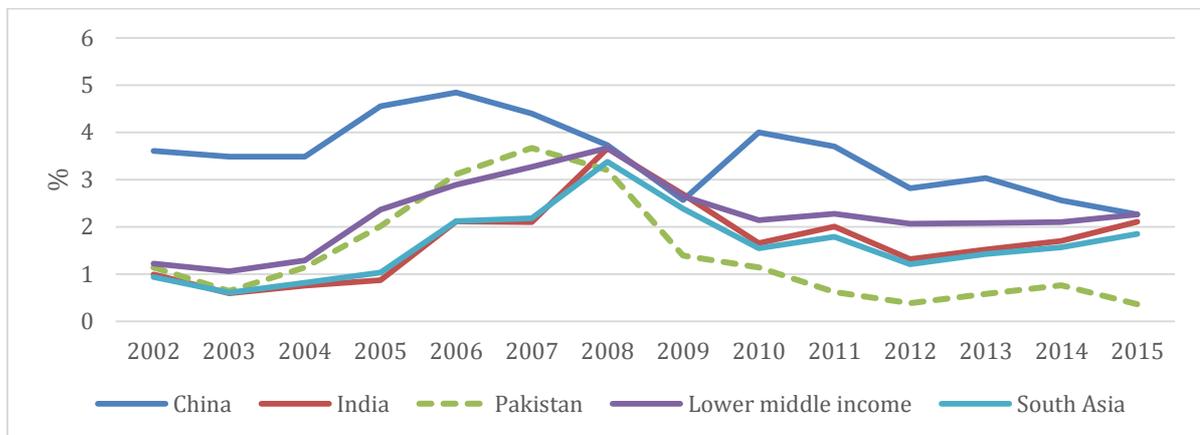
Foreign Direct Investment (FDI) in Pakistan has declined sharply in recent years. FDI in 2015 was 82.5% lower than that received in 2007, as shown in Figure 18. FDI as a percentage of GDP is now substantially lower than in lower middle income countries and South Asia (Figure 19). This is in sharp contrast with Punjab’s objectives of increasing private sector investment.

Figure 18: Foreign Direct Investment in Pakistan (current USD), Pakistan



Source: World Bank databank <http://databank.worldbank.org>

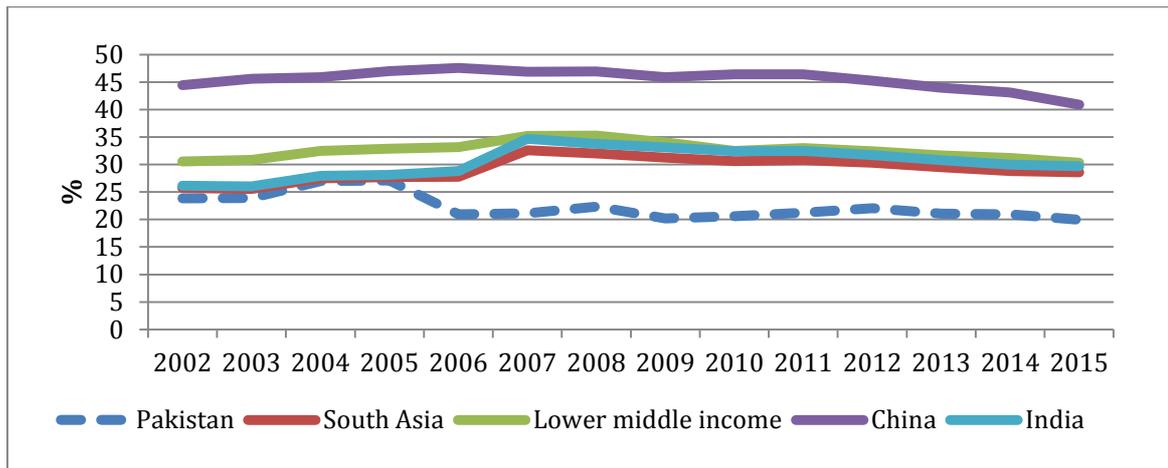
Figure 19: Net inflows of FDI, as a percentage of GDP, Pakistan



Source: World Bank databank <http://databank.worldbank.org>

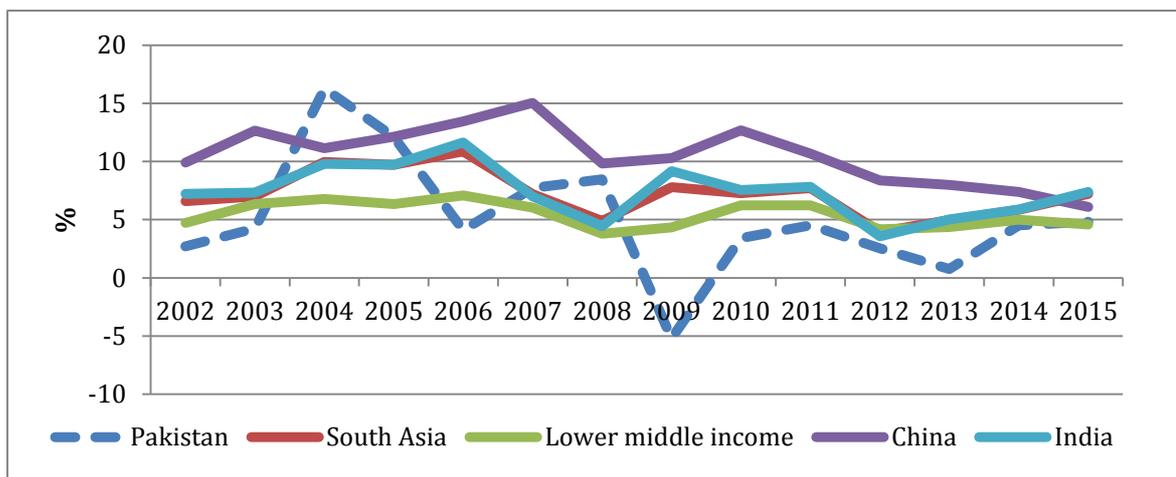
Industry value added, as a percentage of GDP, has also declined since 2005 and is now almost 10 percentage points lower than comparison countries. Growth rate of industry value added too has shown a declining trend over time. Figures 20 and 21 chart these trends.

Figure 20: Industry, value added (% of GDP), Pakistan



Source: World Bank databank <http://databank.worldbank.org>

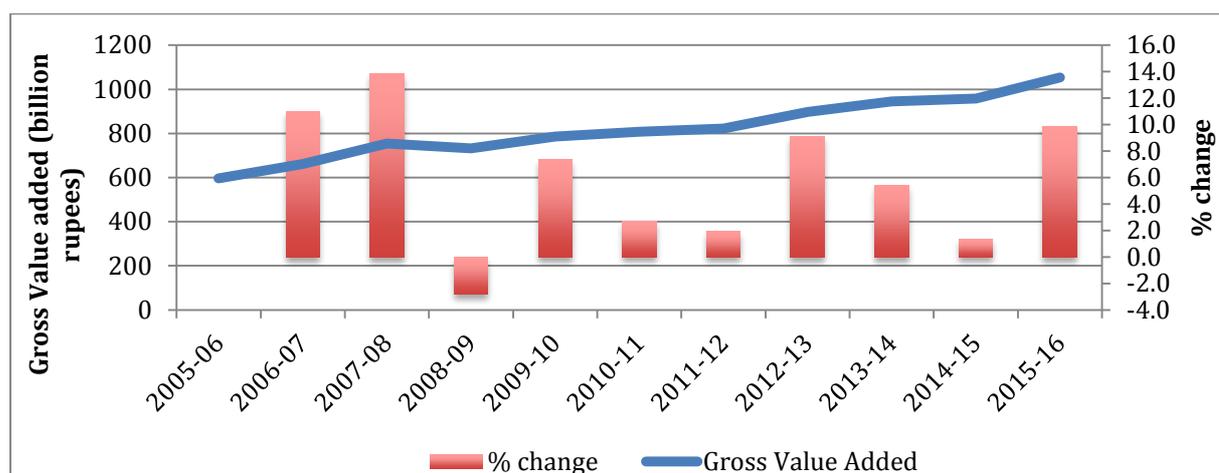
Figure 21: Industry, value added (annual % growth), Pakistan



Source: World Bank databank <http://databank.worldbank.org>

In contrast, Punjab Bureau of Statistics reports that industrial and manufacturing added in Punjab has *increased* over time showing growth rates as high as 10% in recent years (Figure 22). If the data is accurate and consistent, this would imply that industry in Punjab has grown more strongly than in other provinces, and has consequently been the driver of overall industrial growth in Pakistan.

Figure 22: Gross Value added in manufacturing in Punjab, 2005-2016 at constant basic prices of 2005-6



Source: Punjab Bureau of Statistics * includes large scale, small and household and slaughtering

It is also important to document labour productivity and total factor productivity (TFP), as this is a measure of the efficiency with which firms can turn inputs into outputs. A new KLEMS dataset, compiled to international standards and therefore useful for cross-country comparisons, is now available in Pakistan and can be used to study changes in productivity from 1980 to 2010. Since supply use tables are not available at the provincial levels, the KLEMS dataset and analysis cannot be replicated at the provincial level. Burki et al (2016) compile and analyse the data for six industrial groups in Pakistan, recording growth in gross output and sources of growth, including multi-factor productivity (MFP). The results are reproduced below in Tables 6, 7 and 8.

Table 5: Growth in gross output by industry, 1980-2010

Industry description	Average GVO growth	GVO growth by period					
		80-85	86-90	91-95	96-00	01-05	06-10
Agriculture, Hunting, Forestry & Filing	3.69	3.99	4.3	5.55	2.1	3.89	2.31
Food, Beverages & Tobacco	3.54	2.9	2.33	1.96	2.68	7.56	
Pulp, Paper, Paper Prod, Printing and Publishing	11.08	10.28	15.08	4.08	6.94	18.72	
Textiile, Textile Products, Leather & Footwear	7.89	3.11	13.6	3.76	4.84	12.2	
Machinery, NEC	-1.21	21.85	0.8	-1.17	5.34	23.64	
Basic Metals & Fabricated Metal Products	1.9	20.72	0.09	-5.09	6.27	3.29	
Other Non-Metallic Mineral Products	7.49	10.92	7.16	2.21	-1.75	22.76	
Industry Mean	4.91	10.54	6.2	1.61	3.37	6.4	2.31
Industry Median	3.69	10.28	4.3	2.21	4.84	7.56	2.31

Note: All growth rates are reported in percent per annum. Average GVO growth for basic metals and fabricated metal products industry was 5.05% for 1980-2005. However, average GVO growth has been reported here for 1983-2005 (1.90%) since MFP for this industry was also calculated for the same time period. MFP for 1980-1982 could not be calculated because services and labour data was not available for this industry during these years.

Source: Burki et al (2016) "Pakistan KLEMS database and productivity measurement at the industry level"

Table 6: Multi factor productivity growth in selected sectors, 1980-2010

Industry description	GVO growth	MFP	MFP 80-94*	MFP 1999 onwards**
Agriculture, Hunting, Forestry & Filing	3.69	2.89	3.44	2.41
Food, Beverages & Tobacco	3.54	-1.69	-1.40	-2.00
Pulp, Paper, Paper Products, Printing and Publishing	11.08	2.97	5.12	0.62
Textile, Textile Products, Leather & Footwear	7.89	-2.19	-1.36	-3.11
Machinery, NEC	-1.21	1.20	1.29	1.09
Basic Metals & Fabricated Metal Products	1.90	-1.09	-2.11	0.01
Other Non-Metallic Mineral Products	7.48	-4.44	-3.99	-4.93
Industry Mean	4.91	-0.34	0.14	-0.84
Industry Median	3.69	-1.09	-1.36	0.01

Note: All figures reported are in percent per annum. GVO is for gross value of output and MFP is for multi factor productivity.

Refers to MFP growth for agriculture from 1980 to 1994, and for other industries from 1982 to 1994

** Refers to MFP growth for agriculture from 1995 to 2010, and for other industries from 1995 to 2005

Source: Burki et al (2016) "Pakistan KLEMS database and productivity measurement at the industry level"

Table 7: Sources of output growth, 1980-2010

Industry description	GVO growth	Contribution to output of					MFP
		Labour	Capital	Energy	Material	Services	
Agriculture, Hunting, Forestry & Filing	3.69	0.02	0.29	0.17	0.15	0.16	2.89
Food, Beverages & Tobacco	3.54	0.05	3.03	0.40	0.10	1.65	-1.69
Pulp, Paper, Paper Prod, Printing and Publishing	11.08	0.31	3.19	0.47	0.03	4.12	2.97
Textiile, Textile Products, Leather & Footwear	7.89	0.28	4.37	0.25	0.07	5.11	-2.19
Machinery, NEC	-1.21	0.01	-1.64	-0.27	0.20	-0.71	1.20
Basic Metals & Fabricated Metal Products	1.90	0.24	1.90	0.22	-0.36	0.99	-1.10
Other Non-Metallic Mineral Products	7.48	1.47	0.87	0.50	0.34	8.75	-48
Industry Mean	4.91	0.34	1.72	0.25	0.08	2.87	-0.34
Industry Median	3.69	0.24	1.90	0.25	0.10	1.65	-1.1

Note: All figures are reported in percent per annum. For the agriculture industry, the observed period is 1980 to 2010. For the remaining industries, the observed period is 1982 to 2005. GVO refers to gross value of output. MFP is Multi factor productivity.

Source: Burki et al (2016) "Pakistan KLEMS database and productivity measurement at the industry level"

The results show that MFP has been negative across a wide range of industries including food, beverages and tobacco, textile, textile products, leather, footwear and basic metal and fabricated metal products. However, in some industries (agriculture, paper and paper products and machinery) MFP growth has been positive. Growth of output has been driven by factor accumulation rather than MFP growth, except in agriculture and the paper industry. This reflects a lack of improvement in the efficiency of converting factor inputs into outputs.

The preceding analysis has shown that industrial development in Pakistan in recent years has been characterized by low foreign investment, exports, value addition and productivity and stagnant geographical dispersion. The proceeding sections analyze the factors that have impeding the performance of the industrial sector.

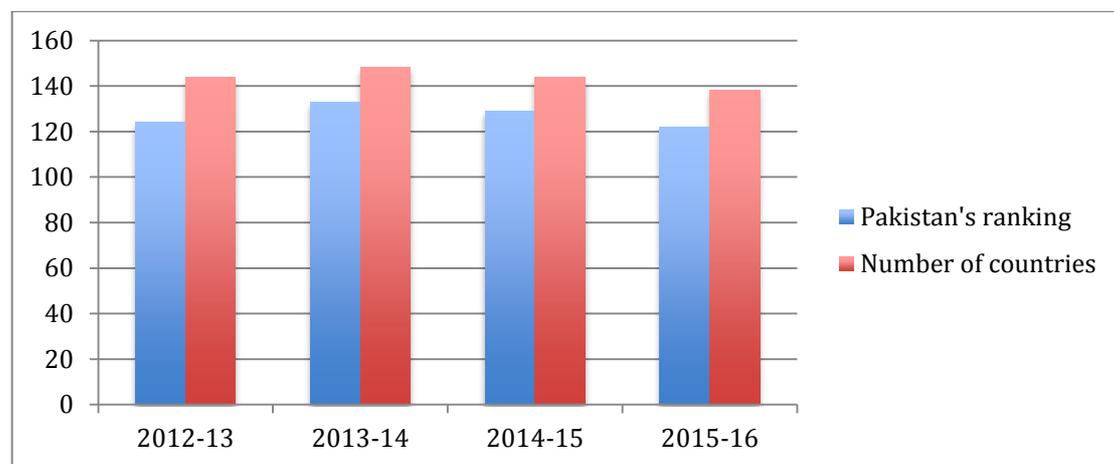
5.2.3 Business environment

There are several internationally comparable reports that are produced regularly to document the competitiveness of the economy and the state of the investment climate in Pakistan. The main findings of these reports are summarized below.

Global Competitiveness Report

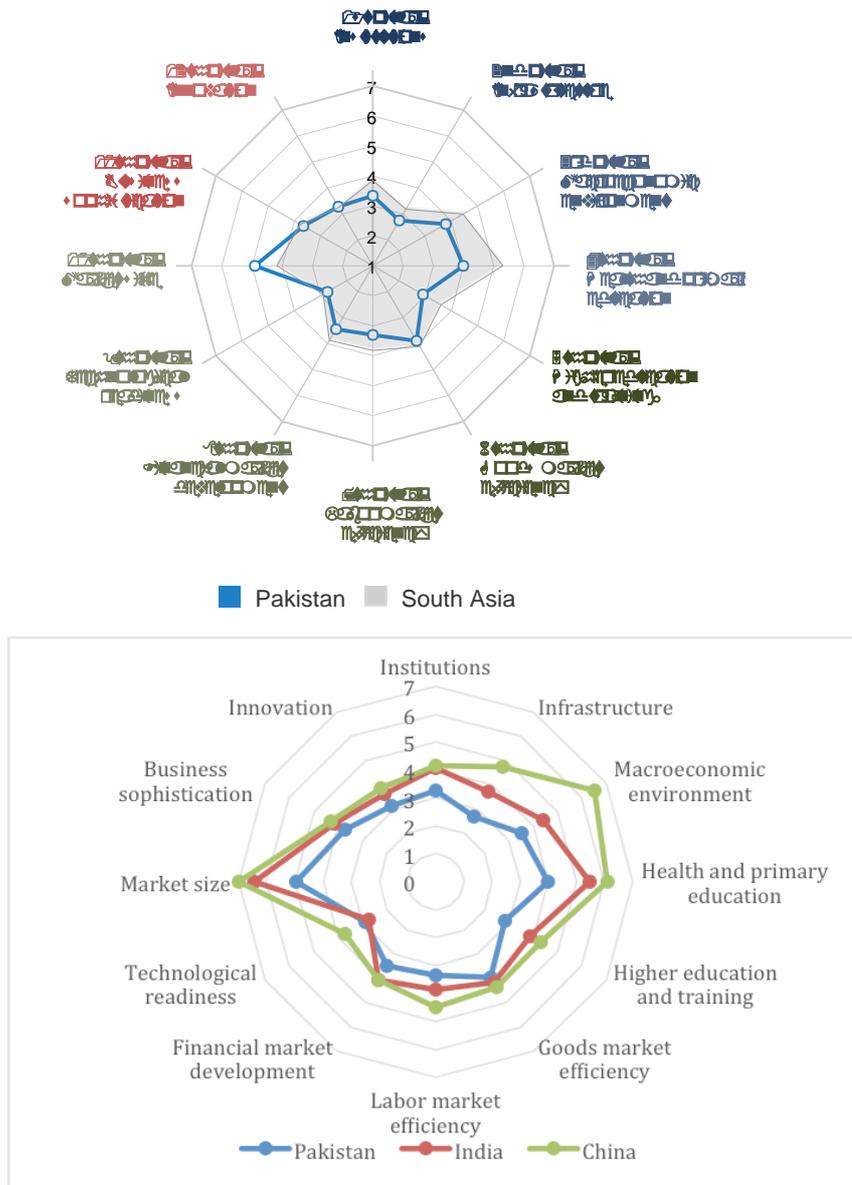
World Economic Forum's Global Competitiveness Report calculates a "Global Competitiveness Index" in which Pakistan ranks 122nd out of 138 countries in 2016-17. This ranking has improved marginally since 2013-14 though changes in the number of countries surveyed each year make the rankings not directly comparable from one year to the next.

Figure 23: Pakistan's ranking on the Global Competitiveness Index, 2012-17.



The report also documents Pakistan's score on 12 pillars of performance. Compared to South Asia, while Pakistan outperforms the region in terms of market size, it fares less favourably on the remaining pillars, doing particularly poorly on health and primary education and higher education and training. Compared to neighboring competitors India and China, Pakistan underperforms on all the pillars. Annex 1 provides detailed data on the sub-indicators for these pillars, where indicators are graduated on a colour scale from red (on those where Pakistan's performance is particularly poor) to green (where Pakistan's performance is better). On two of the indicators that are directly relevant to industrial development, market size and strength of investor protection, Pakistan performs particularly well. On others, while there is substantial room for improvement, Pakistan does not fare poorly. These include financial markets, business sophistication and physical infrastructure (ports, road etc). The weakest areas, where large majority of the indicators are one of the worst in the world include institutions, energy, labour market efficiency and goods market efficiency.

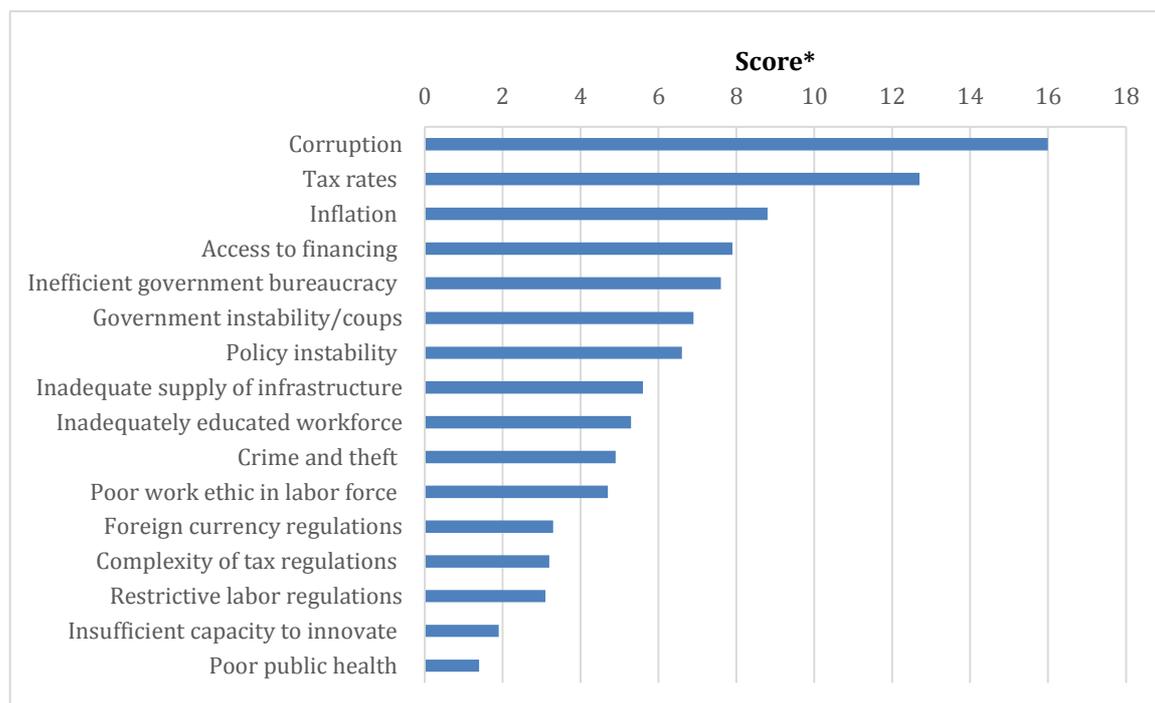
Figure 24: Pakistan's score on the 12 pillars of competitiveness performance, 2015-16



Source: World Economic Forum, Global Competitiveness Report. Available at <http://www3.weforum.org/docs/gcr/2015-2016/PAK.pdf>

The Global Competitiveness Report also identifies the most problematic factors for doing business on Pakistan. Provincial government can help address several of these, in particular: corruption, access to finance, inefficient government bureaucracy, inadequate infrastructure, inadequately educated workforce, complexity of tax regulations and restrictive labour regulations.

Figure 25: The most problematic factors for doing business in Pakistan, Executive Opinions Survey 2016



Source: World Economic Forum

*From a list of factors, respondents were asked to select the five most problematic for doing business in their country and to rank them between 1 (most problematic) and 5 (least problematic). The score corresponds to the responses weighted according to their ranking.

Doing Business Indicators

Doing Business indicators are calculated every year for Pakistan. In addition, in 2010, sub-national doing Business indicators were calculated which compare the regulatory environment for business in 13 Pakistani cities. The indicators report back on six stages of the life of a small to medium-size domestic enterprise: starting a business, dealing with construction permits, registering property, paying taxes, enforcing contracts, and trading across borders. While no single city was ranked best on all the indicators, doing business is easiest overall in Faisalabad. Table 9 shows the rankings within Pakistan, colour coded to show better rankings in green, graduated such that worse rankings are in red. The cities in Punjab that are existing industrial centres perform relatively better. It is no surprise moreover, that the best performer, Faisalabad, is also the city with the largest industrial concentration in Punjab, as shown earlier.

Overall, the distance to frontier for Pakistan on the Doing Business Indicators has deteriorated marginally since 2010 (from 52.93 to 51.77, where higher score indicates less distance to the best practice, the “frontier” at 100). As shown in Figure 26, this decline is largely due a sharp dip in 2015. The last year (2016-17) however, has shown a substantial improvement. Figure 27 shows Pakistan’s distance to frontier, compared with other regional countries.

Pakistan performs better than Bangladesh and Afghanistan, though while Pakistan was closer to best practice than India till 2014, India's improvement combined with Pakistan's decline has now reversed the trend. Particularly problematic areas of doing business are trading across borders, registering property and getting electricity.

Table 8: Sub-national Doing Business Indicators, Ranking within Pakistan

Province		Ease of Doing Business Rank	Starting a Business	Dealing with Construction Permits	Registering Property	Paying Taxes	Trading across Borders	Enforcing Contracts	Average
Baluchistan	Quetta	12	6	12	13	2	9	13	9.6
KPK	Peshawar	8	3	6	9	10	8	8	7.4
Punjab	Faisalabad	1	2	6	1	3	4	2	2.7
Punjab	Multan	2	6	1	7	3	5	4	4.0
Punjab	Lahore	3	3	3	4	3	13	8	5.3
Punjab	Sheikhupura	5	9	8	5	3	7	6	6.1
Punjab	Gujranwala	6	13	2	6	3	10	4	6.3
Punjab	Sialkot	11	12	11	1	3	5	10	7.6
Punjab	Rawalpindi	10	8	5	7	3	12	10	7.9
Sindh	Sukkur	7	10	4	10	11	3	1	6.6
Sindh	Karachi	9	3	10	11	11	1	3	6.9
Sindh	Hyderabad	13	11	13	11	11	2	7	9.7
ICT	Islamabad	4	1	8	3	1	11	10	5.4

Figure 26: Time trend of distance to frontier for doing business indicators, Pakistan

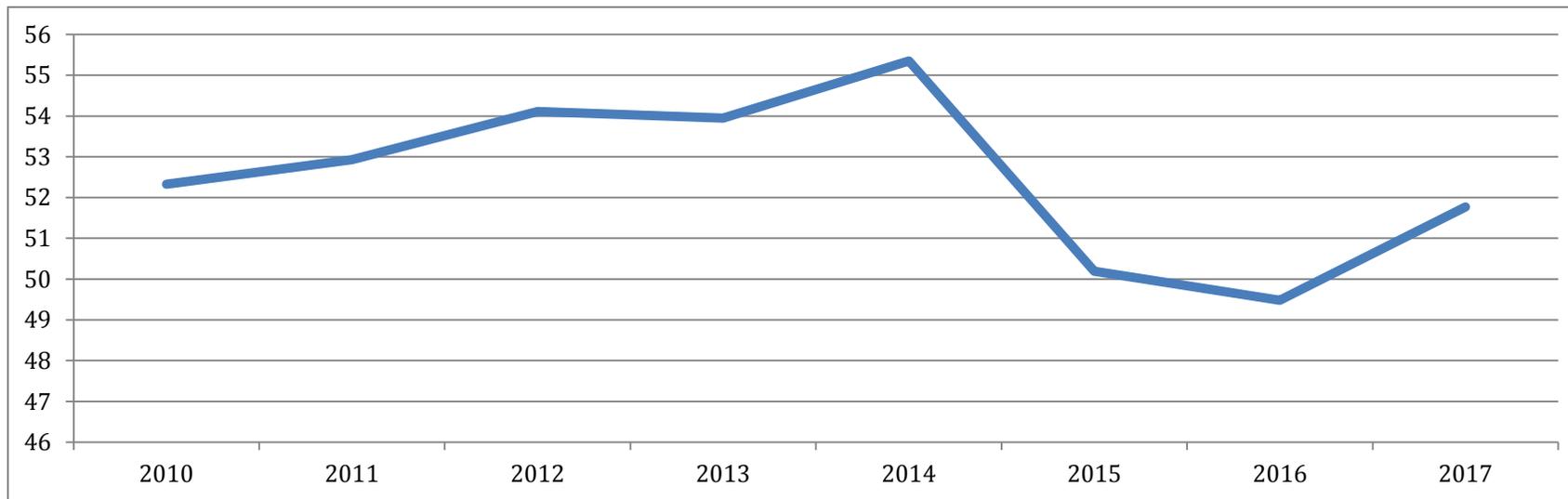


Figure 27: Distance to frontier for doing business indicators, 2010-17

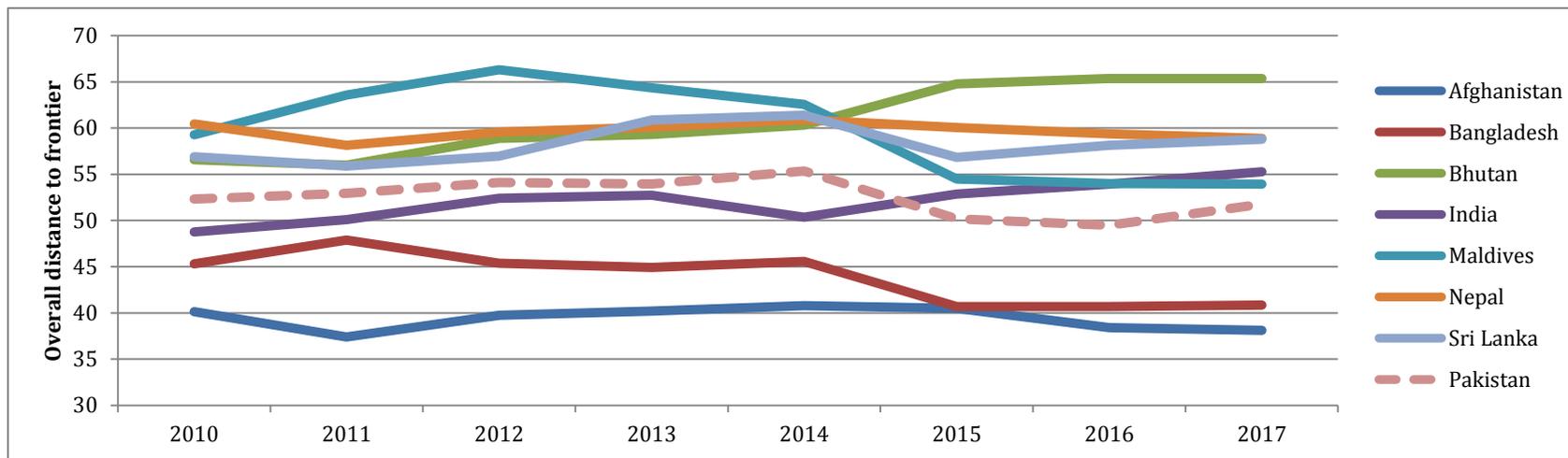
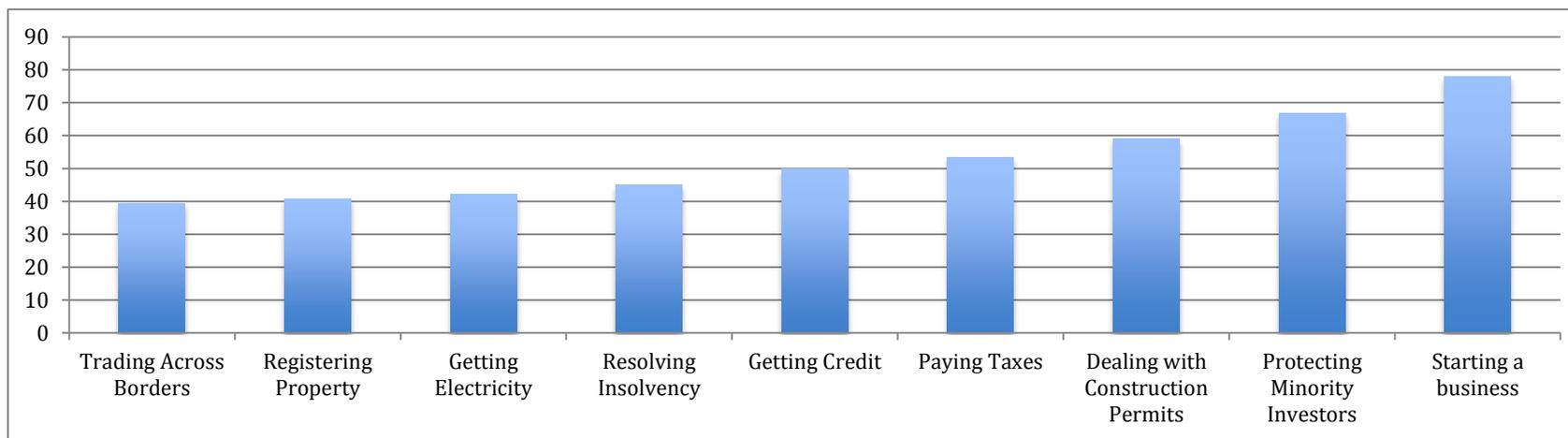


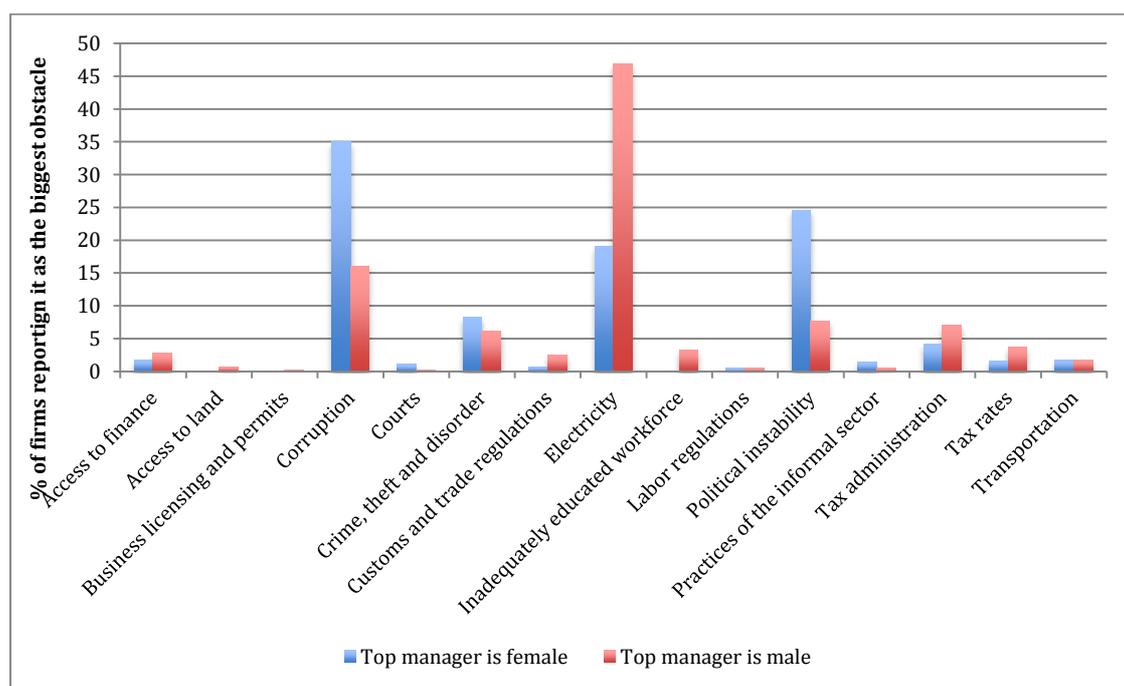
Figure 28: Distance to frontier across doing business indicators, Pakistan 2017



Annex 2 provides additional details for all the investment climate indicators, benchmarking Punjab's performance against the averages for Pakistan, South Asia and all countries. The discussion below captures a selection of these indicators. In general Punjab performs poorly compared to South Asia and other countries. Relative to the other provinces in Pakistan, there is no consistent pattern - on some indicators Punjab's performance is better than the national average, while on others it is worse.

As shown in Figure 39 in Annex 2, for example, on corruption, Punjab's performance is better than the Pakistani and South Asian average for the need to give gifts to get a water or electrical connection, or to get a construction permit. However, Punjab performs worse than Pakistan and South Asia on the incidence of bribery, the depth of bribery, on the expectation of gifts with respect to tax officials and to get an operating license. In particular, 27.7% of firms in KP, and 28% in Sindh report experiencing at least one bribe payment request as compared to 34.2% in Punjab. Corruption is also far more likely to be reported as the biggest obstacle to doing business by enterprises which have a female top manager. This is shown in Figure 26.

Figure 29: Biggest obstacle to doing business, by gender Pakistan 2013



Source: World Bank Enterprise Surveys, 2013

Likewise on taxes, Figure 49 Annex 2 shows that senior management in Punjab needs to spend a smaller proportion of their time dealing with government regulation than firms in Pakistan, South Asia and the rest of the world. However, the number of days required to get a construction related permit or an import license in Punjab is higher than the national average. Tax administration and business licensing and permits are more problematic in Punjab and in Pakistan compared to both South Asia and the world.

Punjab also performs far worse on crime as compared to the average for Pakistan. As shown in Figure 40 in Annex 2, over 40% of firms in Punjab report crime, theft and disorder as a major constraint to doing business, as compared to 34% on average in Pakistan, 3% in KPK and 61.1% in Sindh. Consequently a greater percentage of firms pay for security, and security costs are a higher fraction of annual sales.

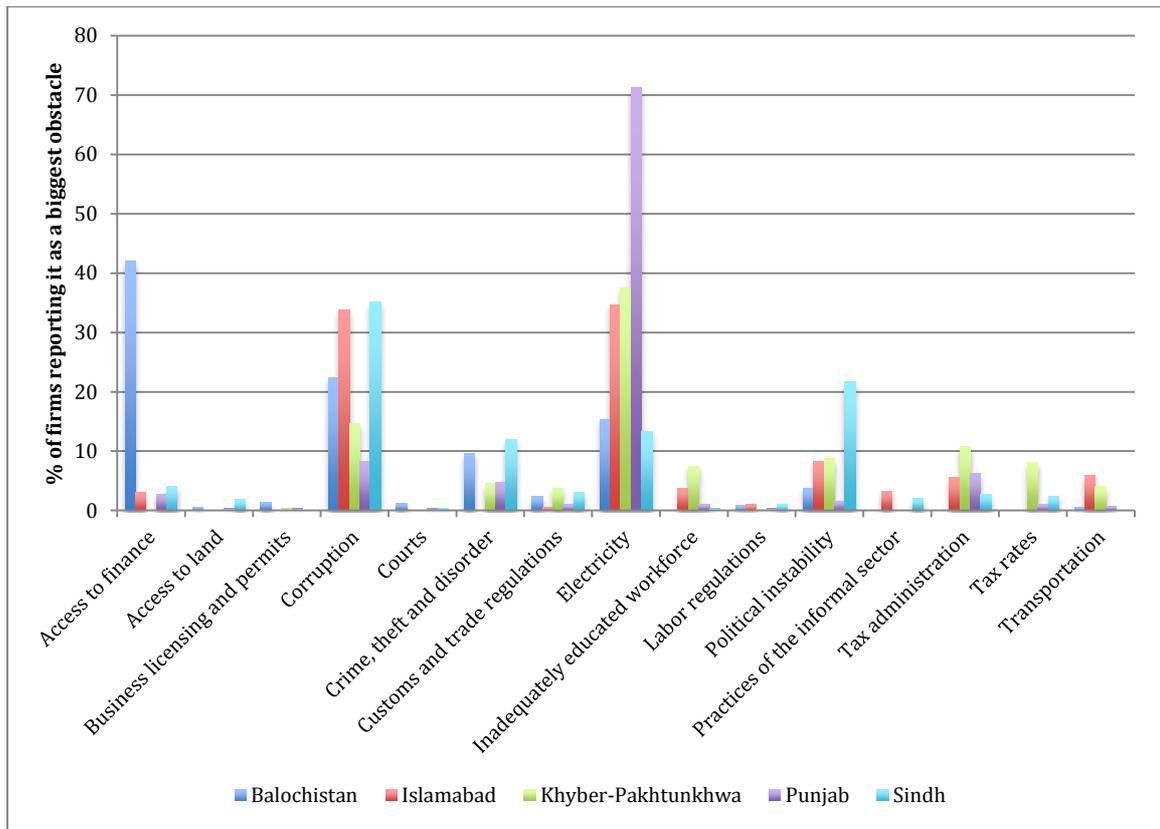
7% of firms in Punjab report access to finance as a major constraint to doing business, as compared to 22.2% in Sindh and 10.8% in KPK. This is however, much lower than the South Asian and the global average of approximately 26% of firms reporting access to finance as a major constraint. This is shown in Figure 41 in Annex 2. Similarly, 7.5% of firms in Punjab use banks to finance investments, as compared 1.8% if KPK and 83.4% in Baluchistan.

On gender, Punjab in particular and Pakistan in general both have fewer firms with a female top manager, and majority female ownership. However, Punjab does better than the national average on the percentage of full-time permanent workers that are female (Figure 42, Annex 2).

Firms in Punjab also report a greater problem with the informal sector as compared to those in Pakistan and South Asia, as shown in Figure 43, Annex 2). However fewer firms in Punjab report damage in transportation, or view transport as a major constraint to doing business, possibly reflecting Punjab's investments in transport infrastructure in Punjab. This is further substantiated by the data on Logistics Performance Index (LPI). While data on the LPI is not available disaggregated by province, the figures show that Pakistan performs better than the average for both South Asia and for Lower Middle Income countries on all parameters of the LPI, and has improved steadily each year.

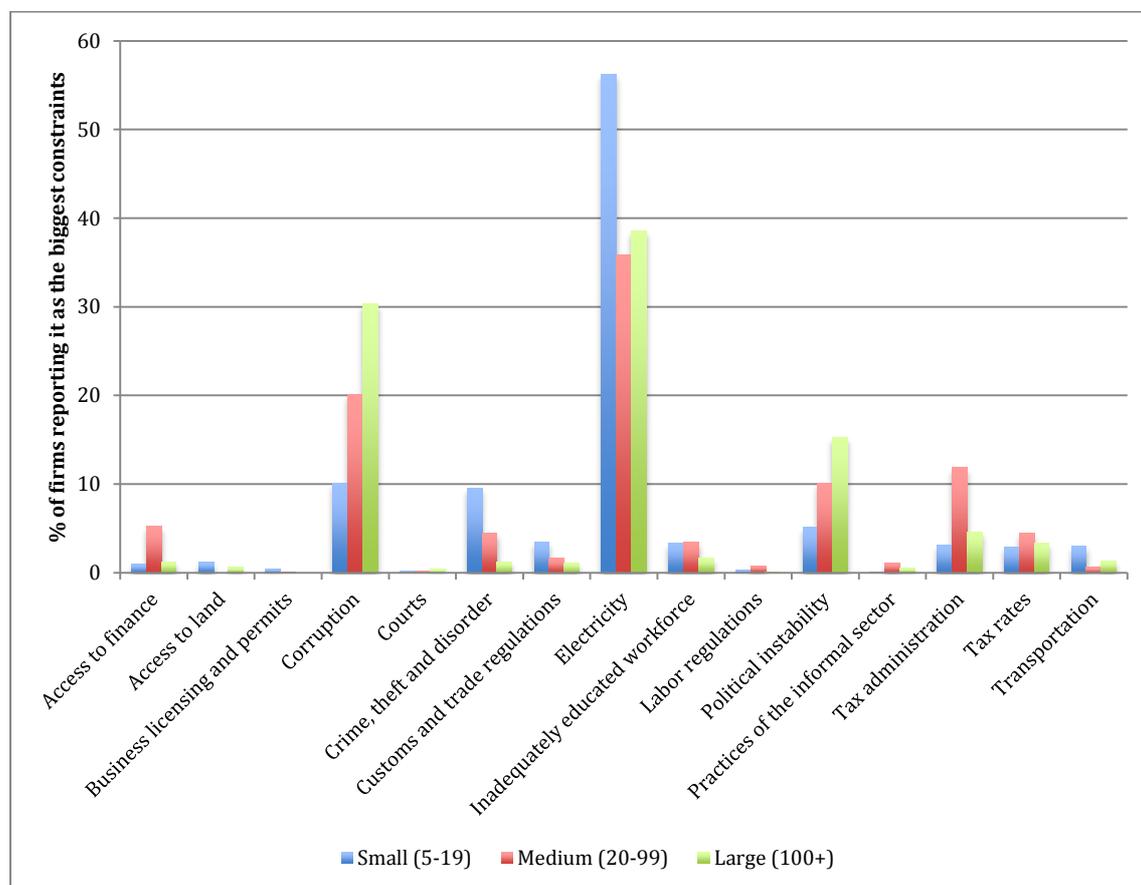
Firms in Punjab also report more difficulty with electricity, as shown in Figure 45, Annex 2, both in terms of number of outages and losses associated with the outages. This is also substantiated by enterprise survey data, which shows that 71% of the firms in Punjab declared electricity in biggest obstacle to doing business, as compared to, for example, 13% in Sindh and 15% in Baluchistan (Figure 30).

Figure 30: Biggest obstacle to doing business, by province, Pakistan 2013



In addition, as shown in Figure 31, electricity is a much more critical problem for small firms, with almost 56% of small firms reporting this as their biggest obstacle to doing business, as compared with 36% of medium sized firms and 39% of large firms.

Figure 31: Biggest obstacle to doing business, by size of firm, Pakistan 2013



In terms of performance, firms in Punjab reported real annual sales growth of 0.1%, compared to Pakistan’s average *decline* of 0.1%, far lower than the 3.7% increase reported by South Asian firms. Similarly, labour productivity in Punjab has fallen by 2.3% which is higher than the South Asian drop of 1.2% but lower than the Pakistani average of a 4% decline in labour productivity.

While trade is in the federal jurisdiction, the different provinces report varying experiences with trade. For example Punjabi firms report a greater number of days required to clear direct exports through customs, and a higher percentage of firms identify customs and trade regulations as a major constraint compared to the national average, as shown in Figure. In particular, 12.3% of firms in KP report customs and trade regulations as a major constraint compared with 22.2% in Punjab.

In terms of workforce, fewer firms in Punjab offer formal training, however, a greater proportion of workers are offered formal training and there is a smaller proportion of unskilled workers out of all production workers. Still 27% of firms in Punjab report inadequately training workforce as a major constraint as compared to 20.1% in KPK and 17.2% in Sindh, and 24.2% in Pakistan.

5.3 Regulatory structure

Industries in Punjab are regulated and facilitated by several provincial and federal departments.

In Punjab, the Department of Industries, Investment and Commerce is the coordinating body for registering firms, issuing clearance certificates, maintaining a directory of industrial units, boiler inspections and enforcing the establishment of industrial units in permitted areas. There are also some autonomous bodies, attached bodies and Section 42 companies which come under the purview of the Department of industries, Investment and Commerce. Those relevant to industrial development include:

- Faisalabad Industrial Estates Development and Management Company (FIEDMC) that develops and manages industrial estates in Faisalabad
- Punjab Industrial Estates Development and Management Company (PIEDMC) that develops and manages industrial estates in the rest of Punjab, including Quaid-e-Azam Apparel Park
- Punjab Small Industries Corporation (PSIC) that develops industrial estates and offers support functions for small and cottage enterprises
- Punjab Board of Investment and Trade (PBIT), the trade and investment promotion agency of Punjab
- Punjab Consumer Protection Council
- Technical Education and Vocational Training Authority (TEVTA)

Other provincial institutions that support or regulate industrial development include:

- Punjab Skills Development Fund (PSDF), a not-for-profit company set up in collaboration with the Department for International Development, UK and the Government of Punjab to provide skills and vocational
- Department of Labour, is responsible for the enforcement of labour laws, maintenance of industrial peace and the safety, health and welfare of workers
- Environment Protection Department, is responsible for implementing the Environment Protection Act and is also responsible for ensuring suitable dengue prevention measures in industrial units
- Punjab Land Records Authority (Punjab Board of Revenue) and land development authorities such as LDA
- Provincial tax authorities: Punjab Revenue Authority and Excise & Taxation department

Other functions are federally regulated and governed, such as taxation (Federal Board of Revenue), firm registration (Securities and Exchange Commission of Pakistan), and trade (Ministry of Commerce). There is also an

authority for providing support to small and medium enterprises in Pakistan, Small and Medium Enterprises Development Authority (SMEDA).

These institutions and regulatory bodies jointly determine the state of the business environment in Punjab, and provincial government has a role to play in coordinating the overall impact of federal and provincial regulations on businesses, to ensure that businesses are not excessively impeded. Following the 18th constitutional amendment, moreover, an increased responsibility for the business and regulatory environment of firms falls within the provincial remit.

A recently conducted study, “Diagnostic and Research study on policy reforms for Punjab’s priority business sectors” by Business Environment Reform Facility,¹ provides an assessment of the business regulatory environment, and recommendations for business environment reform. This research study complements the World Bank survey data described above by providing qualitative findings based on extensive consultations with private sector firms in Punjab’s priority sectors: garments, automotive, footwear, agro- and livestock based business.

The study concludes that firms in Punjab face a number of constraints with respect to the business environment. Across the board, tax policy and administration was seen as the most problematic area. Tax policy focuses narrowly on short-run tax collection, without regard for the impact on long-term growth, and consequently tax revenue. Similar issues arise with the Labour Department, whose mandate focuses on worker protection, without attempting to make the compliances realistically implementable by businesses. For example, many of the labour laws are outdated, and firms believe that it is not physically possible to comply with all of them.

There are three common findings that apply across the nine BER functions.

Firstly, government departments need mandates that consider the impact of their functions on businesses. Businesses need to be facilitated in meeting regulations, and rent seeking should be curtailed through an effective incentive system for employees.

Secondly, there needs to be better coordination and data sharing between the different departments.

¹ Afraz, Nazish, Dan Aylward, Usman Khan, Jayyad Malik and Hina Shaikh (2016) “Diagnostic and Research study on policy reforms for Punjab’s priority business sectors” Business Environment Reform Facility (World Bank and Department for International Development). Available at <http://www.businessenvironmentreform.co.uk/wp-content/uploads/2016/06/Punjab-BERF-Research-and-Diagnostic-Report.pdf>

Thirdly, policy needs to be based on better evidence; involving the private sector at all stages through a proper private public dialogue system, in which the private sector believe there is a real appetite across government for positive change.

Other specific findings are summarized below by each of the nine Business Environment Reform functions.

Business licensing and registrations procedures

Registering a company in Punjab, including with tax authorities, requires several steps. These are often time-consuming and in many cases manual. Despite recent improvements in automation in provincial government, government departments and agencies seldom share data with each other, resulting in separate applications and processing times for each of them. The complicated procedures typically require lawyers and informal payments, which increases the cost of doing business for the investors. Other clearances and permits such as the ones required from Town Municipal Authority and Lahore Development Authority (for buildings), the Intellectual Property Organization and the Environment Protection Agency offer similar challenges.

Tax policies and administration

Once the businesses are registered for tax purposes, filing the returns, assessment of taxes and their payment are also time-consuming and cumbersome. Tax policies, rules and regulations are also subject to change, which adds to the costs of compliance. The enterprises in Punjab sometimes have to face duplicity of tax regimes, with FBR and Punjab Revenue Authority (PRA), particularly in case of the value added tax. Even within Punjab, firms have to deal separately with two tax authorities: PRA and E&T. The perceived discretion of tax authorities also creates space for rent seeking. Claiming refunds with the FBR is also problematic with long processing times and informal payments required to expedite the process. This ties up working capital for firms.

Access to finance

Access to finance presents a cross-cutting challenge which is more severe for smaller firms. Large firms can secure better financial rates as they typically pay KIBOR + 1 – 1.25%. In comparison, SMEs often have to pay KIBOR + 3 – 6%. Currently, SMEs have no specific financial products available for them. Providing collateral is difficult for them as stocks, letters of credit for export orders, confirmed orders and factory premises are often not accepted. Consequently, SMEs often have to rely on personal property or unleveraged personal savings to secure credit.

Labour laws and administration

The labour laws in Pakistan and Punjab are perceived by firms to be outdated and ambiguously worded. Complete compliance to these laws is considered an unachievable task, which typically leads to firms making unofficial payments to avoid inspections and ineffective enforcement. SMEs face more difficulty in such cases as they lack the resources and influence to challenge wrongful penalties, and are more easily intimidated by labour officials.

Overall quality of regulatory governance

Overall poor quality of regulatory governance and the wide discretion of government officials pose another challenge for businesses. For instance, informal payments and bribes are routinely used to get a No Objection Certificate from the Environmental Protection Department or to seek a Structure Safety Certificate. Recently introduced Dengue inspections have also created another avenue for rent seeking.

Land titles, registration and administration

The computerization of land titles in Punjab has made transfer of land quicker and cheaper. However, where changes are disputed, delays are caused due to lack of sharing between courts, property registry office and tax office. Furthermore, the Environmental Protection Agency needs to provide clearance for new manufacturing units, which can be challenging, as there is no proper land zoning.

Access to commercial courts and alternative dispute resolution mechanisms

Since Pakistan has no commercial courts, business disputes have to be resolved through the normal judicial system, which is ineffective and time-consuming. There is also no formal alternative dispute resolutions mechanism, and businesses prefer out-of-court settlements.

Public-private dialogue processes

There is a lack of formal, systematic dialogue processes during policy formulation. Business member organizations have no say in relevant discussions and any consultation is seen as redundant. Therefore, businesses use personal networks to make any inroads. Work is being done with the Planning and Development Department and the Investment Climate Reform Unit to develop an online feedback mechanism. This will give the private sector an improved channel of communication with the public sector and hence, should be piloted in priority sectors.

Access to market information

Market information is unreliable as the Trade Development Authority of Pakistan (TDAP) supports only those exhibitions that businesses already know about. Other entities, such as the Small and Medium Enterprise Development Authority (SMEDA) and Punjab Small Industries Corporation (PSIC) are also not seen as useful. Even business associations are seen as helpful to only large firms.

5.4 Evaluation of policies and key initiatives, 2007-2016

5.4.1 Policy documents

The industrial sector is covered by two important policy documents: the federal Vision 2025 and provincial Punjab Growth Strategy 2014-2018.

Vision 2025

Pakistan's Vision 2025 identifies seven pillars, or priority areas, for Pakistan. While all of these pillars impact industrial development, some do so more directly. These are:

- Pillar 2: Achieving sustained, indigenous and inclusive growth
- Pillar 5: Private Sector and Entrepreneurship Led growth
- Pillar 6: Developing a competitive knowledge economy through value – addition

The sources of growth that are targeted for Pillar 2 are a higher investment rate, productivity growth and greater efficiency of resource mobilization. Specific strategic initiatives include formalizing the parallel economy, resource mobilization through an increase in the tax to GDP ratio, investment and export promotion, harnessing the potential contributions of the Pakistani diaspora, urban development and smart cities (for example by housing and public transport interventions) and a social protection framework.

The interventions targeted for Pillar 5 are strengthening institutions (such as commercial courts and alternate dispute resolution mechanisms, and those for intellectual property protection and enforcing quality standards), removing infrastructure bottlenecks (transportation, communications, water and energy), macroeconomic stability, privatization of services rather than public sector enterprises, public-private partnerships (in which the public sector facilitates and the private sector delivers with accountability), and investment.

Pillar 6 targets competitiveness and productivity through increased education for the workforce, particularly in higher education and science, math and ICT, improved goods and labour market efficiency and greater financial market

sophistication, improvement of ICT and trade infrastructure. It also targets cluster development, particularly in industrial parks, value chain improvement and innovation.

While these targets are directly relevant to the industrial sector, most of them fall outside the remit of the Department of Industries. The interventions that target human development, urban development, infrastructure and taxation are covered in the relevant chapters. This chapter looks specifically at industrial estates, skills and any other projects that come under the purview of the Department of Industries.

Punjab Growth Strategy

At the provincial level, the Punjab Growth Strategy identifies specific priorities for Punjab, including private sector led, export led and employment intensive economic growth. The industries sector plan translates these priorities into a specific set of recommendations for the Department of Industries. These include

- the formation of a provincial industrial policy that gives strategic direction and coordinates the efforts of various arms of Government,
- improvement in data and coordination between industry and Government agencies in order to address these constraints and assess industry requirements
- provision of infrastructure, land and key services via industrial estates and special economic zones
- assessing skills requirements, and enabling and providing skills training to labour
- Enforcing quality standards and investment Promotion.

In addition, the Punjab Growth Strategy singles out ready-made garments as a priority sector for Punjab, and dedicates an industrial park, Quaid-e-Azam Apparel Park, exclusively for the development of this sector.

Against these priorities, Punjab government has undertaken several programs to realize the objectives. The key programs are: provision of land, provision of skills and a Jobs and Competitiveness program.

5.4.2 Key Initiatives

Skills

In the Punjab Growth Strategy 2014-18, Punjab government set a target of training 2 million individuals. This was undertaken primarily by three dedicated skills agencies: Technical Education and Vocational Training Authority (TEVTA), Punjab Vocational Training Council (PVTTC) and Punjab Skills Development Fund (PSDF), but is also undertaken by other government

departments such as the Social Welfare, Higher Education and Agriculture departments. Since the announcement of this target in the Punjab Growth Strategy, the Program Implementation Unit collects details of all trainings conducted.

Table 9: Skills imparted since 2014, Punjab

	2014-15	2015-16	2016-17 (up till 30 April 2017)
TEVTA	110,000	173,246	41,818
PVTC	53,600	138,883	97,500
PSDF	50,000	56,187	16,322
Private Sector (TEVTA affiliated)	29,578	25,494	18,586
Private Sector (others)	77,000	-	5,317
Other government departments	60,308	66,001	35,437
Total	380,486	459,811	214,980

Source: Program Implementation Unit, Government of Punjab

PSDF, in particular, is externally monitored and evaluated, and therefore is a useful model for the Government to follow. PSDF was established in 2010 with a GBP 50 million fund to finance the training of 135,000 individuals and develop the market for training services, starting with pilot programs in four of Pakistan's poorest districts. After successfully piloting operations, PSDF funded training was extended to another ten districts in 2013. By March 2015, PSDF had funded training of 82,000 individuals, 40% of whom were female. This has expanded further, and PSDF is now running schemes under three main programs to provide training to 380,000 individuals. These are:

- Punjab Skills Development Program (PSDP), USD 32 million (World Bank funded)
- Skill Development Program (SDP), GBP 127 million (Department for International Development, UK in collaboration with Government of Punjab)
- Integrated Reproductive Maternal Newborn Child Health & Nutrition Program (IRMNCH) Rs. 35 million, funded by the Government of Punjab

PSDF's program design has been informed by potential employers, rigorous research and with regular monitoring, which makes the program effective and dynamic. This sets a benchmark for other programs, whether in skills or elsewhere.

Jobs and Competitiveness Program

Punjab Jobs & Competitiveness (J&C) Program, a collaboration between the World Bank Group and Government of Punjab, is specifically designed to

implement the Punjab Growth strategy objectives. It targets improvement in the investment climate and promotion of investment and jobs in more inclusive and sustainable industrial estates in Punjab. This program has total funding of USD 100 million over five years in the form of budgetary support. On investment climate reforms, the Program supports reforms to reduce the cost and risks of doing business, improve laws affecting labour, in particular to facilitate women's employment, and promote investments by foreign investors. This also includes support in compliance with GSP+ labour conventions.

There is an additional element of spatial development, in which the program supports the up gradation and development of industrial infrastructure through a private sector-led competitive process informed by the Punjab Spatial Strategy. This includes improved public investment process to support industrial and urban development, improved support to industrial infrastructure through Public Private Partnerships and a new institutional set up to support industrial estates and clusters.

Interventions

Specific interventions under this Program are as follows:

1. Improvement in aggregate doing business performance for Punjab in four doing business indicators, which include business registration, property registration, construction permits and contract enforcement.
2. Improve compliance with GSP+ labour conventions.
3. Investment promotion related activities i.e. investor outreach plans, investor database and announcements etc.
4. Development of Spatial Strategy to help prioritize public infrastructure investments, institutional development.
5. Promote private sector led industrial estates and sustainable Combined Effluent Treatment Plans (CETPs).
6. Institutional Development to improve public support to industrial clusters.

The program was initiated in 2016, and the results are likely to start becoming visible in the next few years, as the program completes implementation.

Industrial Parks

One of the most important levers for industrial development that is available to Punjab Government is the provision of industrial land, particularly in industrial parks. Punjab now has 34 industrial parks, an increase in 10 industrial parks in the last ten years. From just 4 large industrial estates in 2007, there are now 13 large industrial estates. Details of the industrial estates present in 2007 and 2016 are given in Tables 11 and 12.

Table 10: Industrial Estates in Punjab, in 2007

S#	Estate	Agency	Area (Acres)	Total Plots	Vacant Plots	Plots Colonized	Percent Colonization	Price of Plot	Facilities Available	Missing Facilities
Large Industrial Estates										
1	Multan Industrial Estate (P-I)	PIEDMC	743	247	47	140	57		Electricity, Gas, Sewerage, Roads	
2	Multan Industrial Estate (P-II)	PIEDMC	667	360	200	0	0		Electricity, Gas, Sewerage, Roads	
3	Quaid-e-Azam I. E, Lahore.	PIEDMC	575	512	Nil	400	78		Electricity, Gas, Sewerage, Roads	
4	Sunder Industrial Estate	PIEDMC	1550	763	763	0	0		Electricity, Sewerage, Roads	Gas
Small Industrial Estates (Government Funded)										
5	Jhelum	PSIC	52.6	288	10	200	69	Rs.52,000/k	Electricity, Sewerage, Roads	Gas
6	Gujjar Khan	PSIC	17.44	183	20	100	55	Rs.70,000/k	Electricity, Sewerage, Roads	Gas
7	Chakwal	PSIC	17	120	20	60	50	Rs.80,000/k	Electricity, Roads, Sewerage	Gas
8	Gujranwala-I	PSIC	103.5	426	10	390	92	Rs.6,567/k	Electricity, Gas, Sewerage, Roads	
9	Gujranwala-II	PSIC	107	554	35	500	90	Rs.64,000/k	Electricity, Gas, Sewerage, Roads	
10	Gujrat-I	PSIC	71	422	2	400	95	Rs.6,500/k	Electricity, Gas, Sewerage, Roads	
11	Bahawalpur	PSIC	51.14	205	5	198	97	Rs.140,000/k	Electricity, Gas, Sewerage, Roads	
12	Sialkot-I	PSIC	98	372	Nil	372	100	Rs.10,700/k	Electricity, Gas, Sewerage, Roads	

13	Lahore-I	PSIC	9.75	40	Nil	40	100	Rs.220,000/k	Electricity, Gas, Sewerage, Roads	
14	Faisalabad	PSIC	244	1021	8	990	97	Rs.220,000/k	Electricity, Gas, Sewerage, Roads	
15	Sargodha	PSIC	52	255	15	188	74	Rs.150,000/k	Electricity, Gas, Sewerage, Roads	
16	Sahiwal	PSIC	52	187	5	170	91	Rs.250,000/k	Electricity, Gas, Sewerage, Roads	
17	Daska	PSIC	52	150	2	80	53	Rs.140,000/k	Electricity, Gas, Sewerage, Roads	
Small Industrial Estates (On Self Finance Basis)										
18	Taxila	PSIC	118	384	80	40	10	Rs.135,000/k	Electricity, Sewerage, Roads	Gas
19	Gujranwala-III (EPZ)	PSIC	113	212	Nil	35	17	Rs.368,000/k	Electricity, Sewerage, Roads	Gas
20	Sialkot-II (EPZ)	PSIC	109	416	Nil	6	1	Rs.145,000/k	Electricity, Gas, Sewerage, Roads	
21	Sialkot-III (EPZ)	PSIC	128	465	Nil	9	2	Rs.145,000/k	Electricity, Gas, Sewerage, Roads	
22	Kasur	PSIC	80	326	50	18	6	Rs.300,000/k	Electricity, Sewerage, Roads	gas
23	Mian Channu	PSIC	70.62	157	20	55	35	Rs.110,000/k	Electricity, Gas, Sewerage, Roads	
24	Khanewal	PSIC	65	313	30	40	13	Rs.197,000/k	Electricity, Sewerage, Roads	gas
	Total		5146.05	8378	1322	4431	53			

Table 11: Industrial Estates in Punjab, as of December 2016

S#	Estate	Agency	Area (Acres)	Total Plots	Vacant Plots	Plots Colonized	Percent Colonization	Price of Plot	Facilities Available	Missing Facilities
Large Industrial Estates										
1	Multan Industrial Estate (P-I)	PIEDMC	743	247	Nil	247	100		Electricity, Gas, Sewerage, Roads	
2	Multan Industrial Estate (P-II)	PIEDMC	667	360	26	130	36	20 M/acre	Electricity, Gas, Sewerage, Roads	
3	Quaid-e-Azam I. E, Lahore.	PIEDMC	575	512	Nil	461	90		Electricity, Gas, Sewerage, Roads	
4	Sunder Industrial Estate	PIEDMC	1750	763	Nil	595	78		Electricity, Gas, Sewerage, Roads	
5	Bhalwal Industrial Estate	PIEDMC	445	321	227	2	1	8 M/Acre	Electricity, Sewerage, Roads	Gas
6	Rahim Yar Khan Industrial Estate	PIEDMC	450	199	139	3	2	8.5 M/Acre	Electricity, Sewerage, Roads	Gas
7	Quaid-e-Azam Apparel Park, Sheikhpura (Declared SEZ)	PIEDMC	1536					Not finalized	Under Development	Electricity, Gas, Sewerage, Roads
8	Vehari Industrial Estate, Vehari	PIEDMC	200	202	187	0	0	6.5 M/Acre	Under Development	Under development
9	Chunian Industrial Estate, Kasur	PIEDMC	320	239	239	0	0	Not finalized	Under Development	Under development
10	Value Addition City, Fsd (Declared SEZ)	FIEDMC	213.91	127	1	74	58	6.638 M/acre	Electricity, Gas, Sewerage, Roads	
11	M-3 Industrial City Faisalabad (Phase 1A) (Declared SEZ)	FIEDMC	1187.6	134	1	37	28	6.638 M/acre	Electricity, Gas, Sewerage, Roads	

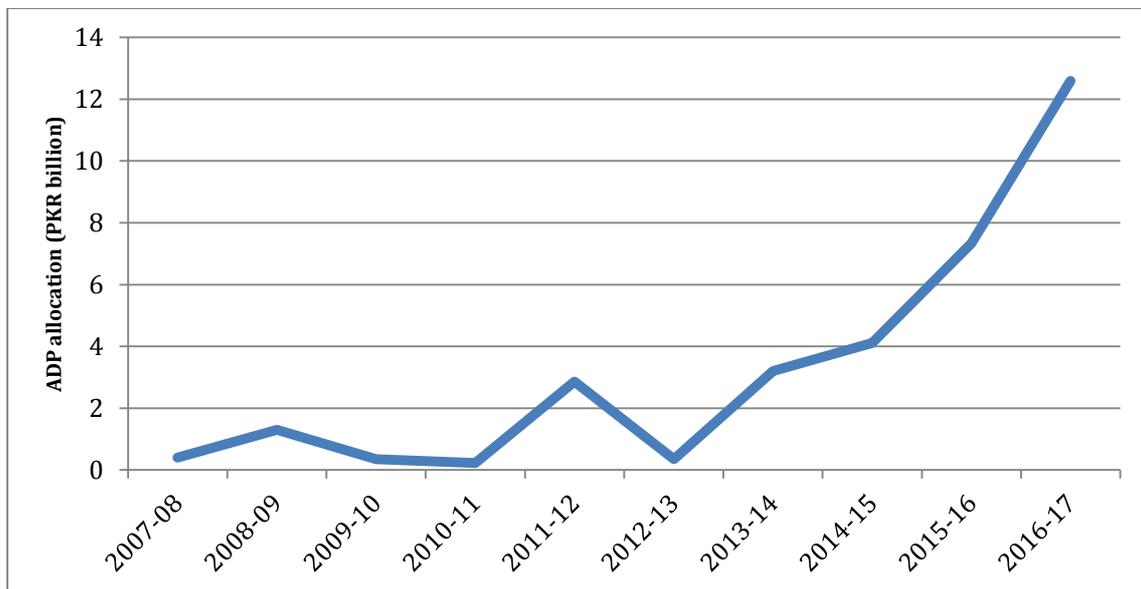
12	M-3 Industrial City Faisalabad (Phase 1B) (Declared SEZ)	FIEDMC	586	84	22	5	6	6.638 M/acre	Under development	Under development
13	M-3 Industrial City Faisalabad (Phase 2) (Declared SEZ)	FIEDMC	2582.4	274	137	70	26	6.638 M/acre	Under development	Under development
Small Industrial Estates (Government Funded)										
14	Jhelum	PSIC	52.6	288	Nil	278	97	Rs.52,000/k	Electricity, Sewerage, Roads	Gas
15	Gujjar Khan	PSIC	17.44	183	1	155	85	Rs.70,000/k	Electricity, Sewerage, Roads	Gas
16	Chakwal	PSIC	17	120	Nil	97	81	Rs.80,000/k	Electricity, Roads, Sewerage	Gas
17	Gujranwala-I	PSIC	103.5	426	Nil	426	100	Rs.6,567/k	Electricity, Gas, Sewerage, Roads	
18	Gujranwala-II	PSIC	107	554	Nil	554	100	Rs.64,000/k	Electricity, Gas, Sewerage, Roads	
19	Gujrat-I	PSIC	71	422	Nil	422	100	Rs.6,500/k	Electricity, Gas, Sewerage, Roads	
20	Bahawalpur	PSIC	51.14	205	1	204	100	Rs.140,000/k	Electricity, Gas, Sewerage, Roads	
21	Sialkot-I	PSIC	98	372	Nil	372	100	Rs.10,700/k	Electricity, Gas, Sewerage, Roads	
22	Lahore-I	PSIC	9.75	40	Nil	40	100	Rs.220,000/k	Electricity, Gas, Sewerage, Roads	
23	Faisalabad	PSIC	244	1021	3	1013	99	Rs.220,000/k	Electricity, Gas, Sewerage, Roads	
24	Sargodha	PSIC	52	255	1	254	100	Rs.150,000/k	Electricity, Gas, Sewerage, Roads	

25	Sahiwal	PSIC	52	187	Nil	187	100	Rs.250,000/k	Electricity, Gas, Sewerage, Roads	
26	Daska	PSIC	52	150	Nil	88	59	Rs.140,000/k	Electricity, Gas, Sewerage, Roads	
Small Industrial Estates (On Self Finance Basis)										
27	Taxila	PSIC	118	384	Nil	48	13	Rs.135,000/k	Electricity, Sewerage, Roads	Gas
28	Gujranwala-III (EPZ)	PSIC	113	212	Nil	37	17	Rs.368,000/k	Electricity, Sewerage, Roads	Gas
29	Sialkot-II (EPZ)	PSIC	109	416	Nil	10	2	Rs.145,000/k	Electricity, Gas, Sewerage, Roads	
30	Sialkot-III (EPZ)	PSIC	128	465	Nil	12	3	Rs.145,000/k	Electricity, Gas, Sewerage, Roads	
31	Kasur	PSIC	80	326	Nil	22	7	Rs.300,000/k	Electricity, Sewerage, Roads	gas
32	Mian Channu	PSIC	70.62	157	Nil	69	44	Rs.110,000/k	Electricity, Gas, Sewerage, Roads	
33	Khanewal	PSIC	65	313	24	58	19	Rs.197,000/k	Electricity, TSewerage, Roads	gas
34	Lahore-II	PSIC	114	348	3	0	0	Rs.325,000/k	Sewerage, Roads	Electricity, Gas.
	Total		12981	10306	1012	5970	58			

5.5 ADP Allocation

Figure documents the ADP allocation of the Department of Industries in the last ten years. The allocation has increased sharply since 2013, and the average annual allocation between 2014-17 (post Punjab Growth Strategy) is over 6 times as high as that before 2014. The amount is allocated to schemes run by the Department and its associated companies and includes skills training by TEVTA, PVTC and PSDF, the Chief Minister's Self Employment Scheme and soft loans given to PIEDMC and FIEDMC for developing industrial parks. In previous years, a large part of the budget has also been allocated to PSIC for industrial parks and other schemes for small and cottage enterprises.

Figure 32: ADP allocation to the Department of Industries



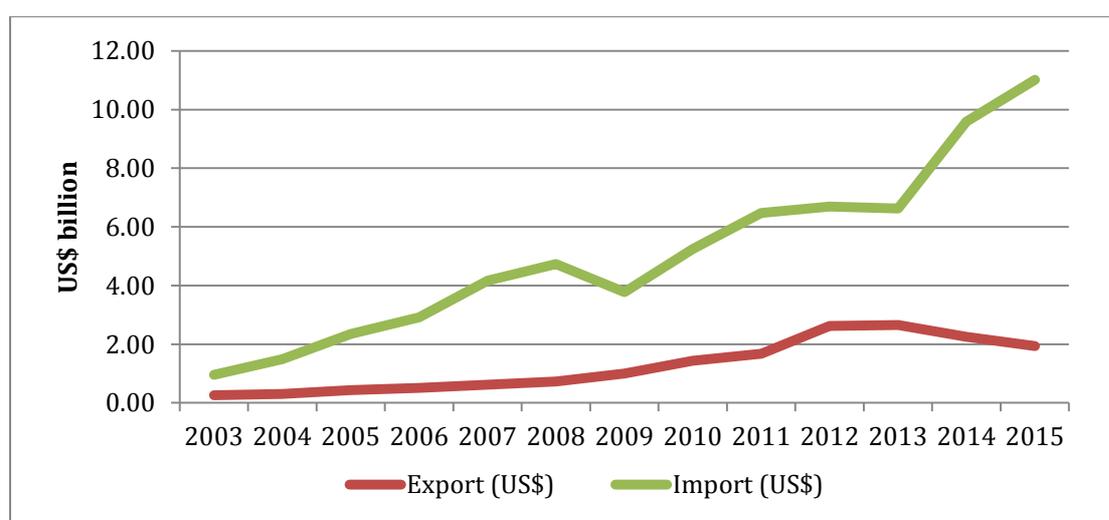
5.6 Opportunities

5.6.1 CPEC

The China–Pakistan Economic Corridor (CPEC) represents a USD 46 billion portfolio of projects including highways, port development, power generation and an optic fiber project. The planned investments target some of the most critical infrastructure gaps in Pakistan. Industry in Pakistan can look forward, for example, to an alleviation of the energy constraint that has been identified as the single most crucial bottleneck in growth and competitiveness. In addition, CPEC will improve transport and connectivity through the length of Pakistan, which is particularly important for trade with China and the Central Asian countries beyond. China is an important trade partner for Pakistan, and in so far as the anticipated ease in trade results in cheaper imported inputs and machinery for industrial units in Pakistan, and a large consumer market for Pakistan’s products, Pakistan has much to gain.

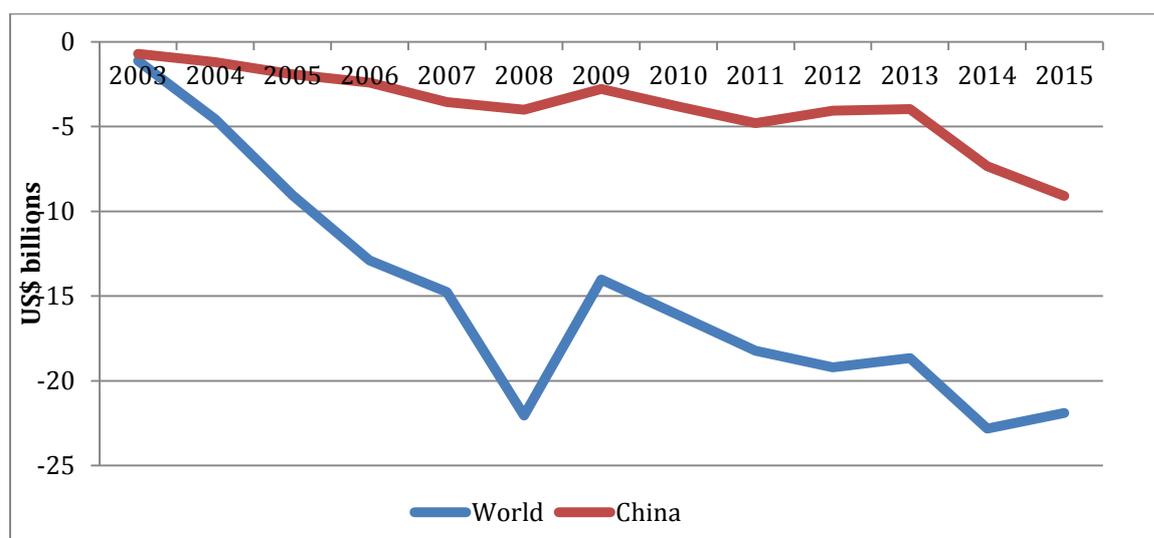
However, it is becoming increasingly clear that CPEC will not automatically translate into improved industrial development. Businesses in Punjab (and throughout Pakistan) are wary, for example, that the impact of CPEC would be to flood the Pakistani market with finished Chinese consumer goods, putting local firms out of business. This fear is based on the impact of the Free-Trade Agreement with China, signed in 2006. Data shows that after the FTA, Pakistan’s imports to China have increased much more sharply than exports to China, as shown in Figure. The bilateral trade balance itself is not problematic: if imports from China allow Pakistan to become more globally competitive, the overall trade balance can improve. However, as shown in the chart below, the overall trade balance of Pakistan with the world has been falling unabated and the bilateral trade deficit with China alone accounted for 40% of the Pakistan’s overall trade deficit in 2015.

Figure 33: Trade flows with China, 2003-2015, as reported by Pakistan



Source: UN Comtrade, downloaded February 2017

Figure 34: Pakistan's trade balance with the world and with China, 2003-2015



Source: ITC Trade maps, downloaded February 2017

Despite the FTA being in place for more than 10 years, Pakistan has not been able to cater significantly to Chinese markets. It would require a detailed investigation to explore the factors that have prevented Pakistani producers from accessing Chinese markets. This investigation is important in devising a strategy for CPEC: Much of the benefit from the trade aspect of CPEC depends on being able to access Chinese markets to expand exports, and being able to import technology to allow Pakistan to become more competitive in global export markets.

For this, Pakistan will need to negotiate an effective FTA and devise an investment incentive strategy to encourage investments from China that help meet Pakistan's objectives of increased technology acquisition, greater value-addition and exports, and higher quality and quantity of employment, while discouraging those that are environmentally damaging.

The provinces will also need to align their own public investments to ensure that the CPEC investments are leveraged for greatest positive impact. For example, the development of the core region on the main CPEC road artery is part of the CPEC investments. However linking and developing the "radiation areas" surrounding the main arteries would ensure that the benefits are spread out and accessed by a wider population. Readiness for CPEC is not just in terms of physical infrastructure, but also in terms of business environment and labour. For firms to benefit from improved opportunities to export to China and CARs, for example, they must be able to produce quality products that are aligned to market demand and competitively priced. Availability of energy, and a regulatory framework that does not impede firms excessively, would give Pakistani firms a level playing field to compete internationally. In addition, an educated labour force has better technology absorption capacity, is more resilient to structural change, and is able to respond quickly to changing market requirements.

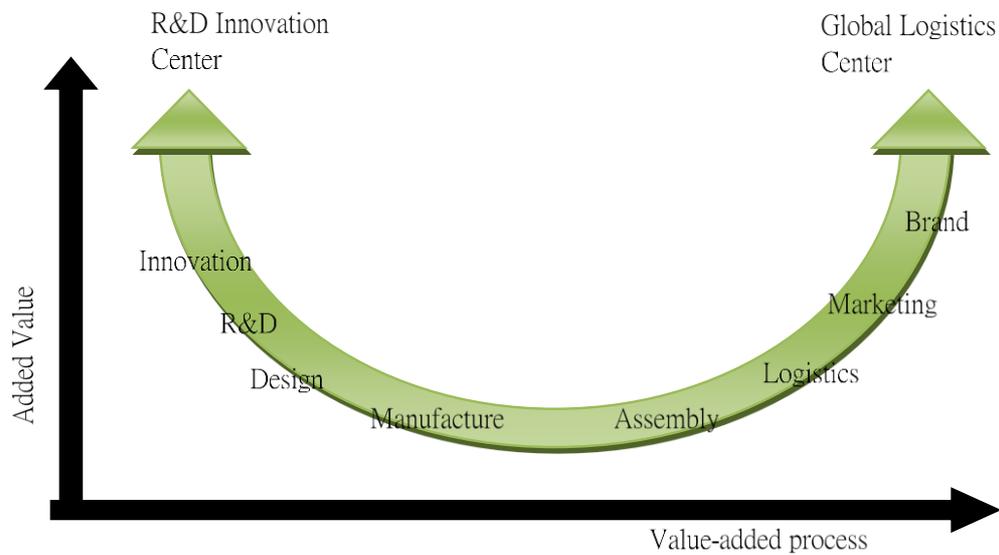
The Department of Industries, Investment and Commerce has developed an industrial co-operation framework for CPEC with technical assistance from the International Growth Centre. This provides a bridge between Chinese priorities for CPEC (as articulated in One Belt One Road policy documents and the Long Term Plan for Pakistan that was developed by the Chinese) and Punjab's priorities (as articulated in the Punjab Growth Strategy). Recommendations from this research are summarized in the section on recommendations below, and one of the key recommendations – an industrial policy for Punjab, was started immediately, to be completed by August 14, 2017. This industrial policy should provide a solid understanding of the industrial sector in Pakistan, identifying needs, providing strategic direction and coordinating the efforts of various arms of Government in addressing constraints and needs. This will be useful in responding to CPEC and any other developments that may arise.

5.6.2 Innovation

The ninth Sustainable Development Goal (SDG) from the United Nations Agenda for Sustainable Development aims to “build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation”. This target is particularly relevant for Pakistan as it seeks to accommodate the youth bulge. Increasing the share of manufacturing is important as the manufacturing sector has a high capacity to deliver jobs. Moving up the manufacturing value chain to more innovative processes, on the other hand, is crucial to transforming the sustainability and quality of jobs in Pakistan.

From iPods to branded jeans, putting physical inputs together is typically the lowest value addition process in the value chain. The value captured by the Pakistani factory assembling a pair of branded jeans, for example, is about 20% of the sales value. Approximately 50% of the sales value remains with the brand-name retailers, where the product was designed and branded. This is illustrated in Figure 35: the more innovative services on either side of basic manufacturing and assembly create higher value, and it is imperative to develop these skills and services to ensure higher value addition.

Figure 35: Smiley model of value addition

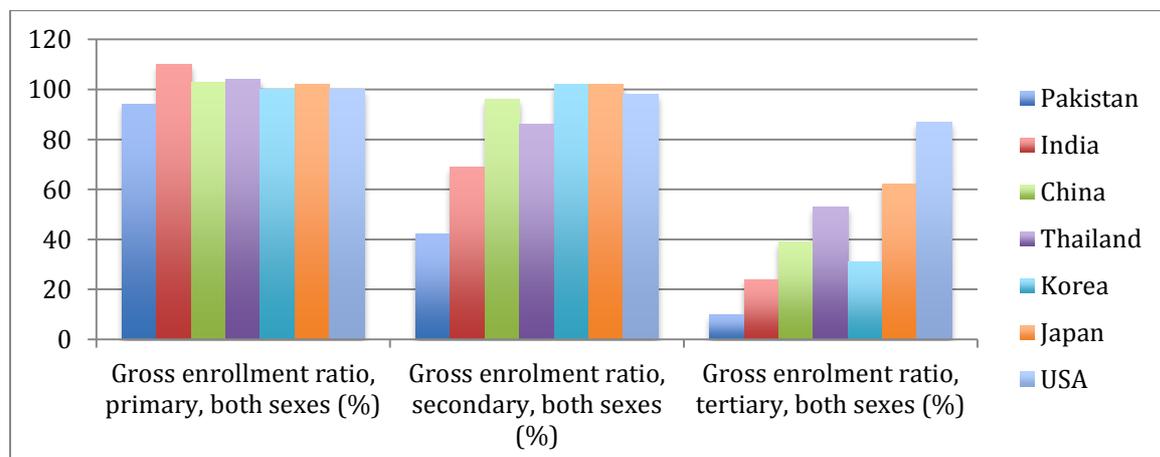


Source: World Economic Forum, 2012

Fostering innovation requires far more R&D personnel: Pakistan currently has 167 R&D researchers per million people, compared to China's 1090 and Japan's 5084. This further filters down to quality of education, particularly higher education, which continues to be well below the targets set for the country.

Pakistan's current education profile is shown below in Figure 36. While there isn't a substantial difference in primary school enrolment between Pakistan and other regional competitors such as China and India, this gap grows with the level of education and for both secondary and tertiary education Pakistan's labour force is less educated.

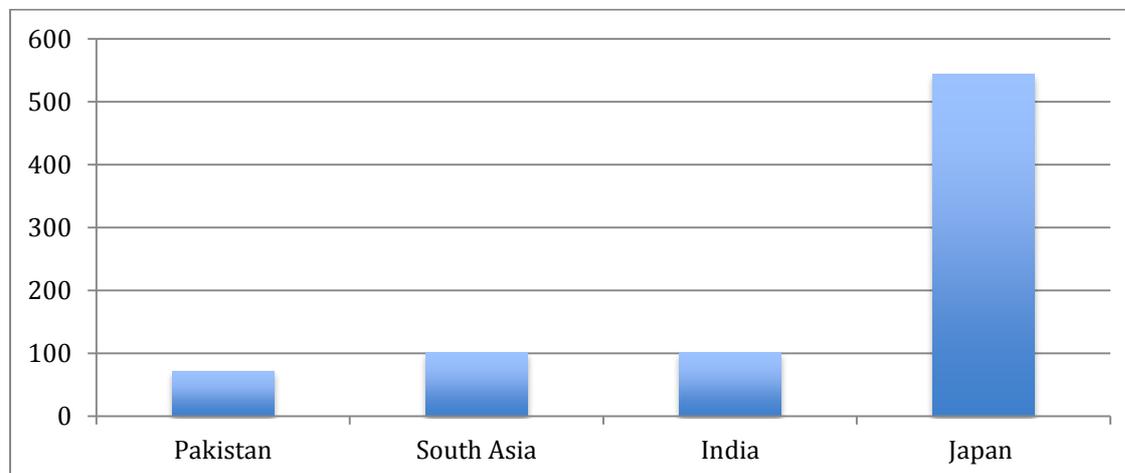
Figure 36: Education enrolment rates for Pakistan relative to competitors, 2014



Source: World Development Indicators, available at <http://data.worldbank.org/data-catalog/world-development-indicators>, downloaded February 2017

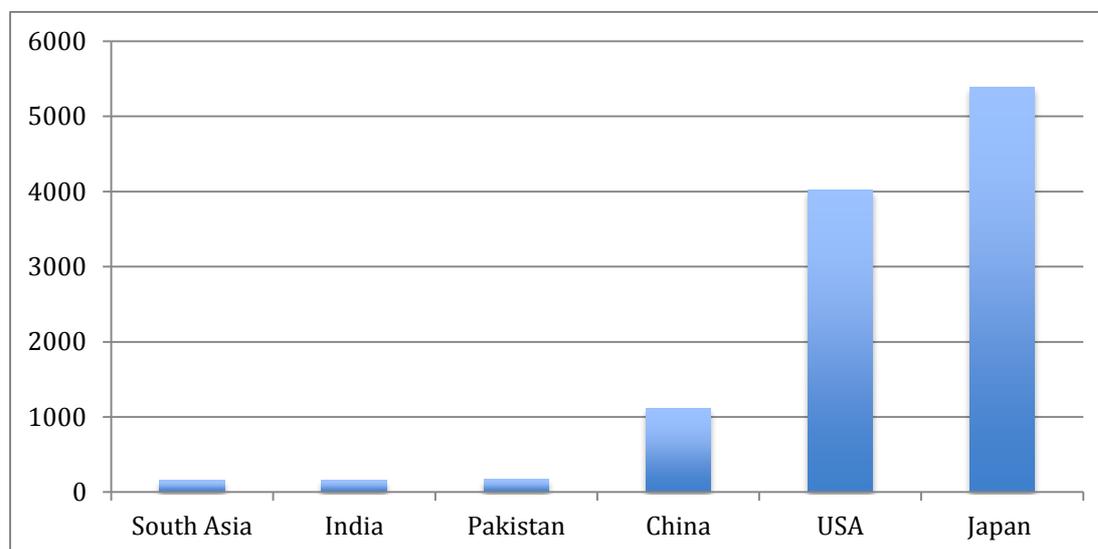
There is also a far smaller proportion of the population engaged as technicians and researchers.

Figure 37: Technicians in R&D per million people, 2013



Source: World Development Indicators, available at <http://data.worldbank.org/data-catalog/world-development-indicators>, downloaded February 2017

Figure 38: Researchers in R&D per million people



Source: World Development Indicators, available at <http://data.worldbank.org/data-catalog/world-development-indicators>, downloaded February 2017

In addition, just 32% of Pakistani firms offer formal training to their employees, compared to 36% in India and 79% in China.

All these indicators point towards Pakistan's low level of readiness for absorbing technology and mismatch for higher technology processes such as product

development. The current labour profile makes Pakistan more suited for assembly and basic manufacturing, at least in the short term.

However, it is important to have avenues for moving to higher value addition processes in the medium and long term. In general, education, skill formation, training in ICT and related areas and a facilitating environment for R&D (such as protection of intellectual property right, creation of labs and science parks, and incentives for in-house technology development) all help ensure that absorptive capacity is widespread throughout the population. It will be important to align educational policies and curricula with the labour market to ensure that new opportunities are leveraged, and contribute to inclusive and employment generating growth. This is particularly important for Pakistan at the moment to help accommodate the demographic bulge productively.

Innovation also requires a more enabling and stable investment climate that gives confidence to technology partners and attracts investment. The auto industry in Pakistan demonstrates the detrimental impact of poor investment climate on innovation. The auto industry is in the top three most innovative industries in the world, filing 12% of all patents worldwide. The Japanese parent companies of domestic carmakers Toyota, Honda and Suzuki, are all frontrunners in innovation, battling for market share in one of the most competitive and fast moving industries in the world.

Yet in Pakistan they seem to have settled into a lower equilibrium. Incomplete implementation of policies, a frequently changing policy environment and poor investment climate have discouraged new investment and entrenched the market power of the incumbents, thereby removing market pressure to provide better value, higher quality cars. The lack of national standards further means that the carmakers are not required by the government to meet any quality target in Pakistan.

An investment friendly approach with sensible, stable regulation can promote a more dynamic industry, and attract innovative global firms to locate their R&D in Pakistan. This would have technology and employment spillovers throughout the value chain, and would also help retain Pakistani researchers and innovators in Pakistan.

5.7 Summary and Way Forward

This chapter documents the current state and historical development of the industrial sector in Punjab. Industrial development in Punjab, and in Pakistan, in recent years has been characterized by low and falling foreign investment, exports, value addition in manufacturing and productivity. Punjab's industry has also had a fairly stagnant geographical dispersion. On the Global Competitiveness Index, Pakistan ranks 122nd out of 138 countries in 2016-17, in the lowest quintile.

There are several impediments to industrial development and competitiveness in Punjab that have been identified consistently from the several survey datasets and from qualitative research: a shortage of energy, policy instability, poor regulatory

governance and low availability of factor inputs such as skilled labour and finance are the key binding constraints at the moment.

The devolution in 2010 following the 18th constitutional amendment have given greater space for the Government of Punjab to change this, and several important steps have been taken by the Government to stem this decline. Firstly, the Punjab Government has prepared a growth strategy that has acted as a policy document that coordinates the arms of different government and donor agencies. The main direct initiatives for industrial development that have followed have been aligned with this strategy: Skills, Jobs and Competitiveness Program and Industrial Parks.

Some of these initiatives have already started to show results, such as skills and industrial parks, particularly for Ready Made Garments, Punjab's priority sector. Others such as the Jobs and Competitiveness Program became operational in 2016, and therefore the results are still to come. Yet other initiatives that directly address the binding constraints to business, such as a one-window facilitation and an industrial policy for Punjab, are also in the pipeline.

There are several recommendations that follow from the constraints that remain.

1. Energy is the single more important impediment to business In Punjab, and one where Punjab's performance is below the national average. Specific recommendations on energy can be found in the relevant chapter.
2. Business environment, including regulatory governance and access to finance, is also a high priority area and one for which Punjab must undertake urgent reforms in order to encourage domestic and foreign investment and allow firms to be globally competitive. Addressing corruption and building well-functioning institutions should be high on Punjab government's agenda, as Punjab performs poorly not just in comparison with the world, but also in comparison with other provinces. More specific recommendations are provided in the section on business environment below.
3. Having a skilled and educated labour force, including higher and technical education, is crucial in building a resilient, high value-added industrial sector. Specific recommendations on education can be found in the relevant chapter. Developing vocational skills has been an important item on the Department of Industries' agenda since the Punjab Growth Strategy and evidence-based programs have been rolled out to provide skills. It will be important to continue to monitor the interventions, and use the evidence to scale up those interventions that have been successful.
4. The provision of industrial land is an important tool for industrial development, and PIEDMC, FIEDMC and PSIC need to ensure a demand-based system where developed land, connected to utilities, is readily available for domestic and foreign investors to locate their industrial units. Past experience has been that while the land is acquired, it is not ready to use, which results in poor colonization, or speculative purchases. The industrial parks authorities need

to develop a sustainable system that ensures provision of land at a low cost to serious investors while deterring speculative investors.

5. There is a dearth of good quality, regularly collected data on industries in Punjab. This data is required for responsive, evidence-based policy making. Regular, good quality data on provincial exports, FDI and industrial output, and firm level data on outputs and inputs would enable researchers to analyze trends such as labour productivity and GPP, identify areas that need facilitation, and track the impact of policy interventions.

Business Environment recommendations:²

Some common recommendations apply across the nine BER functions:

1. Government departments need mandates that consider the impact of their functions on businesses. Businesses need to be facilitated in meeting regulations, and rent seeking should be curtailed through an effective incentive system for employees.
2. There needs to be better coordination and data sharing between the different departments.
3. Policy needs to be based on better evidence; involving the private sector at all stages through a proper private public dialogue system, in which the private sector believe there is a real appetite across government for positive change.

While there were problems in all nine BER functions, the really problematic ones were tax policies and administration, labour laws and administration and overall quality of regulatory governance. Specific short to medium term recommendations for these functions are:

Tax policies and administration

- Use a single tax ID by a single tax collection agency to ensure no duplication
- Enhance transparency in PRA procedures and communicate all applicable taxes and their rates on a website
- Align tax policy between FBR and Government of Punjab and expedite refund claims resolution of over taxation cases.

Labour laws and administration

- Publish a short labour code compliance booklet and checklist of laws by Labour Department
- Simplify labour laws regimes
- Develop intermediaries for interaction between labour officials and businesses with inspections regime based on risk profile of different industries
- Provide exemptions for low risk industries and third party validation for medium risk industries

² These recommendations are based on detailed research by the Business Environment Research Facility for Punjab

- Ensure online availability of inspection reports to enhance transparency

Overall quality of regulatory governance

- A publically available list of approved Dengue spray companies, by Health Department can be used to issue certificates of compliance, without on-ground inspections.
- Use software, such as AutoCAD, for online verification of the compliance of building plans with building codes
- Combine all inspections into a single regime, in the long run, as practiced globally with time bound government service delivery to businesses, with consequences for non-compliance
- Develop relevant legislation for labour, environment, provincial taxes, land, construction permits and utility connections

CPEC specific recommendations:³

Punjab will need to ensure readiness for the changes expected due to CPEC in order to ensure that positive impact on the economy are maximised. Having a good regulatory environment with stable policies and an improved business environment are general recommendations that apply just as well to adjusting to the changes that are expected due to CPEC. Some specific recommendations are:

1. Develop sector-specific investor fora to ensure that investors are able to identify and act upon favorable opportunities. This includes opportunities for both inward and outward investment, as both facilitate technology acquisition and growth.
2. Undertake public-private dialogue to inform the government of the market pulse and provide timely feedback for any corrective action on part of the government.
3. Provide targeted incentives to support desired policy outcomes. For Punjab, this may include tax incentives for provincial taxes, subsidized credit; industrial parks and export promotion zones or other forms of land lease; guarantees or special purpose vehicles to subsidize high-risk finance; subsidized skills development interventions; and business facilitation. It is important that any such incentives should follow international guidelines on investment policy principles such as transparency, property protection and non-discrimination.
4. Collect sound evidence and data to assess industrial trends, competitiveness of various sectors, value chain dynamics and identify bottlenecks and failures, etc. Such intelligence should regularly feed into government's policy making and help calibrate any government interventions. An industrial observatory housed within the Industries Department can take on this role.

³ These recommendations are based on detailed research by the Consortium for Development Policy Research on Industrial Cooperation under CPEC

5. Coordinate with federal government to renegotiate the Free Trade Agreement (FTA) with China to take full benefit of industrial cooperation under CPEC. It is important that tariff structure for Pakistan should be at par with that offered to China's other trading partners and non-tariff barriers should be rationalized and minimized through effective negotiation.
6. Tighten the regulatory and safeguards regime and strengthen capacity to implement environmental regulations. It is expected that CPEC will also lead to industry relocation from China to Pakistan, and it will be important to ensure that environmental safeguards are in place to regulate this new industrial activity.
7. Build capacity of local industry so that they can take maximum benefit of these upcoming investments. It is also critical that any new industry, especially in sectors supported by government, should focus on technology transfer and strengthening of local business. Efforts should also be made for upstream and/or downstream integration of local partners.
8. Align all public investments with CPEC and ensure readiness for local industrial clusters to take benefit of upcoming developments. Government of Punjab is already making substantial investments through its annual development portfolio in a number of areas that are relevant to CPEC, such as skills development, industrial parks development, rural and urban roads development, etc. These need to be calibrated in light of CPEC plans. A similar readiness would also be required for the local workforce, so that they are suitably skilled to take advantage of opportunities offered by new and expanding industries. Pakistan has poor secondary and tertiary school enrolment compared to competitors, and it is imperative to provide basic competencies and higher and technical education to a wider section of the population. This will ensure that labour is resilient to structural change and has absorptive capacity for new technologies.

5.7 Annexes

Annex 1: Pakistan's performance on the Global Competitiveness Index, 2015-16

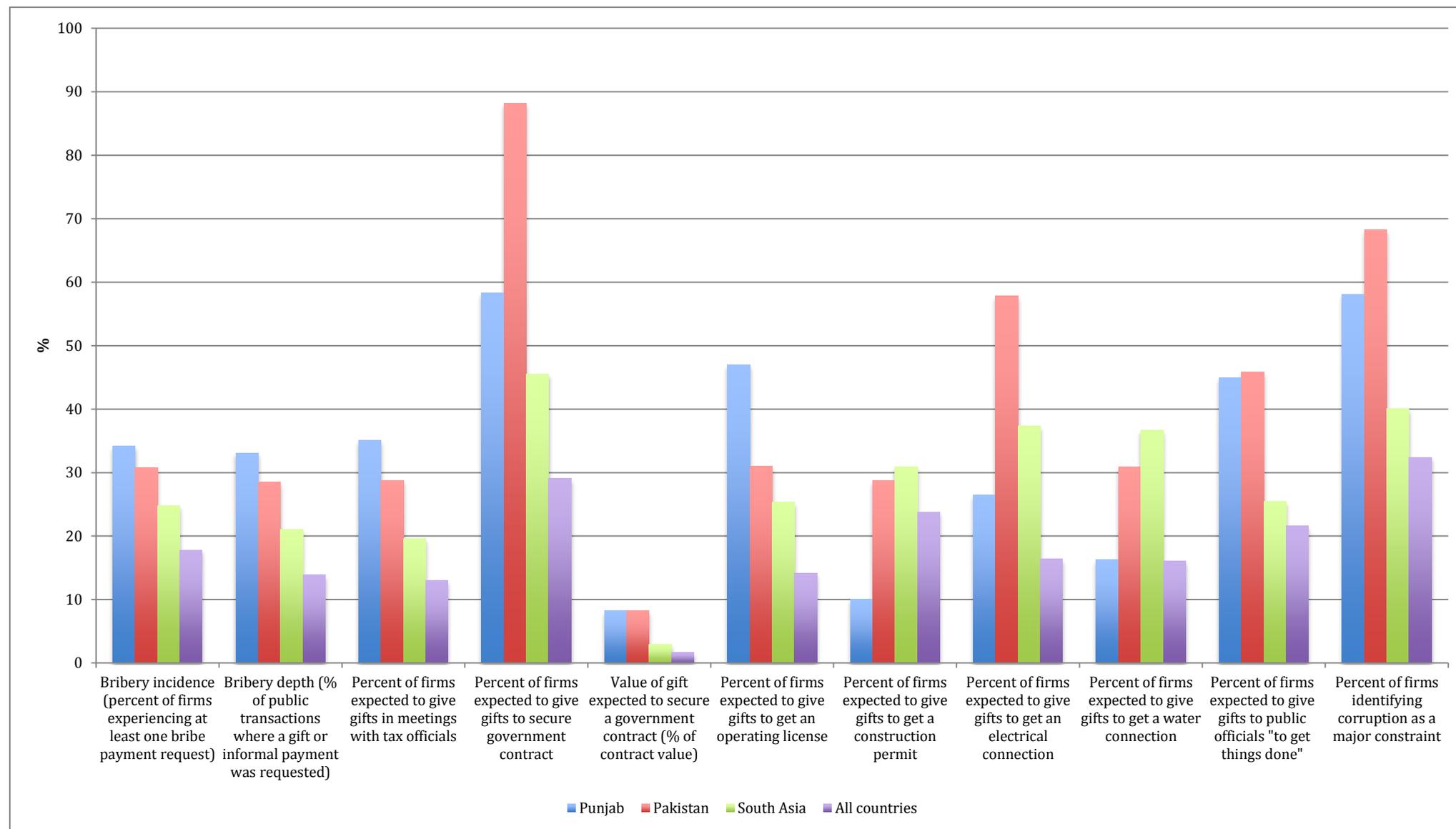
INDICATOR		VALUE	RANK/140	INDICATOR		VALUE	RANK/140
1st pillar: Institutions				4th pillar: Health and Primary Education			
1.01	Property rights	3.47	118	4.01	Malaria cases/100,000 pop*	1953.6	46
1.02	Intellectual property protection	3.21	112	4.02	Business impact of malaria	4.19	49
1.03	Diversion of public funds	3.08	85	4.03	Tuberculosis cases/100,000 pop*	275	125
1.04	Public trust in politicians	2.44	99	4.04	Business impact of tuberculosis	4.44	104
1.05	Irregular payments and bribes	2.99	116	4.05	HIV prevalence % adult pop*	0.1	1
1.06	Judicial independence	3.56	82	4.06	Business impact of HIV/AIDS	4.81	94
1.07	Favouritism in decisions of government officials	2.97	75	4.07	Infant mortality deaths/1000 live births*	69	134
1.08	Wastefulness of government spending	2.58	102	4.08	Life expectancy years*	66.59	106
1.09	Burden of government regulation	3.27	86	4.09	Quality of primary education	2.99	112
1.1	Efficiency of legal framework in settling disputes	3.08	108	4.1	Primary education enrolment net %*	71.86	134
1.11	Efficiency of legal framework in challenging regs.	3.01	101	5th pillar: Higher Education and Training			
1.12	Transparency of government policymaking	3.33	125	5.01	Secondary education enrolment gross %*	38.32	129
1.13	Business costs of terrorism	2.59	139	5.02	Tertiary education enrolment gross %*	9.82	115
1.14	Business costs of crime and violence	2.83	130	5.03	Quality of the education system	3.57	75
1.15	Organized crime	3.07	132	5.04	Quality of math and science education	3.64	89
1.16	Reliability of police services	2.84	126	5.05	Quality of management schools	4.13	70
1.17	Ethical behaviour of firms	3.6	98	5.06	Internet access in schools	3.53	103
1.18	Strength of auditing and reporting standards	3.82	117	5.07	Availability of research and training services	3.82	94
1.19	Efficacy of corporate boards	4.1	121	5.08	Extent of staff training	3.33	122
1.2	Protection of minority shareholders' interests	3.55	112	6th pillar: Goods Market Efficiency			
1.21	Strength of investor protection 0–10 (best)*	6.7	21	6.01	Intensity of local competition	4.69	98
2nd pillar: Infrastructure				6.02	Extent of market dominance	3.25	110
2.01	Quality of overall infrastructure	3.48	98	6.03	Effectiveness of anti-monopoly policy	3.41	106
2.02	Quality of roads	3.76	77	6.04	Effect of taxation on incentives to invest	3.66	66
2.03	Quality of railroad infrastructure	2.83	60	6.05	Total tax rate % profits*	32.6	50
2.04	Quality of port infrastructure	4.08	66	6th pillar: Goods Market Efficiency (cont'd)			
2.05	Quality of air transport infrastructure	4.13	79	6.06	No. procedures to start a business*	10	116
2.06	Available airline seat km/week millions*	439	48	6.07	No. days to start a business*	19	94
2.07	Quality of electricity supply	2.07	129	6.08	Agricultural policy costs	3.39	103
2.08	Mobile telephone subscriptions/100 pop.*	73.33	124	6.09	Prevalence of trade barriers	4.01	106
2.09	Fixed telephone lines/100 pop.*	2.65	112	6.1	Trade tariffs % duty*	17.49	137
3rd pillar: Macroeconomic Environment				6.11	Prevalence of foreign ownership	3.65	116
3.01	Government budget balance % GDP*	-4.71	106	6.12	Business impact of rules on FDI	3.83	111
3.02	Gross national savings % GDP*	12.75	115	6.13	Burden of customs procedures	3.36	111
3.03	Inflation annual % change*	8.62	127	6.14	Imports as a percentage of GDP*	22.14	132
3.04	General government debt % GDP*	64.22	101	6.15	Degree of customer orientation	4.07	106
3.05	Country credit rating 0–100 (best)*	25.3	115	6.16	Buyer sophistication	3.3	78

INDICATOR	VALUE	RANK/ 140
7th pillar: Labor Market Efficiency		
7.01 Cooperation in labor-employer relations	3.54	131
7.02 Flexibility of wage determination	4.14	114
7.03 Hiring and firing practices	4.09	48
7.04 Redundancy costs weeks of salary*	27.17	115
7.05 Effect of taxation on incentives to work	3.69	84
7.06 Pay and productivity	3.66	95
7.07 Reliance on professional management	3.45	122
7.08 Country capacity to retain talent	3.48	70
7.09 Country capacity to attract talent	2.86	96
7.1 Women in labor force ratio to men*	0.3	136
8th pillar: Financial Market Development		
8.01 Availability of financial services	4.24	80
8.02 Affordability of financial services	3.96	83
8.03 Financing through local equity market	3.55	69
8.04 Ease of access to loans	2.58	90
8.05 Venture capital availability	2.64	78
8.06 Soundness of banks	4.36	99
8.07 Regulation of securities exchanges	3.78	93
8.08 Legal rights index 0–10 (best)*	3	93
9th pillar: Technological readiness		
9.01 Availability of latest technologies	4.58	79
9.02 Firm-level technology absorption	4.42	82
9.03 FDI and technology transfer	4.34	77
9.04 Individuals using Internet %*	13.8	119
9.05 Fixed broadband Internet subscriptions/100 pop*	1.08	107
9.06 Int'l Internet bandwidth kb/s per user*	5.68	115
9.07 Mobile broadband subscriptions/100 pop.*	5.06	125

INDICATOR	VALUE	RANK/ 40
10th pillar: Market Size		
10.01 Domestic market size index 1–7 (best)*	4.99	23
10.02 Foreign market size index 1–7 (best)*	4.88	55
10.03 GDP (PPP\$ billions)*	882.31	26
10.04 Exports as a percentage of GDP*	11.28	137
11th pillar: Business Sophistication		
11.01 Local supplier quantity	4.63	53
11.02 Local supplier quality	3.88	98
11.03 State of cluster development	3.68	68
11.04 Nature of competitive advantage	3.05	99
11.05 Value chain breadth	3.83	64
11.06 Control of international distribution	3.85	62
11.07 Production process sophistication	3.6	86
11.08 Extent of marketing	3.92	100
11.09 Willingness to delegate authority	3.27	115
12th pillar: Innovation		
12.01 Capacity for innovation	3.67	95
12.02 Quality of scientific research institutions	3.21	104
12.03 Company spending on R&D	3.01	88
12.04 University-industry collaboration in R&D	3.21	98
12.05 Gov't procurement of advanced tech products	3.55	52
12.06 Availability of scientists and engineers	4.31	44
12.07 PCT patents applications/million pop*	0.04	109

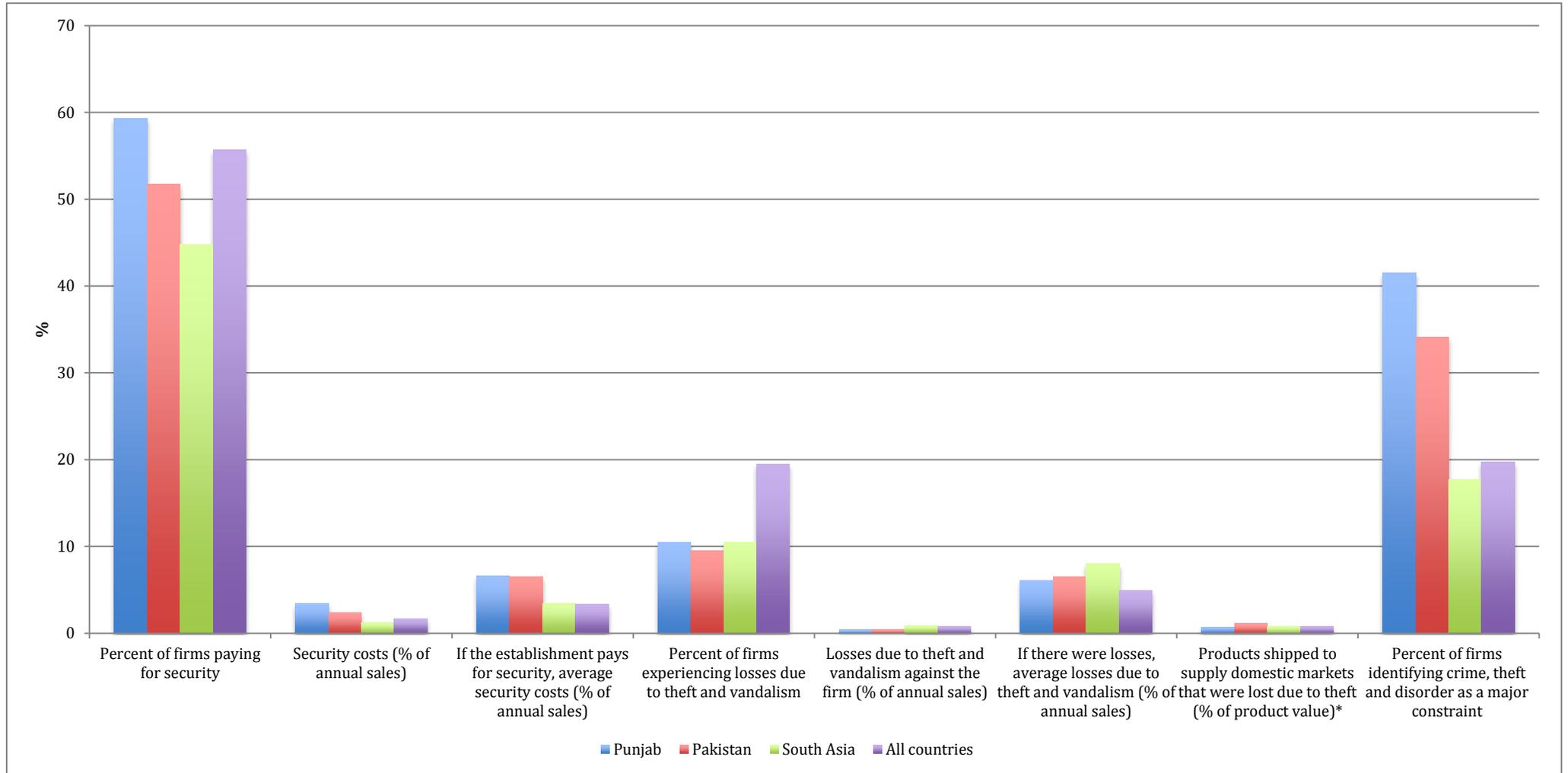
Annex 2: Punjab's performance on World Bank's Investment Climate survey

Figure 39 Investment Climate performance of Punjab, 2013: Corruption



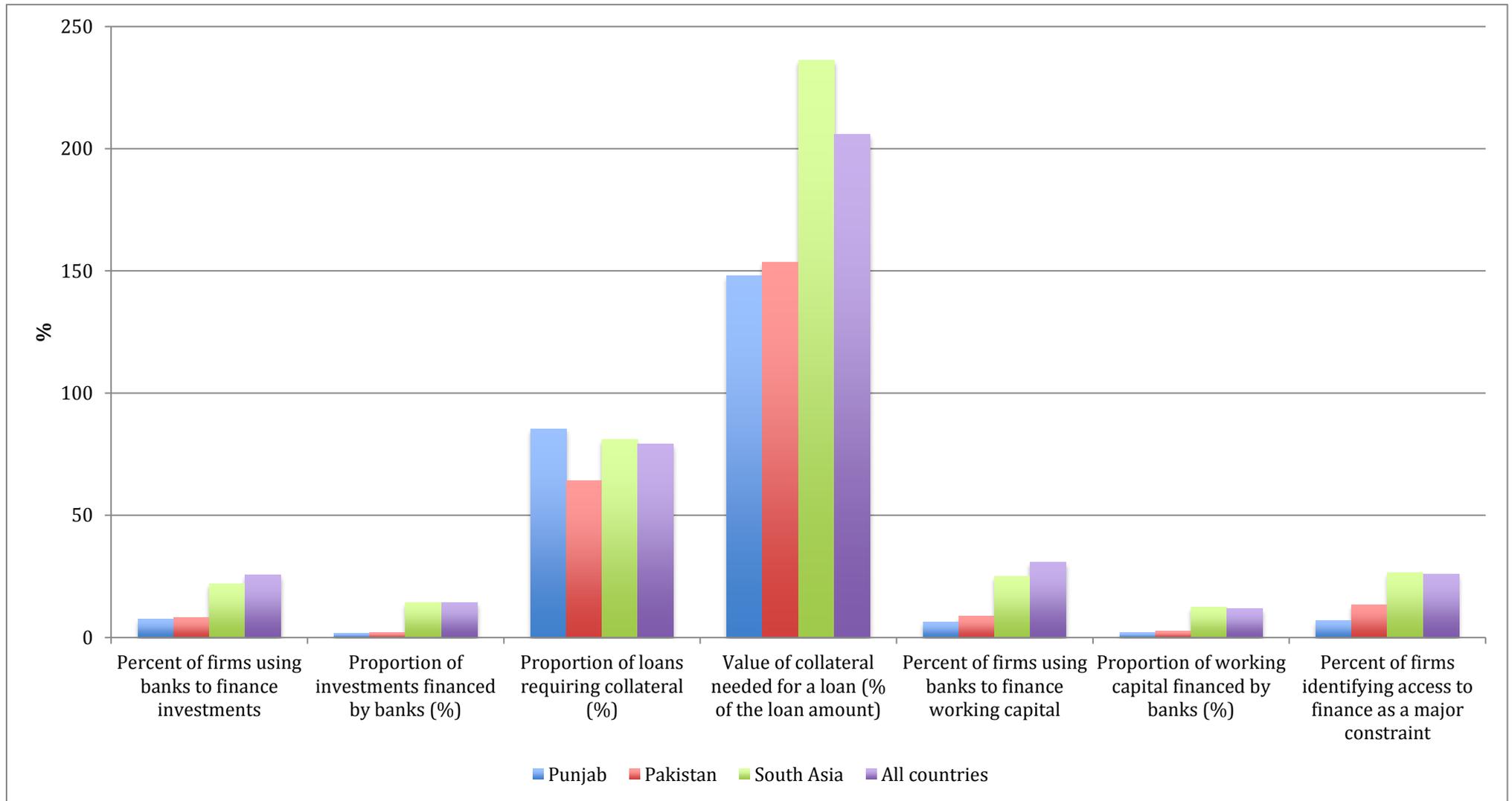
Source: World Bank Investment Climate survey, 2013

Figure 40 Investment Climate performance of Punjab, 2013: Crime



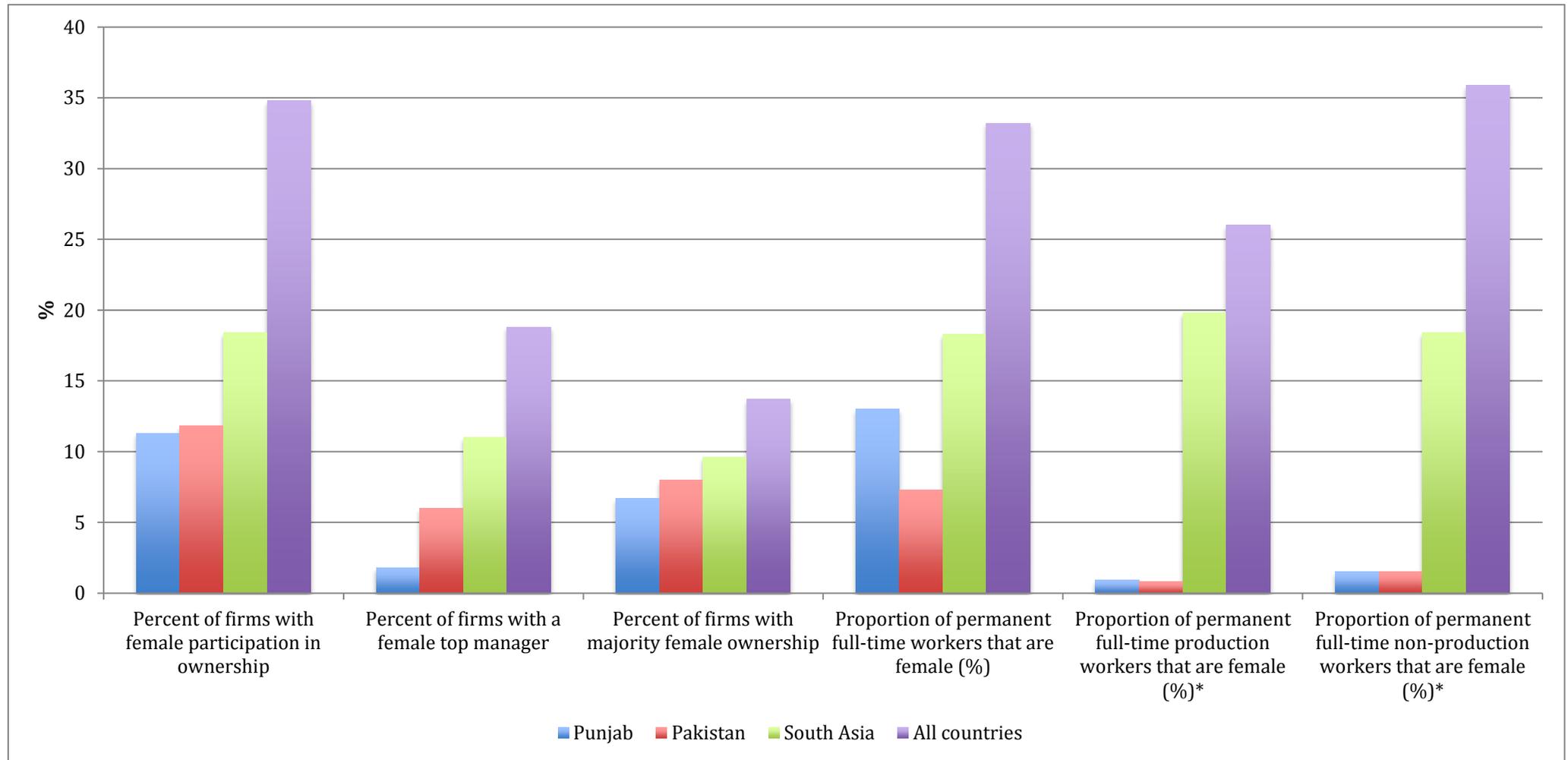
Source: World Bank Investment Climate survey, 2013

Figure 41 Investment Climate performance of Punjab, 2013: Finance



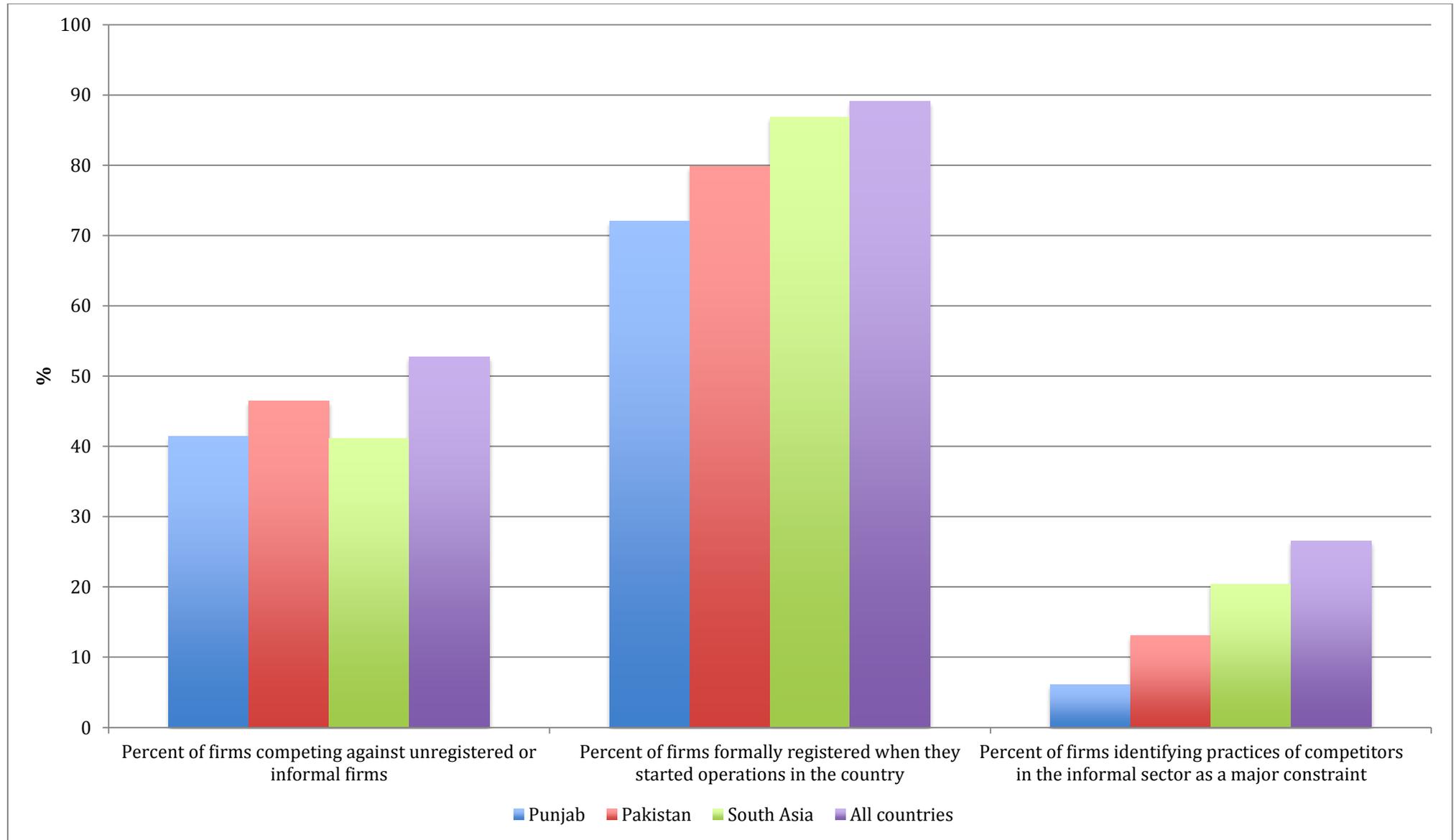
Source: World Bank Investment Climate survey, 2013

Figure 42 Investment Climate performance of Punjab, 2013: Gender



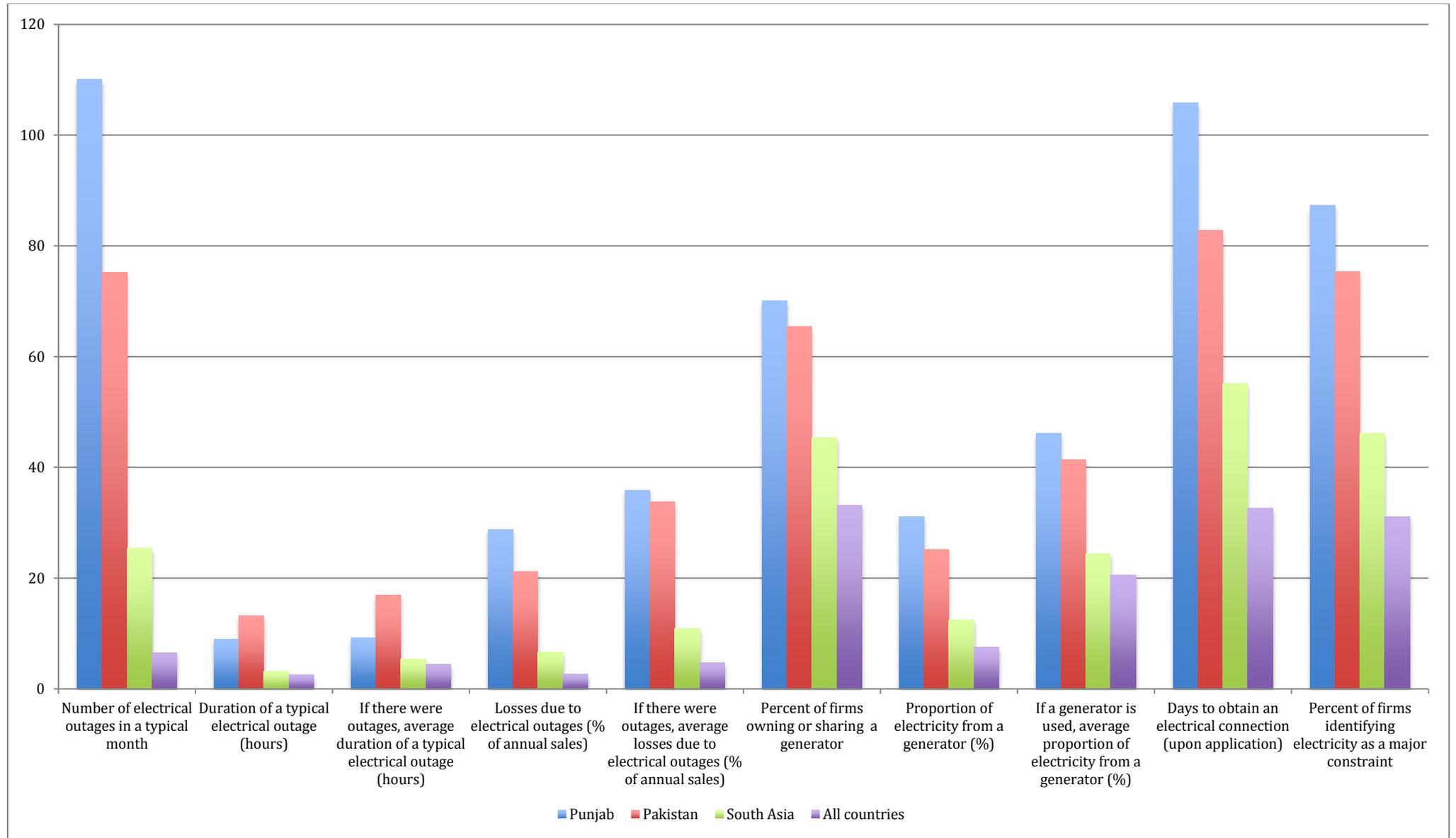
Source: World Bank Investment Climate survey, 2013

Figure 43 Investment Climate performance of Punjab, 2013: Informality



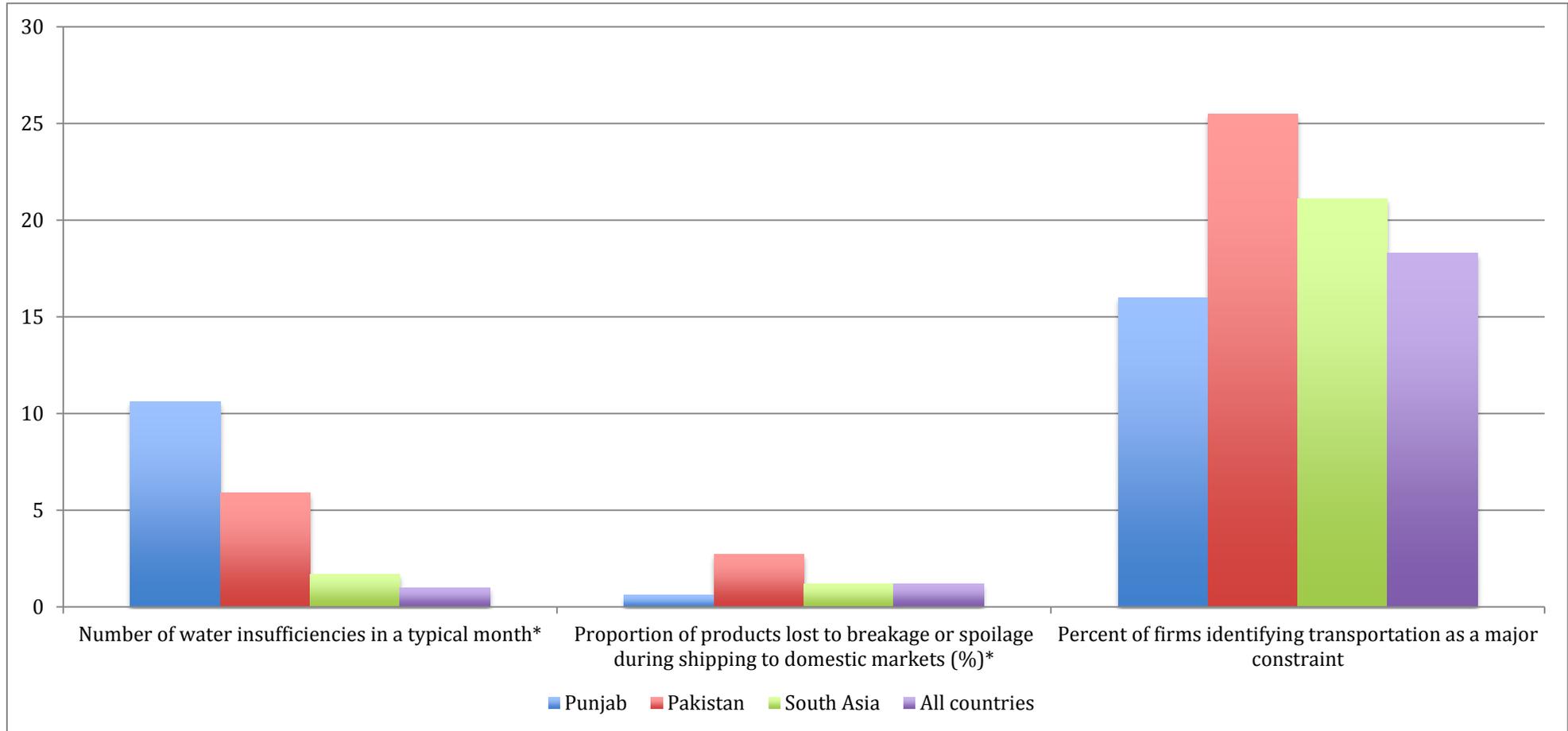
Source: World Bank Investment Climate survey, 2013

Figure 44 Investment Climate performance of Punjab, 2013: Electricity



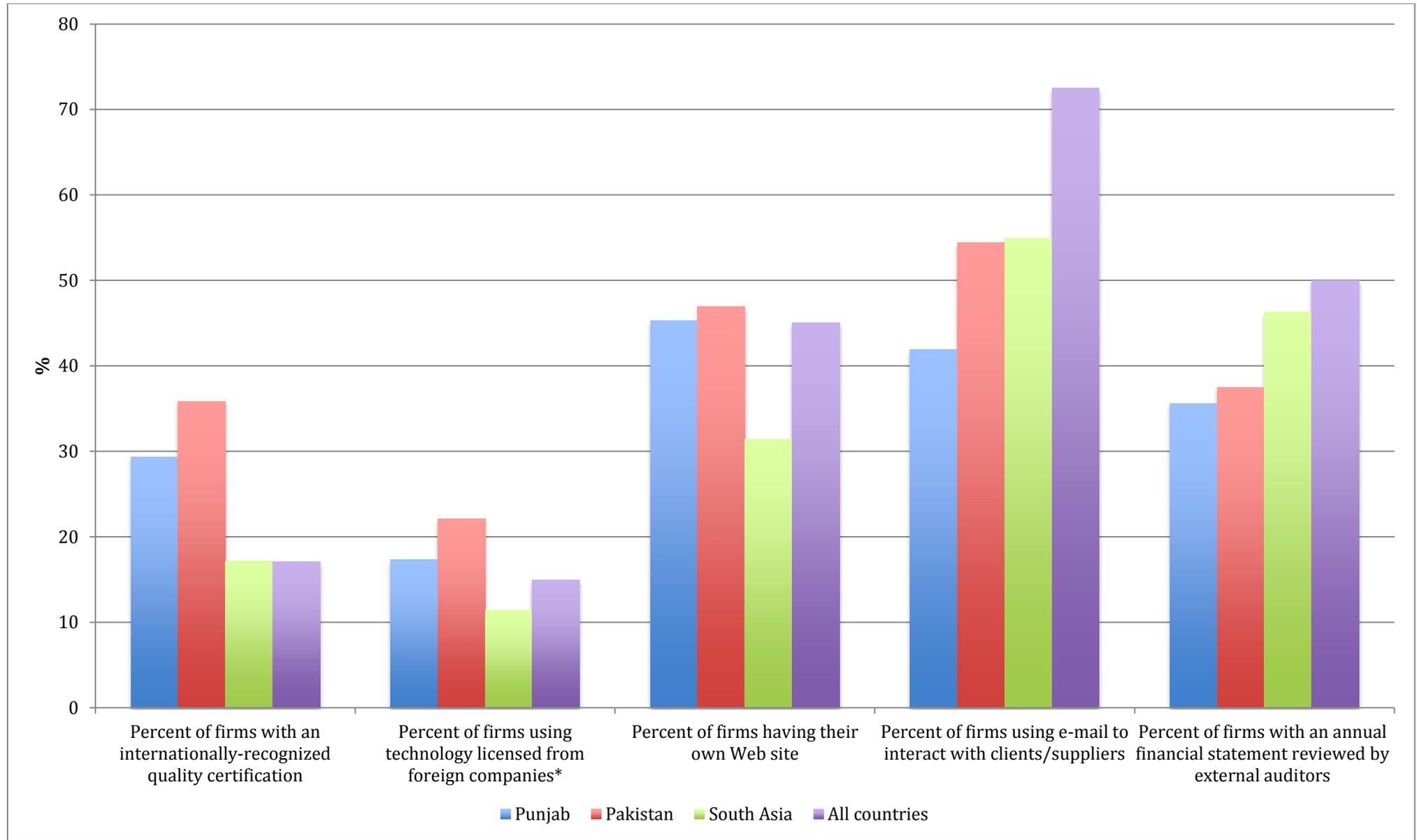
Source: World Bank Investment Climate survey, 2013

Figure 45 Investment Climate performance of Punjab, 2013: Other infrastructure



Source: World Bank Investment Climate survey, 2013

Figure 46 Investment Climate performance of Punjab, 2013: Innovation and Technology



Source: World Bank Investment Climate survey, 2013

Figure 47 Investment Climate performance of Punjab, 2013: Firm performance I

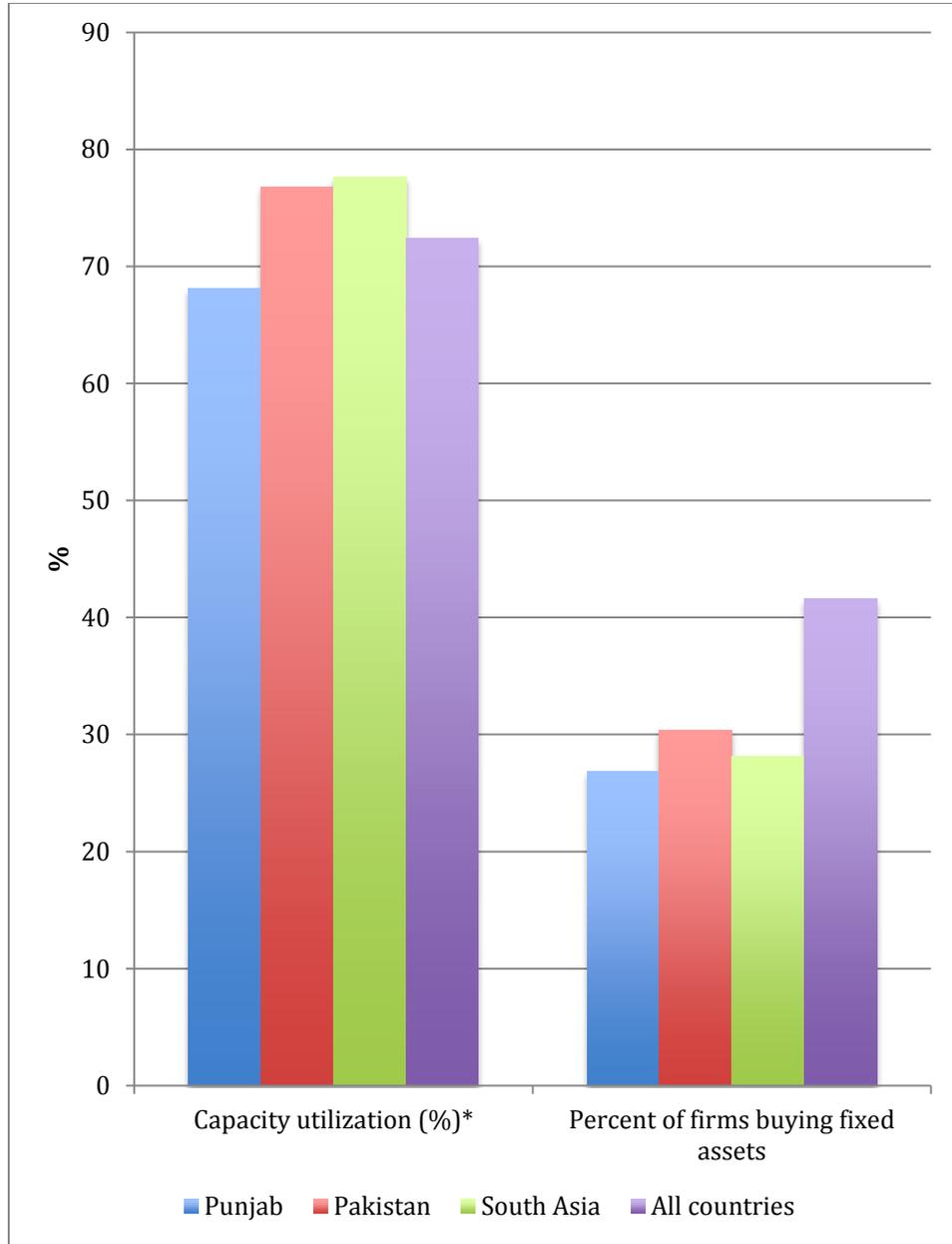
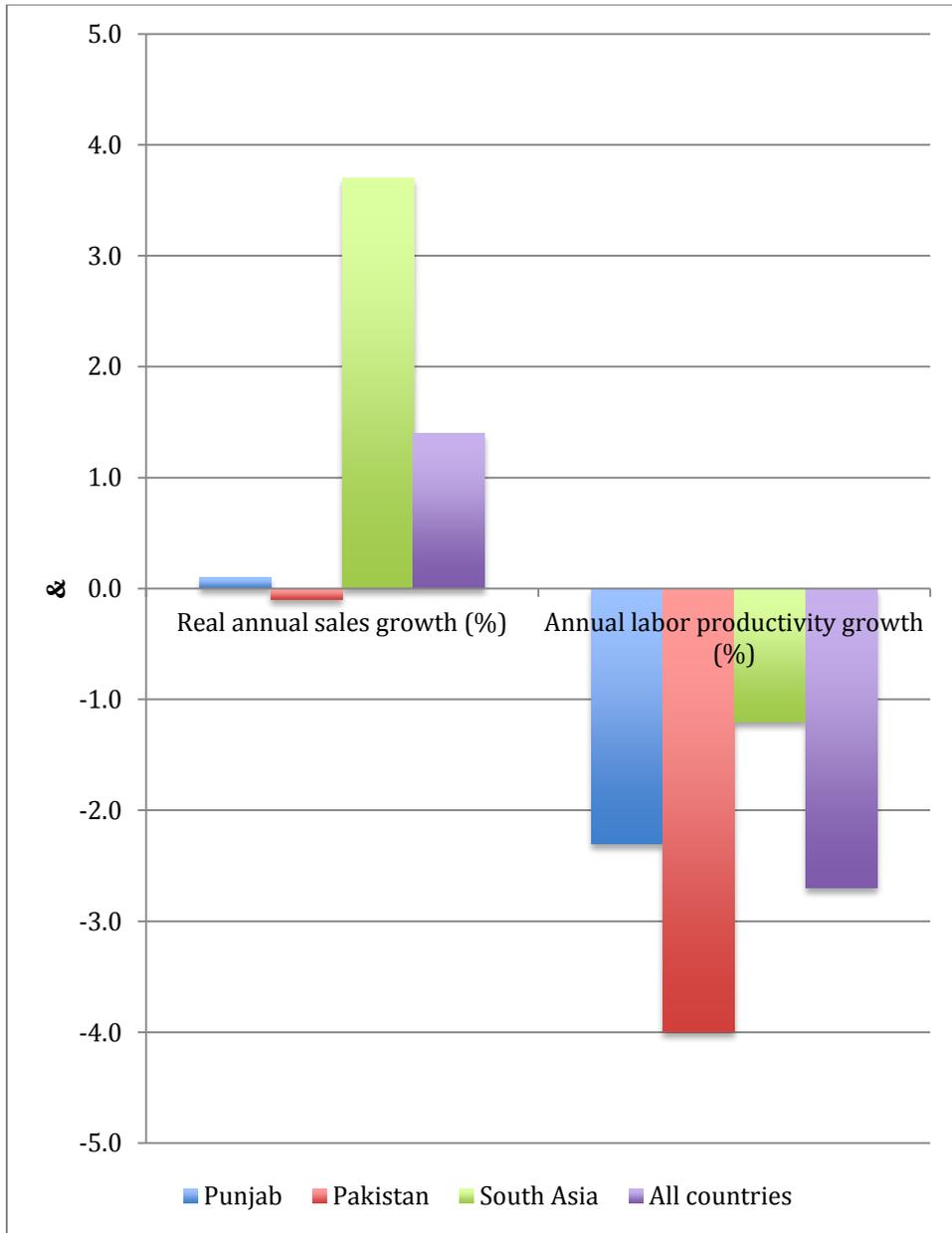
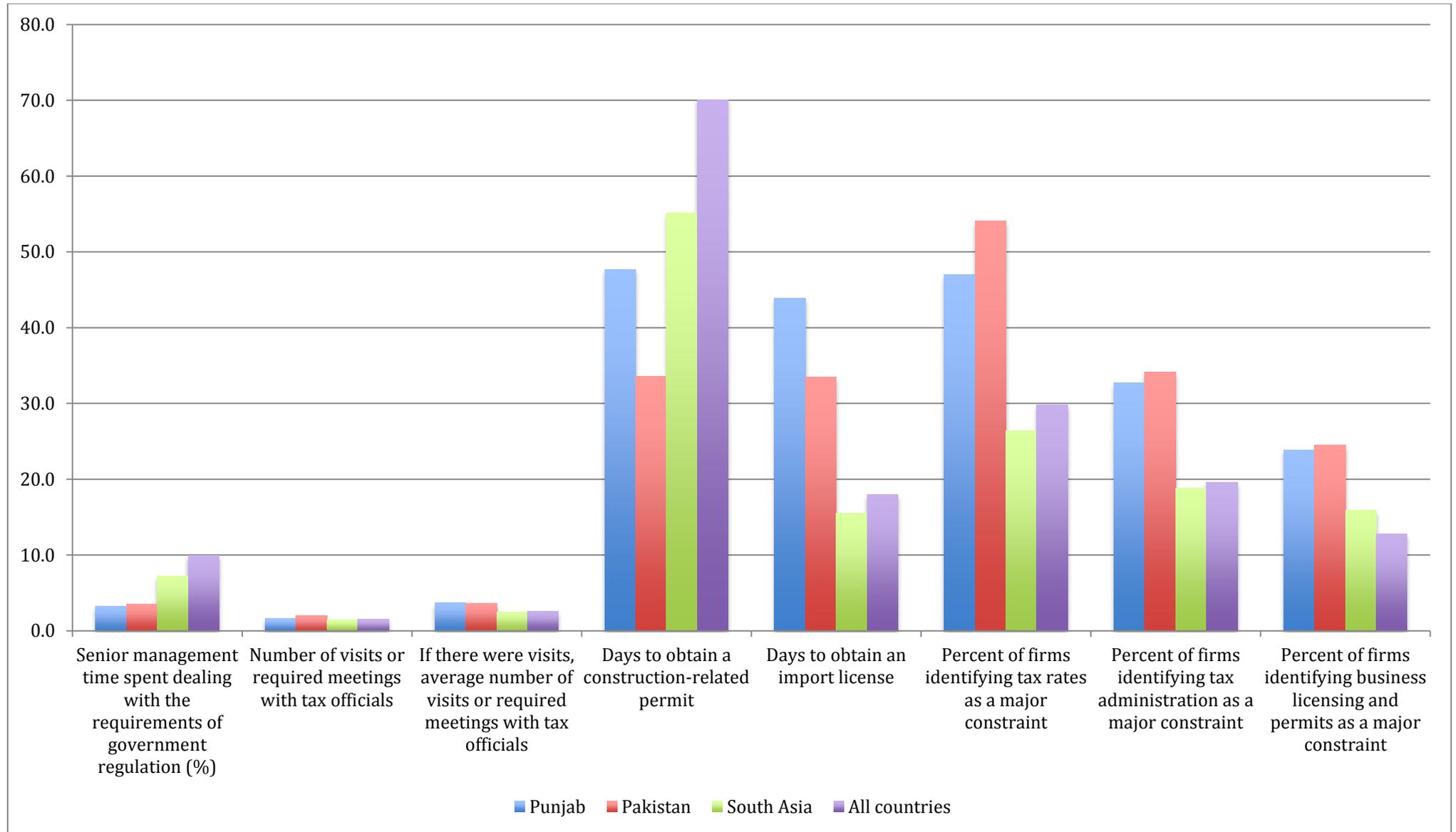


Figure 48 Investment Climate performance of Punjab, 2013: Firm performance II



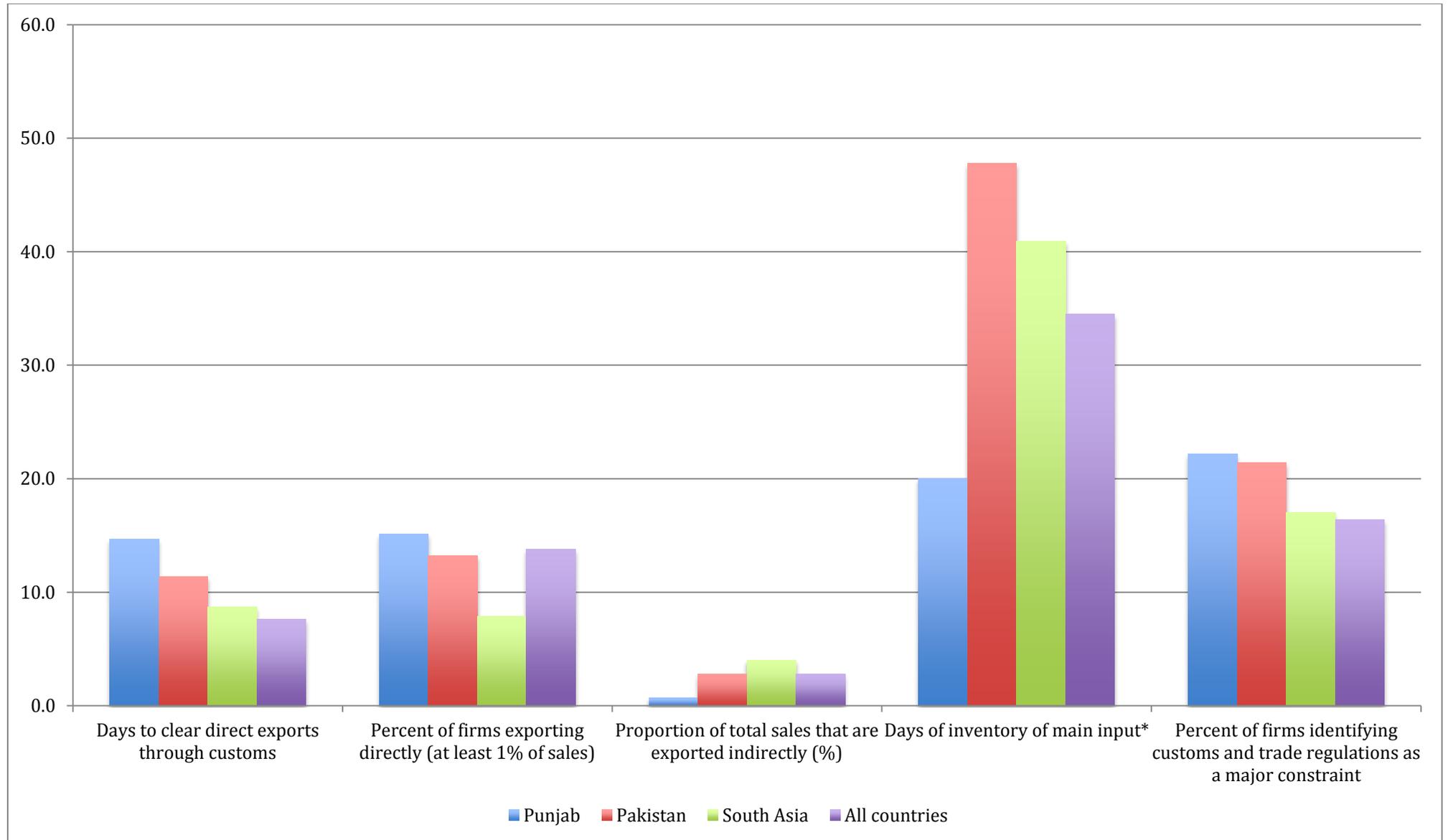
Source: World Bank Investment Climate survey, 2013

Figure 49 Investment Climate performance of Punjab, 2013: Regulation and Taxes



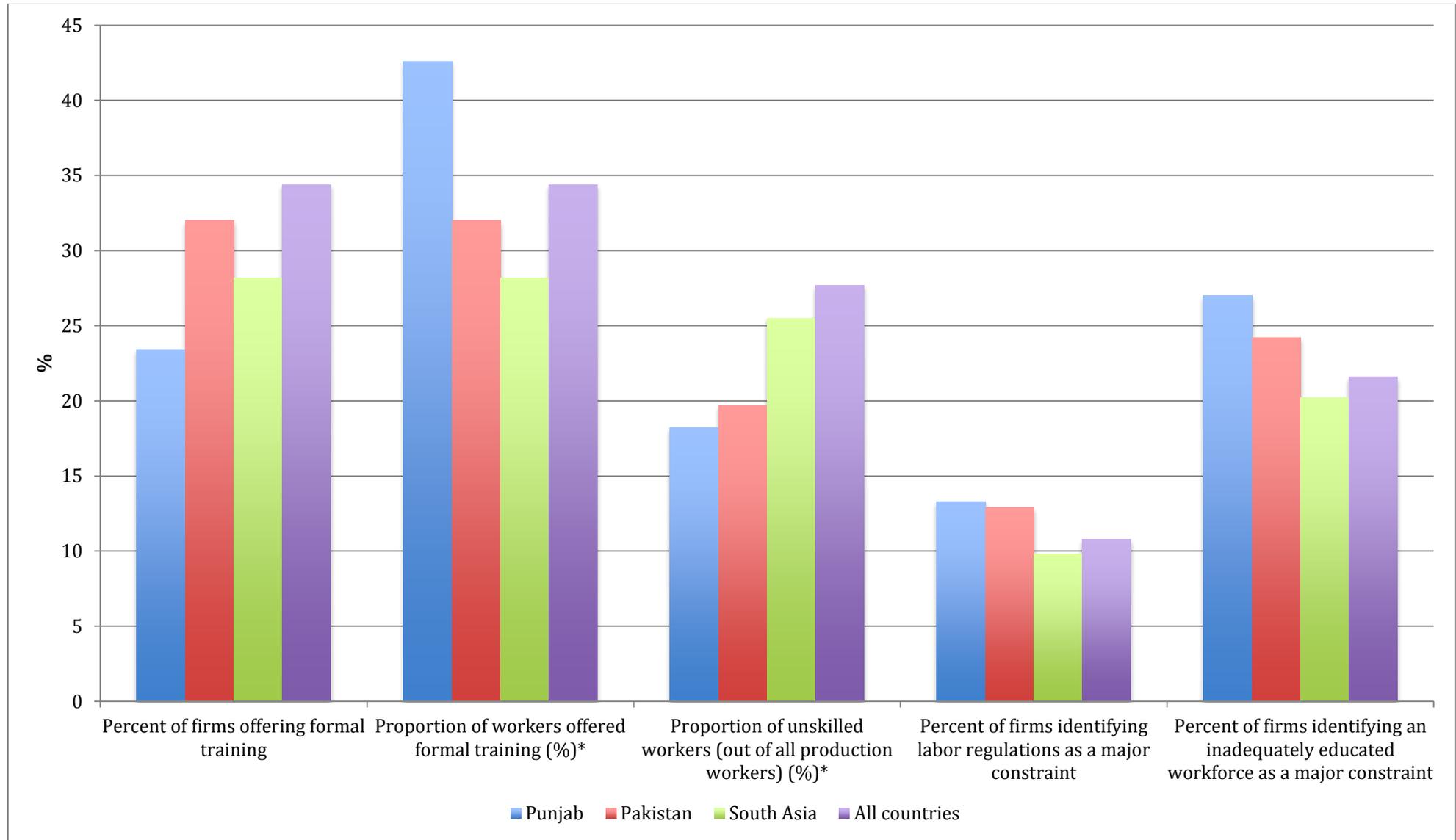
Source: World Bank Investment Climate survey, 2013

Figure 50 Investment Climate performance of Punjab, 2013: Trade



Source: World Bank Investment Climate survey, 2013

Figure 51 Investment Climate performance of Punjab, 2013: Workforce



Source: World Bank Investment Climate survey, 2013

Figure 52 World Bank Logistics Performance Index, 2016

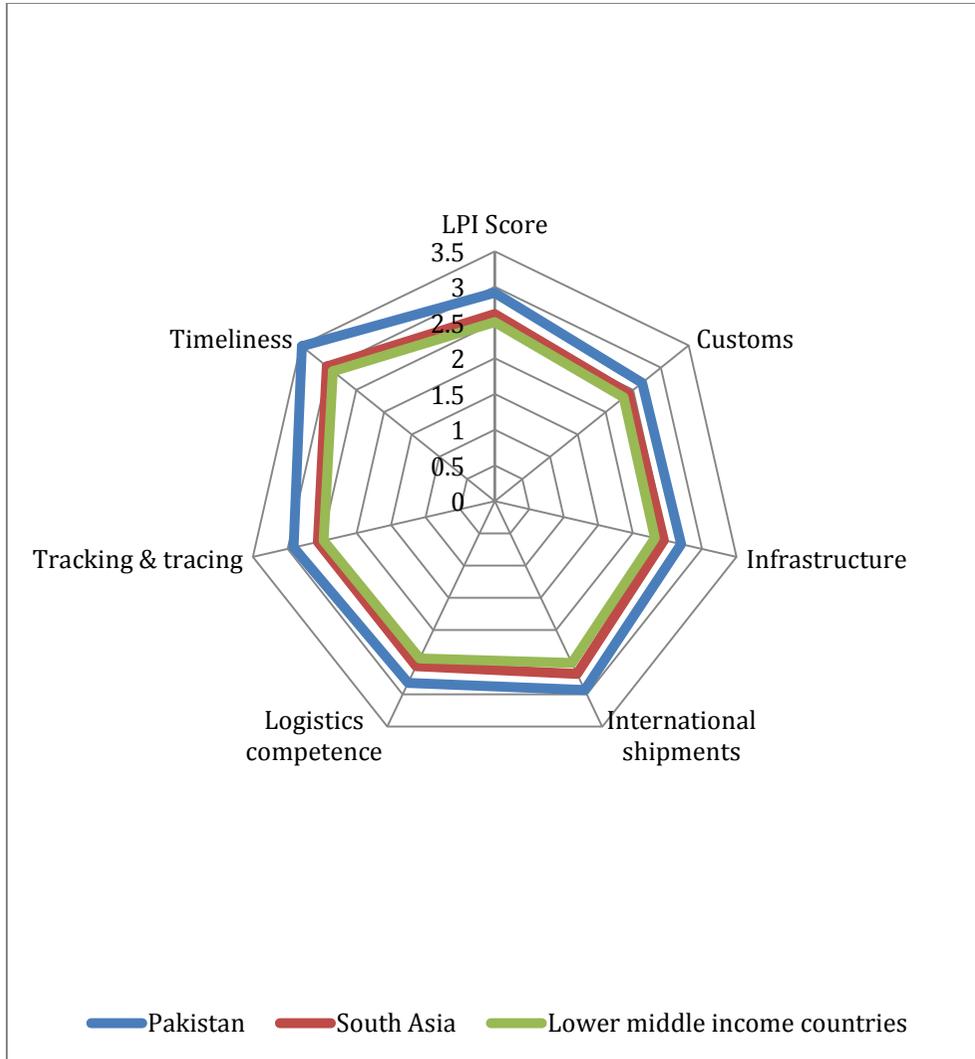
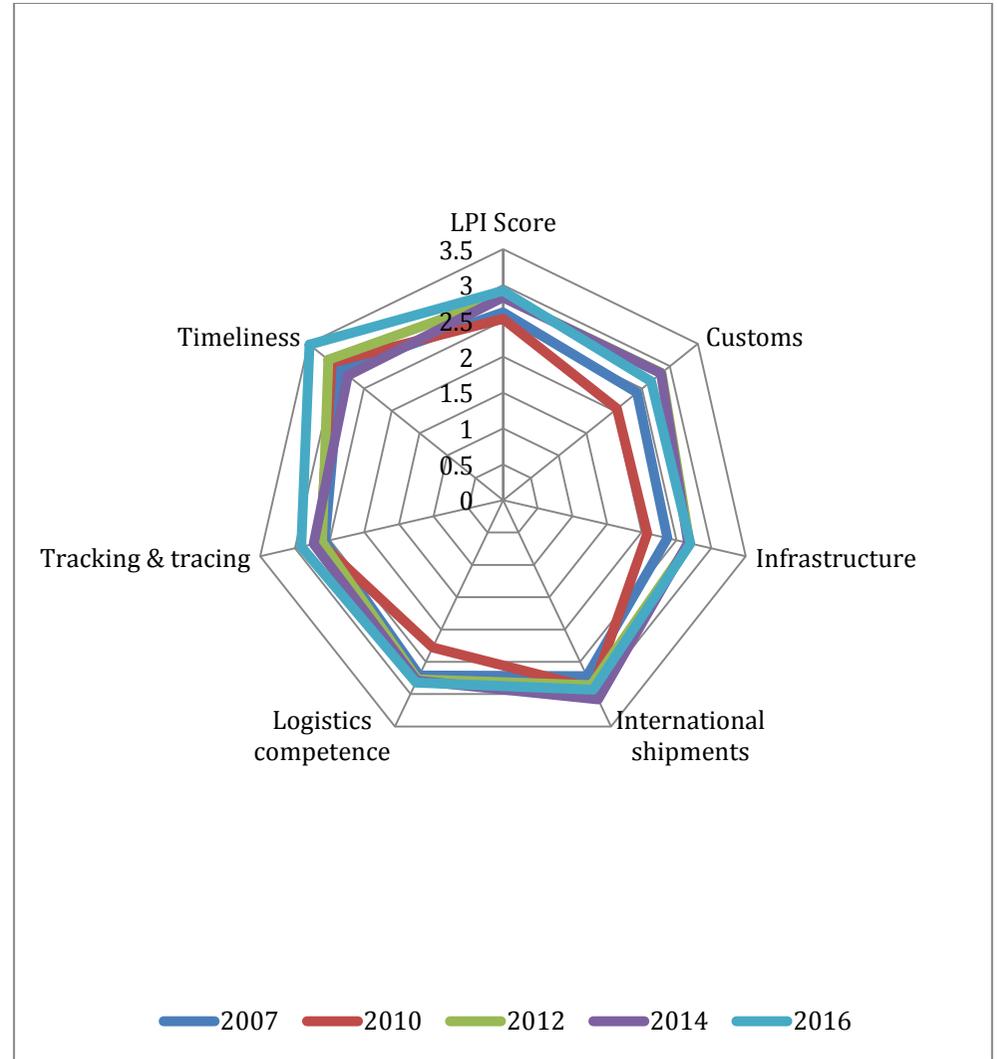


Figure 53 Pakistan's Logistics Performance Index, 2007-2016



Source: World Bank

Notes:

1. The Logistics Performance Index is calculated using responses from a structured online survey of logistics professionals from the companies responsible for moving goods around the world.
2. Higher score indicate better performance. Germany, the best performer in 2016 has an overall LPI of 4.23. Syria, the lowest performer, had a score of 1.6.

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