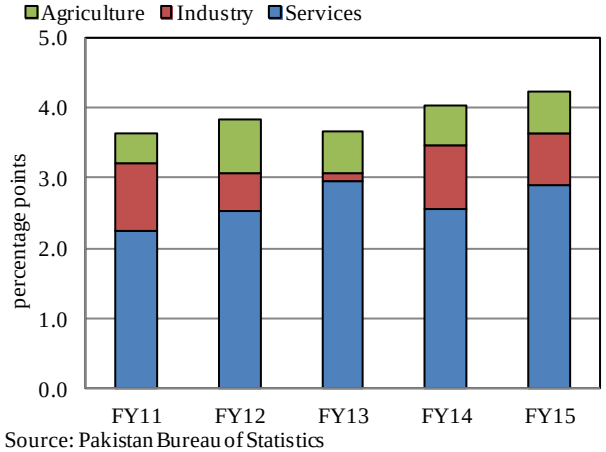
2 Economic Growth

2.1 Real GDP

Pakistan's real GDP growth reached 4.2 percent in FY15 – a seven year high level. The impetus to growth came from a strong pick up in the services sector, and a modest recovery in agriculture (mainly driven by a healthy growth in livestock) (**Figure 2.1**).

Figure 2.1 Contribution to GDP Growth



Source: Pakistan Bureau of Statistics

Although the country was able to consolidate macroeconomic stability, several long standing structural constraints continue to impede any sharp recovery in growth. For example, investment rate remained low mainly due to difficult security situation; unfavorable weather events damaged several crops and lowered yields; and continuing energy shortages disrupted industrial activity. The challenges compounded further in FY15, as weak external demand slowed down country's exports. The GDP growth, therefore, fell short of the target of 5.1 percent.

In agriculture, crop losses from September 2014 floods and heavy rains in April 2015, offset most of the gains in the livestock sector.[1] Farmers, who were already carrying losses from crop damages, came under further pressure when the prices of agriculture produce in the domestic market fell in line with global trends.[2] In the case of sugarcane, growers also faced delays in cane crushing.[3] In this situation, as farmers had little incentive (and resources) to invest in their crops, yields of almost all major crops, fell further in FY15 from their already low levels.

The persistently low yields posed a serious concern, as Pakistan already ranks 77 out of 109 countries in terms of food security.[4,5] On top of it, ensuring food security is likely to become more challenging due to growing population, urbanization, rising water scarcity, and potential climate changes. Improving productivity is the key to achieve high and sustained growth in the agriculture sector.

The lackluster performance of industry was another factor that contained the overall GDP growth. Specifically, industry could grow by only 3.6 percent, against the target of 6.8 percent. The LSM

[1] According to Pakistan's Economic Survey FY15, heavy rainfall and floods in September 2014 damaged the standing crops of cotton, rice and sugarcane particularly in the districts of Jhang, Muzzafargarh, Mutlan and Sargodha. In addition, the rabi crops (mainly wheat) suffered from heavy rains and hailstorm in April 2015, particularly in KPK and Punjab.

[2] For example, the World Bank commodity prices index for grains fell by 22.8 percent from March 2014 to June 2015. The wholesale price of wheat and rice in the domestic market fell by 22.3 and 8.4 percent, respectively, during this period.

[3] Avoiding delays in crushing is challenging: sugarcane growers have incentive to clear their fields as early as possible (they need to prepare for the wheat sowing that generally starts in late November and early December), whereas sugar mills prefer to wait as matured cane improves the sucrose content and the recovery ratio. One possible way out is to price the sugarcane according to sucrose contents (instead of weight), as specified in the National Sugar Policy.

[4] Source: Global Food Security Index (http://foodsecurityindex.eiu.com/Country/Details#Pakistan).

[5] For an agro-based economy like Pakistan, increasing food availability through improved yields is crucial, as importing food would further accentuate balance of payments constraints.

growth in particular was low, despite gains from the steady decline in global prices of raw materials;[6] a robust growth in construction; and a strong recovery in the demand for automobiles. While some slowdown was expected in industries (e.g., sugar, fertilizer, cooking oil & ghee and POL) that had grown strongly last year, additional drag came from weak external demand (impacting cotton yarn, clothing and other textile items), and continued energy shortages (e.g., textile, glass, paper, leather).

Finally, the services sector grew by 5.0 percent in FY15, comfortably surpassing the FY14 growth of 4.4 percent, mainly due to a sharp recovery in *general government services* and *finance & insurance*.

The highlight of the FY15 growth was the strong support from the government, both to steer the economy to higher growth level and to manage the implications from collapse of the global commodity prices. The government support, particularly in the manufacturing (e.g., construction and allied industries, and the auto sector), and the services sector, helped sustain GDP growth. For example, higher PSDP spending in infrastructure boosted production of construction and allied sectors like steel, cement and paints; and initiation of 'Apna Rozgar Scheme' and reduction in GST on tractors, revived manufacturing in the auto sector. In the services sector, increase in salaries pushed up growth in *general government services*,[7] and massive borrowing needs of the government from the banking system helped *finance & insurance* achieve higher growth in assets and improved profitability.

While the collapse of the global commodity prices induced macro stability, the policy response catered to its divergent effects on the domestic economy.[8] In particular, besides protecting growers and some industries (e.g., iron and steel) against cheaper imports, government passed on the benefits from lower international oil prices to end-consumers.[9] The latter decision not only boosted the domestic consumption, it also contained inflationary pressures, and created room for central bank to pursue accommodative monetary policy.

Looking ahead, the global commodity prices are expected to remain soft in near future. This together with better security situation and improvement in macroeconomic stability sets the stage for a sustained and high GDP growth, which is sufficient to absorb growing workforce and improve living standards (**Box 2.1**). The Vision 2025 already aims to lead the country from lower-middle-income to upper-middle-income level by achieving growth of above 8 percent from 2018 and onwards.[10]

For this to happen, we need to resolve long standing structural issues which are hampering growth. Much of the policy focus in recent past has remained on energy shortfalls – the foremost binding constraint to growth (**Chapter 3**). Addressing the water scarcity, an equally important issue, is far more complicated as it requires close coordination between federal and provincial governments. Ironically, despite being categorized as one of the most water stressed country in the world, the

[6] The World Bank commodity prices index for metals and minerals dropped by 20.2 percent from July 2014 to June 2015. According to IMF, June 2015 industrial inputs price index was the lowest in six years. The lower input cost benefits economic activity through higher profitability (which promotes investment), and increase in real income of consumers.
[7] Source: Pakistan Economic Survey 2014-15.
[8] The most prominent gains from the collapse of the global commodity prices were in the form of a sharp reduction in domestic inflationary pressures. The expected improvement in the trade account however could not materialize, as the increase in non-oil imports (mainly raw material, machinery and consumer items) eaten into the benefits from lower oil imports. In the fiscal account, the lower tax collection due to falling oil prices was partly offset by a decline in power-related subsidies.
[9] For example, in the crop sector, government raised wheat support price, imposed regulatory duty on wheat imports, and subsidized export of wheat and sugar. The government also imposed regulatory duty on steel imports.
[10] According to the World Bank classification, lower-middle-income economies have per capita gross national income (GNI) (calculated using World Bank Atlas Method) in the range of US$1,045 to $4,125, whereas for upper-middle-income countries, per capita GNI falls between US$4,125 - US$12,736. According to this method, Pakistan's per capita GNI was US$1,410 in 2014.

Box 2.1: What should be the desirable growth rate for the country?

Achieving a high and sustainable GDP growth has always been the focus of policymakers. What this level should be, is however a matter of debate. One view is that the growth should be sufficient to absorb the incremental workers entering in the labor market.

According to available data, the population of 10 years and above in Pakistan has grown at an average rate of 2.8 percent during 1980-2015.[11] How much GDP growth absorbs this incremental workforce, would depend on employment elasticity of the output. The literature on Pakistan confirms that one percentage point increase in GDP growth would generate jobs for 0.11–0.37 percent of the labor force (**Table 2.1.1**). Even if we assume a high employment elasticity of 0.4, this entails in GDP growth of 7 percent a year, just to absorb new labor in the market. Of course, we need a higher GDP growth to clear the backlog of the unemployed labor force.

Developing economies want higher growth to get closer to rich countries. Over the last 20 years, the per capita income in Pakistan has been growing at an average rate of less than 2 percent. Though higher than 1.3 percent growth in the income of OECD countries during this period, this performance is considerably weaker than the regional economies. This means, in this race to converge to OECD economies, Pakistan is far behind other countries in the South Asia (**Figure 2.1.1**).

The World Bank Commission on Growth and Development (2008) Report assessed the growth required by selected countries to catch up with OECD economies. According to their finding, even if Pakistan grows at an average growth of 8.3 percent, it will not be able to reach the income level of OECD countries before the year 2050.

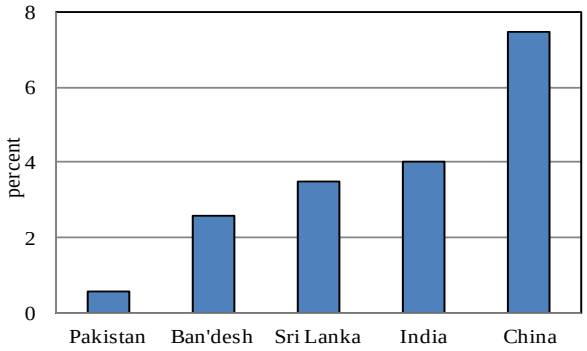
In sum, with more than 8 percent GDP growth, Pakistan would be able to absorb the labor force, and get closer to developed economies. The Vision 2025 already targets GDP to grow above 8 percent from 2018 and onwards; this performance will elevate the country from lower-middle-income to upper-middle-income level. Certainly, this will be a challenging task, as a review of historical trends clearly shows very few occasions when the GDP growth had exceeded the 8 percent level (**Figure 2.1.2**).

Table 2.1.1: Employment Elasticity to GDP in Pakistan

	Study	Elasticity
1	Baqai (1979)	0.33
2	Kemal (1990)	0.20
3	Chaudhary & Hamid (1998)	0.37
4	Aslam and Zulfiqar (2008)	0.11

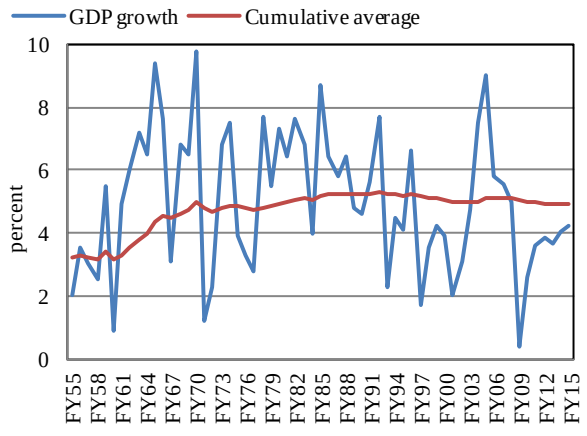
– Baqai, M (1979), Pakistan's Pattern of Development and Prospects, *Pakistan Economics and Social Review*, Vol. 17 (3-4), pp.1-62.
– Kemal, A . (1990), Balance of Supply and Demand for Manpower, GOP/UNDP/ILO ARTEP, Islamabad.
– Chaudhary, M. A. and A. Hamid (1998), Unemployment in Pakistan, *Pakistan Economic and Social Review*, Vol: 36 (2), pp. 147-170.
– Aslam, M. and K. Zulifqar (2008), Management of Human Resources: Employment Patterns and Dimensions of Unemployment in Pakistan; National Conference on Socio-Economic Challenges Faced by Pakistan, *International Islamic University Islamabad*, June 2-3, 2008 (Unpublished Paper).

Figure 2.1.1: Catchup Rate Relative to OECD Countries



Catchup is defined as the difference in average (1995-2014) growth of per capita GDP (at constant US$ price of 2005) for individual country and that of OECD as a group.
Source: Haver Analytics

Figure 2.1.2: GDP growth Historical Trend



Source: Pakistan Bureau of Statistics

country still allows large losses and inefficient use of water. This is alarming as water scarcity is likely to only worsen going forward due to growing population and urbanization. What we need is

[11] Source: World Population Prospects: the 2015 Revision by United Nations, Department of Economic and Social Affairs, Population Division.

more storage to capture seasonal surpluses, and an appropriate pricing to incentivize water conservation (**Box 2.2**). Pakistan has to substantially boost productivity levels to achieve sustained high economic growth. Among other factors, this requires investment in human capital, as a better skilled labor force would allow the country to make most out of the demographic dividend.[12,13]

At the same time, we need policies to absorb skilled labor in most productive sectors of the economy. As things stand, more than 40 percent of the workforce in Pakistan is still engaged in low-productive agriculture (and also vulnerable to potential climate changes), which contributes only one-fifth of the GDP.[14] On the other hand, industry (where labor productivity is highest) absorbs 23 percent of the labor, and it has performed poorly in recent years (**Box 2.3**). Low and falling share of industry in GDP and its concentration in a few sub-sectors (textile, sugar) is a major concern.[15] Pakistan's rank in Global Competitiveness Index has slipped from 83rd (out of 131) in 2006-07 to 129th (out of 144). In this situation, the burden to steer productivity growth, and create sufficient jobs for growing workforce falls on the services sector.[16] However, even the growth of the services sector is far lower than peer countries in the region.

In sum, we need to transform the economy by improving productivity across all sectors. Investment is an essential pillar of growth; Pakistan will have to substantially raise its investment rate from the current 15.1 percent of GDP (public and private sector). This can be achieved through an effective and well-coordinated industrial policy designed to expand industrial and export base.

2.2 Agriculture

Agriculture faced several challenges during FY15. For example, farmers income came under pressure when commodity prices in the international market fell sharply, which pulled down domestic prices of agri produce. On the input side, while prices of diesel came down, that of fertilizer did not follow the global trend. Furthermore, unfavorable weather changes lowered yields of several major crops (e.g., prolonged cold weather and hail/wind storms at crucial stage negatively affected yield of wheat).

Table 2.1: Performance of Agriculture

Share and growth in percent; contribution in percentage points

	Share in GDP	Growth			Contribution to agri growth	
	FY15	FY14[R]	FY15[T]	FY15	FY14	FY15
Crop	8.3	3.2	2.4	1.0	1.3	0.4
Major crops	5.3	8.0	1.5	0.3	2.0	0.1
Minor crops	2.3	-5.4	4.5	1.1	-0.7	0.1
Cotton ginning	0.6	-1.3	5.0	7.4	0.0	0.2
Livestock	11.8	2.8	3.8	4.1	1.5	2.3
Forestry	0.4	-6.7	2.0	3.1	-0.1	0.1
Fishing	0.4	1.0	2.0	5.8	0.0	0.1
Overall	**20.9**	**2.7**	**3.3**	**2.9**	**2.7**	**2.9**

R: Revised; T: Target

Source: Pakistan Bureau of Statistics

Hence, the crop sector could grow only by 1.0 percent in FY15, compared to 3.2 percent growth realized in the preceding year (**Table 2.1**). Both, the major and minor crops, missed their targets by a wide margin. However, a better performance by the livestock sector provided some support, allowing the agriculture growth rate to exceed the last year's level.

[12] Pakistan, with an estimated population of 190 million in 2015, is the 6th most populous country in the world. Moreover, since almost half of the population falls in the age group of 15-49 years, the country can get huge productivity gains by imparting suitable skills to this cohort.

[13] The higher education lowers fertility rate, which in turn, increases the number of working-age adults relative to the rest of the population. The country, therefore, can benefit from demographic dividend much earlier.

[14] The labor productivity is generally considered lowest in agriculture (perhaps due to limited mechanization), and highest in industry.

[15] This trend even diverges from other regional economies in South Asia (e.g., India, Bangladesh, Sri Lanka), where the share of industry in production, continues to grow.

[16] While in overall terms, the services sector is generally considered less productive (for being non-tradeable) compared to industries, the technological advances have made some of the activities in services highly productive.

In terms of farm inputs, water availability remained higher than the last year for both *kharif* and *rabi* crops.[17] In addition, credit disbursement to agriculture posted a strong YoY growth of 31.8 percent during FY15.[18] As expected, production loans made up 88 percent of the disbursements.[19] However, the fertilizer off-take remained lower, perhaps due to pressures on growers' income.[20]

Lower crop yields in Pakistan, than regional and global averages (**Table 2.2**), pose a serious concern in terms of food security. According to The Economist Intelligence Unit (EIU), Pakistan ranks far behind at 77 (out of 109 countries) in terms of food security. More importantly, this ranking is unchanged since 2012 (**Table 2.3**). Similarly, according to the Global Hunger Index (GHI) computed by International Food Policy Research Institute, Pakistan has recorded a steady decline in hunger, but it remains in the serious hunger category, only a few points away from reaching the 'alarming' category.

Table 2.2: Crop Yields – Cross Country Comparison
Tons/hectare

	China		India		Pakistan		USA	
	2005	2013	2005	2013	2005	2013	2005	2013
Potatoes	16.0	17.0	20.8	25.1	19.9	24.1	48.2	51.4
Rice	6.9	7.4	3.5	4.0	3.5	3.9	8.2	9.5
Sugarcane	70.5	76.1	71.4	74.3	53.9	62.3	78.6	83.5
Wheat	4.7	5.6	2.9	3.5	2.9	3.1	3.1	3.5

Note: the latest data on crop yields pertains to 2013.
Source: FAOSTAT (faostat.fao.org)

Table 2.3: Food Security Situation

	Affordability		Availability		Quality & safety		Overall	
	2012	2015	2012	2015	2012	2015	2012	2015
Score								
Pakistan	32.7	37.1	41.8	50.9	56.0	53.0	40.5	45.7
Sri Lanka	45.5	50.3	55.9	59.5	47.1	46.2	50.3	53.7
Bangladesh	32.9	32.9	42.8	44.9	31.3	28.5	37.0	37.4
India	38.3	47.4	55.4	56.1	44.8	45.3	46.8	50.9
Rank								
Pakistan	84	77	87	74	58	64	77	77
Sri Lanka	65	66	52	49	73	78	64	63
Bangladesh	83	85	85	90	96	102	84	89
India	74	72	53	58	75	79	70	68

Source: Economic Intelligence Unit Report

The concerns on food security become more serious due to growing population. According to estimates, Pakistan's population is likely to increase from current level of 190 million, to over 227 million by 2025. Ensuring food security to this increasing population becomes more complicated as (a) the demand for new urban settlements uses up more cultivable land; (b) crops yields are not only low, but are also vulnerable to climate change and extreme weather events;[21] (c) irrigation system is too old to respond to growing water shortages; (d) food processing is characterized by limited storage and post-harvest losses.

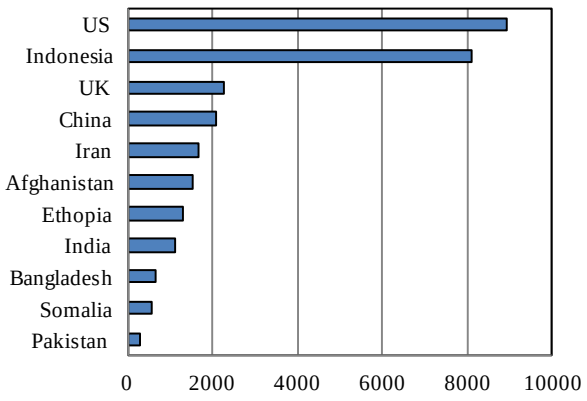
Water scarcity is another problem looming over Pakistan's agriculture. According to IMF report Pakistan is among the world's 36 most water-stressed countries.[22] This is likely to worsen due to population growth, urbanization, and climate change. Despite this growing stress, country faces low productivity and large losses in water. We desperately need storage and appropriate pricing to encourage water conservation and more efficient use.

[17] The water availability was better at 69.3 MAF during FY15, compared to 65.5 MAF in the previous year.
[18] During FY15 agriculture credit disbursement surged to Rs 515.9 billion from Rs 391.4 billion during previous year.
[19] The share of development loans has been gradually improving, owing to banks' growing interest in lending to livestock and dairy.
[20] Despite some ease in the international prices, the domestic price of urea increased from Rs 1,849 per 50 kg in June 2014 to Rs 1,883.5 in June 2015.
[21] Pakistan ranked eighth in the most vulnerable country to the climate change. Small landholders particularly those in rain-fed areas are at risk.
[22] *'Is the Glass Half Empty or Half Full? Issues in Managing Water Challenges and Policy Instruments'*. IMF Staff discussion note, June 2015.

Box 2.2: Low Productivity and Losses are Aggravating the Water Scarcity

Pakistan is one of the most water stressed countries in the world. According to World Bank estimates, per capita availability of water in Pakistan is well below Afghanistan, India, Bangladesh and Somalia (**Figure 2.2.1**),[23] and this stress is likely to worsen further in view of growing population and stagnant supply.[24,25] In this situation, conservation of water through containing losses and improving productivity becomes only viable option.

Figure 2.2.1: Per Capita Water Availability



Source: The World Bank

Water losses are abnormally high

Water losses in agriculture can be categorized into three categories: (a) evaporation losses; (b) seepage losses; (c) excess discharge into the sea. The evaporation losses are not only hard to account for, but also difficult to control.

According to estimates, losses due to seepage are high: around 25-30 percent of available water is lost in canals and water courses, followed by another 25-40 percent in water application.[26] Although this seepage recharges the underground aquifer (and is recoverable), a significant supply is lost to saline aquifers. Controlling this loss requires heavy investment in water infrastructure.

Table 2.2.1: Productivity of Land and Water

Productivity per unit of water (Kg/m^3)		Productivity per unit of land (Tons/Ha)	
Canada	8.72	France	7.60
America	1.56	Egypt	5.99
China	0.80	Saudi Arabia	5.36
India	0.39	Punjab (India)	4.80
Pakistan	0.13	Pakistan	2.24

Source: Tariq S., Presentation on water productivity, made in national seminar on integrated water resources management, Islamabad, Pakistan 2005.

As far as discharge into the sea is concerned, this is a function of the seasonal mismatch in water inflow and its usage; available storage; and the need to maintain a balance between sea-water and freshwater in the coastal areas. According to estimates, more than 2/3rd of the annual flow of the western rivers realizes during the three months (i.e. June-August), whereas water needs remain round the year.[27] This means given the limited storage capacity, we have no choice but to let the excess water flow into the sea.[28] This discharge swells exponentially whenever floods hit the country.

There is no environmental issue as long as this discharge meets the minimum demand to prevent the sea-water intrusion. The estimates on minimum demand for water discharge however vary widely. One study finds an annual flow of 10 million acre feet (MAF) as sufficient; whereas another assessment suggests a total flow of 25 MAF over the period of 5 years (i.e., 5 MAF per year), and a continuing flow of 5000 cusecs enough to serve

[23] Source: World Bank data retrieved from http://data.worldbank.org/indicator/ER.H2O.INTR.PC

[24] The estimates on total water availability differ considerably: according to Pakistan Water Partnership (PWP), total surface water available in Pakistan is about 153 MAF, and the total ground water reserves are approximately 24 MAF (Source: http://pwp.org.pk). Another assessment "The Indus Basin," by Laghari, Vanham, and Rauch, puts average renewable water availability at around 154 MAF; of which, 45 MAF is from ground water. In terms of use, around 95 percent of the available water is consumed in agriculture.

[25] The demand for water is likely to reach 261 million MAF by 2025, whereas supply would remain stagnant at around 150 MAF (barring the impact of the climate change), resulting in a gap of approximately 111 MAF (Source: Kahlown, M. Akram, and A. Majeed. (2002). *'Water resource situation in Pakistan: Challenges and future strategies'*. Science Vision Quarterly, Vol. 7, No. 3&4, Jan-Jun 2002.)

[26] Source: Pakistan Water Vision 2025 by Pakistan Water Partnership 2001; available at http://www.pwp.org.pk/

[27] Source: data on water flows by Indus River System Authority (IRSA).

[28] According to an estimate, total dam storage in Pakistan represents only 30 days of average demand, compared to 220 days for India and 1,000 days for Egypt (Source: Better Management of Indus Basin Water by World Bank at http://siteresources.worldbank.org). More importantly, this capacity has been depleting over time due to sedimentations.

the minimum requirement.[29] Interestingly, according to IRSA, the actual discharge amounts to 27 MAF per annum (on average) since early 1990s. Even after excluding the impact of heavy floods during this period, the water discharge remains at 17 MAF – considerably above the minimum requirement.

Unfortunately, the continuing differences between provinces on sharing resources, have not only muddled the debate on the efficacy of large reservoirs, this also overshadowed the larger issue of water insecurity in the country.

Water productivity is low and focus on conservation is missing

Water productivity is considerably low in Pakistan compared to other countries (**Table 2.2.1**). This is due to the excessive reliance on traditional irrigation methods (such as flood irrigation), which causes huge water losses due to excessive run off, deep percolation and evaporation.[30] The over-irrigation not only damages the land quality (through water logging), but also reduces crop yields as excessive water leaches the nutrients out of the root zone.[31] Farmers over-irrigate their fields despite these implicit costs, mainly due to the *warabandi* system, wherein farmers get water on a specific day, irrespective of the crop needs. The exiting irrigation system therefore results in large water losses.

Encouragingly, more flexible and less water intensive irrigation methods, yield more gains in the forms of improved water and land productivity, reduced labor and less soil erosion. According to a field experiment, drip irrigation results in water savings of 40 percent with 98 percent water efficiency compared to conventional methods.[32] Similarly, perforated pipe irrigation technique yields 18 percent in water savings, with 77 percent efficiency.[33] This means, awareness campaign on modern irrigation methods such as drip irrigation and perforated irrigation will help a great deal in conserving water. On a broader scale, losses can be controlled by improving the storage capacity through construction of new reservoirs as well as de-silting the existing ones. Similarly, lining of water channels will help conserve seepage losses.

2.2.1 Major crops

The production of wheat, maize and sugarcane (having a combined weight of around 60 percent in value addition of major crops) fell in FY15; whereas cotton and rice recovered markedly (**Table 2.4**).

Cotton (27.95% share in major crops): With the production of 14 million bales (170 kg each), cotton missed the annual target of 15.1 million bales, but comfortably surpassed the last year's level (**Table 2.5**). The crop benefited from both, increase in area and improved yields, mainly reflecting a recovery from last year's losses.[34] In addition, better availability of water and certified seeds

Table 2.4: Performance of Major Crops

				Growth (%)	
	FY13	**FY14**	**FY15**	**FY14**	**FY15**
Area (in 000 hectare)					
Cotton	2,879	2,806	2,961	-2.5	5.5
Rice	2,305	2,789	2,891	21.0	3.7
Sugarcane	1,129	1,173	1,141	3.9	-2.7
Wheat	8,660	9,199	9,180	6.2	-0.2
Maize	1,060	1,168	1,130	10.2	-3.3
Production (in 000 tons; for cotton 000 bales)					
Cotton	13,031	12,769	13,960	-2.0	9.3
Rice	5,536	6,798	7,005	22.8	3.0
Sugarcane	63,750	67,460	62,652	5.8	-7.1
Wheat	24,211	25,979	25,478	7.3	-1.9
Maize	4,220	4,944	4,695	17.2	-5.0

Source: Pakistan Bureau of Statistics

[29] Interprovincial water issues in Pakistan, Report by Pakistan Institute of Legislative Development and Transparency, Page 9, January 2011.

[30] Generally, farmers irrigate their fields in excess of the requirement due to (i) lack of proper knowledge about irrigation scheduling, and (ii) with the intention to get more yield. Excessive irrigation however contributes to water logging and groundwater pollution.

[31] Source: Kahlown, M. Akram., M. Ashraf and M. Yasin. (2003), *'Water management for efficient use of irrigation water and optimum crop production'*, Pakistan Council of Research in Water Resources, Islamabad.

[32] Source: A. Bakhsh., Ashfaq, M., Hussain, M., Rasool, G., Haider, Z., and Faraz, R.H. (2015), *'Economic evaluation of different irrigation systems for wheat production in Rechna Doab, Pakistan*' Pakistan Strategy Support Program. International Food Policy Research Institute. Working Paper No. 028. Retrieved from http://pssp.ifpri.info/research/pssp-working-papers/).

[33] Water efficiency is measured as the ratio of water required and water applied.

[34] Cotton crop suffered last year, initially due to water shortages at the time of sowing; later on, pest attacks and untimely rains damaged standing crops in Sindh and Punjab.

provided a much needed support. However, some of the farmers did not go for the third or fourth picking of cotton for the fear of low prices.

Rice(12.35%share in major crops): The rice production reached 7.0 million tones in FY15, comfortably exceeding the target of 6.7 million tons. Encouragingly, the improvement came due to higher production of basmati rice, mainly on account of increase in area under cultivation. Some of the growers of sugarcane and maize crop switched to rice cultivation. In Sindh, where most of the non-basmati varieties are grown, production increased by 1.1 percent (**Table 2.6**).[35]

Sugarcane (12.1%share in major crops): The FY15 production of 62.7 million tons fell short of the target of 65.5 million tons, as both the area under cultivation and the crop yield declined during the year (**Table 2.7**). The fall in area under sugarcane cultivation came for the first time in the past 6 years. The lower yield was observed particularly in Punjab. The growers in Sindh suffered following delays in sugarcane crushing due to standoff between growers and millers over prices (see Section 2.3.1 on **Large Scale Manufacturing**).

Wheat (39.27% share in major crops): Wheat output fell short of the target of 26 million tons, as well as last year's level (**Table 2.8**). The prolonged low temperature and hail/wind storm partially damaged the wheat crop. The decline in yield was more pronounced in Punjab.

With food security on high priority, government protected growers from falling international wheat prices. Specifically, the government increased the wheat support price from Rs 1,250 per maund to Rs 1,300, and imposed a 20 percent regulatory duty on wheat import. Meanwhile, authorities allowed export of 1.2 million tons of surplus wheat with an aim to lower the domestic wheat stock before the fresh procurement. In view of higher price of domestic wheat, government offered an export rebate of upto US$ 90 per ton to Punjab and Sindh.[36,37]

Table 2.5: Cotton

	Area ('000 hectare)		Production ('000 bales)		Yield (kg/hec)	
	FY14	FY15	FY14	FY15	FY14	FY15
Punjab	2,199	2,323	9,145	10,277	707	753
Sindh	568	596	3,523	3,573	1,055	1,020
KPK	0.3	1.0	0.8	3.0	454	510
Balochistan	38.4	41.2	100.0	107	443	442
Total	**2,806**	**2,961**	**12,769**	**13,960**	**774**	**802**

Source: Pakistan Bureau of Statistics

Table 2.6: Rice Production (Variety wise)

000 tons

	Punjab		Sindh	
	FY14	FY15	FY14	FY15
Basmati	2,057	2,337	74	74
Irri	497	503	1,286	1,161
Hybrid	927	807	1,257	1,417
Total	**3,481**	**3,648**	**2,617**	**2,653**

Source: Pakistan Bureau of Statistics

Table 2.7: Sugarcane

	Area ('000 hectares)		Production ('000 tons)		Yield (kgs/hectare)	
	FY14	FY15	FY14	FY15	FY14	FY15
Punjab	757	711	43,704	40,900	5,773	5,752
Sindh	298	317	18,363	16,614	6,162	5,241
KPK	117	113	5,361	5,107	4,566	4,540
Balochistan	0.7	0.7	32	31.6	4,571	4,514
Total	**1,173**	**1,141**	**67,460**	**62,652**	**5,751**	**5,491**

Source: Pakistan Bureau of Statistics

Table 2.8: Wheat

	Area ('000 hectares)		Production ('000 tons)		Yield (tons/hectare)	
	FY14	FY15	FY14	FY15	FY14	FY15
Punjab	6,901	6,910	19,739	19,541	2,860	2,828
Sindh	1,121	1,109	4,002	3,698	3,570	3,335
KPK	777	775	1,363	1,367	1,755	1,764
Balochistan	399	383	875	872	2,191	2,275
Total	**9,199**	**8,480**	**25,979**	**25,478**	**2,824**	**3,004**

Source: Pakistan Bureau of Statistics

[35] The share of non-basmati has reached 87 percent of Pakistan's total rice exports. Major destinations include Kenya, Bangladesh, UAE, Afghanistan, and Somalia (see Section 7.5 on Foreign Trade in **Chapter 7** on *External Sector*).
[36] Accordingly, Punjab was allowed 800,000 tons, while Sindh was awarded an export quota of 400,000 tons of wheat.
[37] Furthermore, taking notice of unhindered import of wheat byproducts, the government banned their import.

2.2.2 Minor Crops

Against the expectations of a steep recovery from last year's losses, the minor crops showed a modest growth of 1.1 percent only (**Table 2.9**). Within minor crops, pulses (gram, mash and moong), vegetables (especially potatoes and onion), and fruits performed better; whereas oilseeds (rapeseed & mustard, sunflower and canola) recorded a decline, as falling international prices translated into lower domestic prices of oilseed crops.[38] Potato production increased due to rise in area under its cultivation.

The gram production rebounded from last year low level due to favorable weather.[39] Specifically mild precipitation during December and January in major gram producing districts of Punjab resulted in production gains (these four districts, together contribute more than 70 percent of country's gram production).

Table 2.9: Minor Crops

	2013-14	2014-15	% change
Area in 000 hectare			
Gram	950	960	1.1
Onion	134	135	0.9
Sunflower	153	147	-4.1
Rapeseed & mustard	220	198	-9.8
Potatoes	160	170	6.3
Production in 000 tonnes			
Gram	399	484	21.3
Onion	1,740	1,763	1.3
Sunflower	193	186	-3.6
Rapeseed & mustard	203	183	-9.8
Potatoes	2,901	3,084	6.3
Yield (kgs/hectare)			
Gram	420	504	20.0
Onion	12,985	13,059	0.6
Sunflower	1,261	1,265	0.3
Rapeseed & mustard	923	924	0.2
Potatoes	18,131	18,141	0.1

Source: Annual Plan 2014-15 & FCA Working Paper

2.2.3 Livestock

Livestock, the largest sub-sector of agriculture (accounting for 56.3 percent of the agri value addition) recovered sharply during FY15 (**Table 2.10**). The value addition in livestock includes headcount of animals and their products (milk, meat and wool, etc.); poultry and its products (meat and eggs); and animal husbandry practices. In overall terms, the livestock sector contributed about 11.8 percent to Pakistan's GDP in FY15.

As things stand, Pakistan is blessed with a large population of livestock. This can be gauged from the fact that Pakistan ranks 2nd in the world in terms of number of buffaloes and 8th in terms of size of cattle herd.[40] Despite having large stock of animal, exports of livestock products are almost negligible (**Table 2.11**). However, most of this livestock farming in the country is done at subsistence level in the form of small holding that ensures social security, additional income and employment for rural population. More than

Table 2.10: Value Added in Livestock

billion Rs

			Growth	
	FY14	**FY15**	**FY14**	**FY15**
A. Gross Output	1,461	1,510	3.3	3.3
Animals sold for slaughtering	340	350	2.9	2.9
Natural growth & regeneration	212	218	3.0	3.0
Livestock products	778	801	2.9	2.9
Milk	660	683	3.2	3.4
Others	118	120	1.1	1.3
Poultry products	131	141	7.4	7.5
B. Intermediate Consumption	258	260	6.0	0.8
C. Gross value addition (A-B)	1,203	1,250	2.7	3.9
D. Other	5	8	7.3	59.8
Total Gross VA (C+D)	**1,209**	**1,258**	**2.8**	**4.1**

Source: Pakistan Bureau of Statistics

Table 2.11: Livestock and Exports

Pakistan's ranking in the World		**Selected exports (million US$)**		
		Items	**FY14**	**FY15**
Buffaloes	2nd	Bovine meat	19.5	30.0
Cattle	8th	Sheep/goat meat	26.9	23.9
Goats	3rd	Milk & cream	41.8	40.9
Sheep	9th	Carcasses bovine animal	85.2	95.3
Milk	4th	Live animal	6.6	3.1

Source: Ranking from FAO; Exports from PBS

[38] Following the global trends, domestic oilseeds prices (sunflower & canola) recorded a decline of around 25 percent.
[39] It may be noted that gram production fell by almost half to 399,000 tons in FY14, from 751,300 tons in FY13, due to prolong dry spell in Punjab.
[40] Source: FAOSTAT (faostat.fao.org).

80 percent of the rural families rear less than 5 buffaloes and cattle for milk production and try to meet their domestic demand.[41] In addition, the persistent decline in average farm size, is not only pressuring cattle holding by households, it also prevents farming on a commercial scale.[42]

While the subsistence cattle farming and smaller land holding, limit any significant growth in animal headcount, breeding more animals also involves cost. According to estimates, raising 1 million additional animals will require 2.4 million tons of additional feed; 0.5 million acres of more land; and 1.3 billion gallons of more water. [43]

In this situation, focus should be on transforming the existing animal farming from subsistence to commercial scale. In addition, appropriate incentives are needed to raise productivity of existing animals. According to FAO, while the animal productivity in Pakistan is well below other economies. Even over a longer period of time. Productivity gains in Pakistan have been on the lower side, indicating sufficient room for improvement (**Table 2.12**). Increasing productivity is also necessary to meet growing demand for livestock value added products due to urbanization, rising income and changing tastes.

Table 2.12: Average Milk Yield (Cattle & Buffaloes)
(kg per animal/day)

	1990	2013	Productivity Gains
China	5.4	9.8	4.3
Egypt	5.1	9.9	4.8
Germany	13.5	19.9	6.4
India	5.1	8.0	2.9
Morocco	1.4	4.4	3.0
Pakistan	**6.9**	**8.9**	**1.9**
Sri Lanka	2.8	4.1	1.3
Switzerland	13.5	18.9	5.4
Thailand	8.0	10.0	2.0
Turkey	6.2	10.9	4.7
Vietnam	4.9	11.0	6.1

Source: FAOSTAT (faostat.fao.org)

These low productivity levels can be largely attributed to poor nutrients, deterioration of rangelands, animal health issues, and production losses. Specifically, breeders in Pakistan fulfill nutrient requirement of dairy animals through crops, shrubs, grasses and agro-industrial wastes. According to IFCN study, in Pakistan more than 50 percent of animal feed consist of roughage and 7 percent is concentrate.[44] Due to the continuous increase in population of dairy animals, the scarcity of feed and fodder in the country is negatively affecting the production potential of dairy animals. Similarly, rangelands are deficient in nutrients and overgrazed; deforestation and uprooting of the range vegetation is occurring rapidly.[45]

Table 2.13: Growth in Industry
Share and growth in percent; contribution in percentage points

	FY15 Share in GDP	Growth			Contri to Industry growth	
		FY14	FY15[T]	FY15	FY14	FY15
Mining & quarrying	2.9	1.6	6.5	3.8	0.2	0.6
Manufacturing	13.3	4.5	6.9	3.2	2.9	2.1
Large-scale	10.6	4.0	7.0	2.4[1]	2.1	1.3
Small-scale	1.7	8.3	8.4	8.2	0.7	0.7
Slaughtering	0.9	3.4	--	3.3	0.2	0.2
Electricity gene & distt and gas distt	1.7	5.6	5.5	1.9	0.5	0.2
Construction	2.4	7.2	7.5	7.0	0.8	0.8
Industry	**20.3**	**4.5**	**6.8**	**3.6**		

1. This is based on partial information available at the time of compilation of the national income accounts. The actual growth in LSM for FY15 was 3.3 percent, compared 4.0 percent last year.
Source: Pakistan Bureau of Statistics

[41] Source: Enhancing Dairy Sector Export Competitiveness (2013). This study was commissioned Trade Related Technical Assistance-II program funded by the European Union.
[42] In 1960, only 19 percent of total private farms were less than 5 acre; in 2010, this share has increased to 64 percent.
[43] Source: Farid, Faisal. (2012). *'Cattle Feed Business: Opportunities and Challenges'.* University of Veterinary and Animal Sciences.
[44] Source: *'World Mapping of Animal Feeding Systems in the Dairy Sector'*. A publication of Food and Agriculture Organization of the United Nations, International Dairy Federation and IFCN Dairy Research Network.
[45] Source: Raziq, A., M. Younas and Z. Rehman. (2010). *'Prospects of livestock production in Balochistan'. Pak Vet. J.*, 30(3): 181-186.

2.3 Industry

Besides missing the FY15 target, the overall industry could not surpass the growth level of FY14. *Manufacturing* and *electricity generation and distribution and gas distribution* (having a combined share of over 75 percent in industry) decelerated sharply in FY15 (**Table 2.13**). This lackluster performance is a reflection of deep rooted structural issues faced by the industry, which over the years have brought down its share in overall GDP. In comparison, the industrial sector in other regional economies (e.g., India, Bangladesh, and Sri Lanka) has been growing at a much faster pace (**Table 2.14**).

Pakistan has been facing a slowdown in industrial growth since FY09. The persistent energy shortages, difficult security situation, and low investment rate are some of the reasons for this slowdown. However, a more deep-rooted problem is the absence of any coherent industrial policy. As a consequence, industrial sector lacks diversification and relies heavily on low-tech, resource-based manufacturing activities. Not surprisingly, the industrial sector in Pakistan could not create a competitive advantage both in local as well as in export markets. Indeed, while most of the advanced economies have been able to achieve higher per capita income on the basis of industrial growth, Pakistan did not benefit from productivity and income gains associated with the rapid industrialization (see **Box 2.3**).

Table 2.14: Regional Comparison of Industrial Sector Performance
Percent

	Bangladesh		India		Sri Lanka		Pakistan	
	Growth	Share in GDP	Growth	Share in GDP	Growth	Share in GDP	Growth	Share in GDP
1980s	4.7	20.7	6.0	25.5	4.2	27.0	8.2	23.3
1990s	7.1	23.1	5.7	26.1	6.8	26.4	4.7	24.4
2000s	7.4	24.7	7.8	27.3	5.0	28.9	5.6	23.4
2010+	8.7	27.0	5.7	30.6	10.1	31.4	3.5	21.2

Source: Haver Analytics

2.3.1 Large scale manufacturing (LSM)

Despite gaining from the steady decline in global prices of crude oil and raw material;[46] a robust growth in construction; and a strong recovery in the demand for the automobiles; the large scale manufacturing posted a growth of 3.3 percent in FY15, which was lower than both, 4.1 percent growth realized in FY14 (**Table 2.15**), and the FY15 target of 7.0 percent.[47]

A number of factors explain this slowdown in LSM: (1) foreign demand for major exporting commodities (e.g., cotton yarn, clothing and other textile items) remained sluggish; (2) high-base from last year's strong growth in some industries (e.g., fertilizer, cooking oil & ghee and POL) means some deceleration was expected in FY15;[48] and (3) energy shortages continue to hold back production in a number of industries (e.g., textile, glass, paper, leather). In addition, slowdown in sugar production hampered the LSM growth.[49]

Textile sector suffered from weak global demand and gas shortages

Despite low cotton prices (reflecting better crop) in the local market, the production of cotton yarn and cloth saw a slowdown in FY15. The domestic industry continues to face multiple constraints, e.g. (1) delays in the settlement of sales tax refunds[50] and; (2) persistent gas shortages,

[46] The steep fall in international prices of POL products reduced the cost of self-generated electricity, and the transportation & distribution expenses.
[47] Although the Annual Plan for FY15 envisaged improved performance for many industries, only automobiles, pharma, electronics and cement, could show a reasonable growth. Other industries (e.g., textile, chemicals, leather products, paper & boards, other non-metallic minerals) performed well below expectations.
[48] Cooking oil and ghee manufacturers built their stocks last year to benefit from low palm oil prices in the global market.
[49] Sugar production alone dragged down the overall index by 18.2 percent. After excluding sugar, LSM growth rises to 4.3 percent, higher than 3.6 percent in FY14.
[50] In order to settle past dues, the government has asked the industry to file their refund claims before 31st August 2015.

Box 2.3: Economic Transformation: A Comparison of Pakistan with Regional Economies[51]

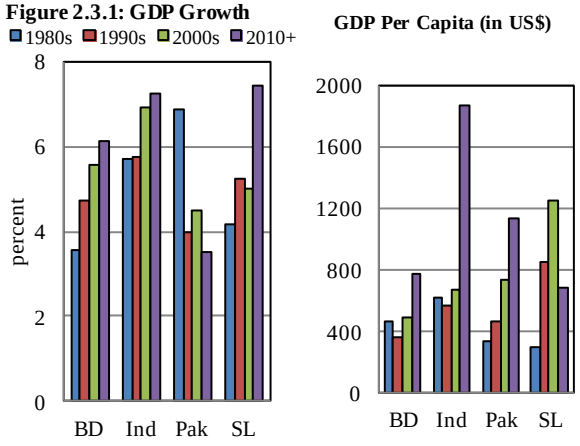
While analyzing the growth performance of developed economies, Kuznets (1971) identified industrialization as the pivotal stage in economic transformation and essential for achieving high income level. According to him, structural transformation involves two phases. In the first phase, the growth accelerates as resources are reallocated from low productivity sector (i.e., agriculture) to highly productive industry. In the second phase, resources shift from both agriculture and industry, to services where the productivity growth is usually slower than in industry – this explains the deceleration of growth in the second phase.

In this backdrop, this note compares the economic transformation in Pakistan with other major economies in South Asia. This comparison highlights some important observations:

- Pakistan's average GDP growth of 4.7 percent during 1980-2014 is the lowest among the major regional economies, such as India, Sri Lanka and Bangladesh.[52] More importantly, in a sharp contrast to Pakistan, the average GDP growth has been on a rising trend in other countries (**Figure 2.3.1**). While there are many explanations for this weak performance, one must not rule out the fact that the country has remained a frontline state in the war against terrorism (**Box 1.1**).

- These countries share some common features in their economic transformation. In terms of output, the share of agriculture in GDP has fallen over time, and the services have become the leading contributor (**Table 2.3.1**). This means, these countries have transformed into service economies in terms of their output. However, when we look at employment absorption, most of the labor is still engaged in low productive agriculture sector.

Figure 2.3.1: GDP Growth



Source: World Development Indicators

Table 2.3.1: Transformation of the Agriculture Sector

	% Share in GDP		% Share in Employment	
	1980s	2012	1980s	2012
Agriculture				
Bangladesh	33.7	17.1	68.2	48.1
India	31.7	18.0	67.0	47.2
Sri Lanka	27.2	11.0	50.1	39.4
Pakistan	28.4	24.5	52.1	43.7
Industry				
Bangladesh	20.7	26.7	16.2	14.5
India	25.5	32.0	15.5	24.7
Sri Lanka	27.0	31.5	19.7	19.1
Pakistan	23.4	22.1	20.0	23.1
Services				
Bangladesh	45.6	56.2	15.6	37.4
India	42.8	50.0	17.5	28.1
Sri Lanka	45.8	57.5	30.2	41.5
Pakistan	48.2	53.4	27.9	33.2

Source: World Development Indicators, The World Bank.

- The case for Pakistan becomes more interesting, as the share of agriculture in GDP also remains significantly higher than other countries in South Asia.

- Furthermore, while in other countries the share of industry has been rising, the same has been experiencing a falling trend in Pakistan. This is a source of concern as the labor productivity is generally highest, in industry.

In sum, more than 40 percent of the workforce in Pakistan is still engaged in low-productive agriculture (and also vulnerable to potential climate change), which contributes only one-fourth of the GDP. On the other hand,

[51] For a detailed discussion on structural change in of Pakistan's economy, see M. Ali Choudhary and Farooq Pasha (2013), 'The RBC View of Pakistan: A Declaration of Stylized Facts and Essential Models', SBP Working Paper No. 56.
[52] In comparison, the average GDP growth rate during the same period remained at 5.0 percent for Bangladesh; 5.5 percent for Sri Lanka; and 6.4 percent for India.

industry (where labor productivity is highest) absorbs 23 percent of the labor, and it has performed poorly in recent years, thereby pulling down its share in GDP. The burden therefore falls on the services sector to steer productivity growth, create sufficient jobs for growing workforce, and improve per capita income. However, the average growth in services from 2010 onwards remained at 4.1 percent, which is the lowest among the peer countries.

especially in the Punjab region. A further setback came when the depressed external demand held back growth in production.[53]

Table 2.15: Large Scale Manufacturing Index (YoY Growth)
In percent

		Cumulative Growth			Percentage Contribution		
	Weights	**FY13**	**FY14**	**FY15**	**FY13**	**FY14**	**FY15**
LSM	70.3	4.0	4.1	3.3			
Textile	21	1.6	1.3	0.5	12.0	9.6	4.6
Cotton Yarn	13	2.1	1.6	0.5	10.1	7.3	2.8
Cotton Cloth	7.2	0.6	0.7	0.1	1.4	1.7	0.2
Food	12.4	9.8	7.7	-1.1	49.0	40.1	-7.3
Sugar	3.5	9.5	10.0	-7.7	16.5	18.2	-18.2
Vegetable Ghee	1.1	3.3	4.1	-0.7	1.1	1.4	-0.3
Cooking Oil	2.2	12.5	3.3	-2.0	11.1	3.1	-2.3
Petroleum Products	5.4	16.5	8.3	5.9	21.9	12.3	11.2
Steel	5.4	8.7	5.6	35.4	6.1	4.1	32.1
Pig Iron	1.6	-19.1	-55.6	196.8	-3.1	-6.9	12.8
Billets	1.5	1.4	29.9	28.3	0.3	6.6	9.5
H.R sheets/strips	2.3	28.1	11.4	19.4	8.9	4.4	9.8
Non-Metallic Minerals	5.4	5.0	1.2	2.1	13.5	3.1	6.8
Glass Plates & Sheets	0.1	2.3	0.4	-14.1	0.1	0.0	-0.5
Cement	5.3	5.1	1.2	2.3	13.4	3.1	7.3
Automobile	4.6	-12.8	-2.6	23.6	-19.9	-3.3	34.8
Tractors	0.5	5.6	-32.1	41.6	0.8	-4.6	4.8
Jeeps and Cars	2.8	-21.3	-3.5	30.8	-17.8	-2.2	21.9
Fertilizer	4.4	-4.0	16.5	4.6	-5.4	20.2	7.7
Pharmaceutical	3.6	6.3	-0.1	7.5	12.4	-0.3	17.8
Paper	2.3	16.0	11.4	-9.9	13.6	10.7	-12.1
Electronics	2	-3.2	8.6	6.0	-1.4	3.4	3.0
Chemicals	1.7	-0.5	6.7	8.5	-0.3	3.6	5.8
Leather Products	0.9	1.5	10.8	7.0	0.7	4.6	3.9
LSM excl. Sugar	66.8	3.6	3.6	4.3			

Source: Pakistan Bureau of Statistics

During initial months following the grant of GSP-Plus, the textile industry successfully expanded its export share in the EU market. However, this came at the expense of other markets (e.g., China and the US). In fact, Pakistani yarn is losing export market in China, to India and Vietnam (**Chapter 7**).[54]

Even in the domestic market, low-cost Indian yarn has been gaining grounds. In fact, Pakistan could not contain its imports of Indian yarn, despite re-imposition of 5 percent duty in April 2014.[55] The industry is, therefore, demanding a higher import duty on yarn imports from India.[56]

[53] According to market sources, exports account for around 75 percent of the domestic production of cotton and its allied sectors.
[54] China and Vietnam have an agreement for duty-free yarn exports.
[55] According to SBP data, in value terms, import of the Indian cotton yarn reached US$ 92.6 million in FY15, compared to only US$ 9.1 million in FY10.
[56] The incentives offered by the Indian government to its textile sector are in the form of Technology Upgradation Fund Scheme (TUFS), include subsidized loans, capital subsidy on imports and installation of different machineries prescribed in the scheme, and limited cover against exchange rate fluctuation for investment in new technology. The industry has attracted an investment of approximately US$ 41.95 billion since 1999.

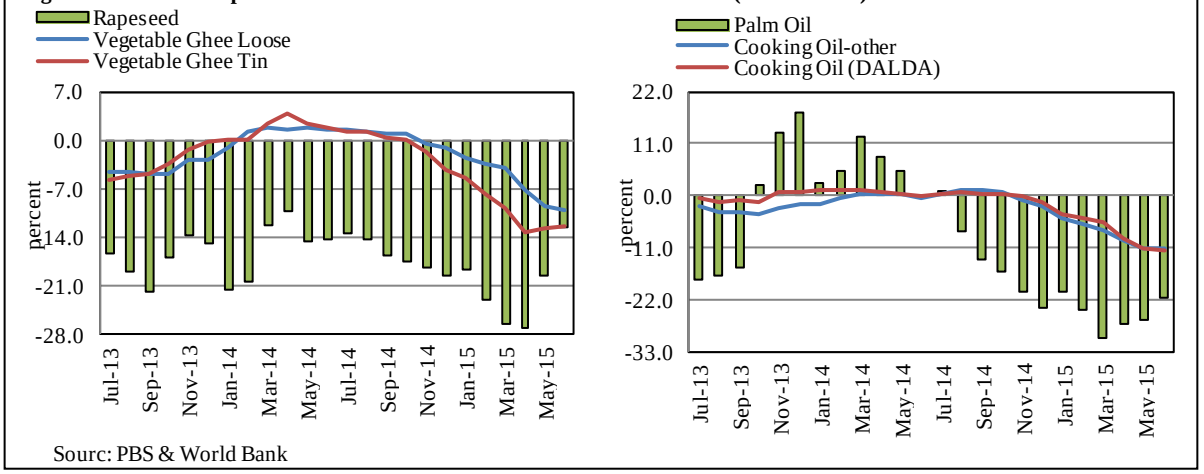
Surplus stocks and pricing issues hampered performance of the food sector
The food sector, which has been performing well with an average annual growth rate of 8.8 percent since FY11, could not maintain its trend in FY15. The overall growth fell by 1.1 percent mainly due to decline in production of sugar, edible oil and ghee.

The overall production of sugar fell in FY15 due to a 7.1 percent decline in the sugarcane crop. In addition, sugar mills were facing severe liquidity crunch, as they could not offload their carryover stock in the domestic market due to low prices; even the export of sugar was not viable due to depressed prices in the international market.

The concern for mills compounded when the governments of Khyber Pakhtunkhwa and Punjab increased cane support price from Rs 170 to Rs 180 per 40Kg; Sindh government, on the other hand, notified Rs 172 as the support price (this included subsidy of Rs 12 per 40 kg). This means sugar mills in Sindh had to pay cane price of Rs 160 to farmers. As the cash-strapped mills were reluctant to pay higher prices for their key raw material, this dispute delayed the crushing of cane, and even encouraged some of the growers to produce gur.

Almost similar conditions prevailed in the cooking oil/ghee industry, where manufacturers had already built their stocks last year to benefit from depressed input prices (i.e., palm oil/rapeseed) in the global markets. The large inventory, together with the ease in local prices of edible oil/ghee (particularly in the second half of the year), prompted the industry to reduce their production (**Figure 2.2**). [57]

Figure 2.2: Price Comparison between Raw Material and Final Product Price (YoY Growth)



Sourc: PBS & World Bank

Almost unchanged gas allocation from last year level, held back growth in fertilizer during FY15
The fertilizer sector experienced a turnaround last year when better gas availability to all leading manufacturing plants, led to a growth of 16.5 percent (compared to a *decline* of 4.0 percent in FY13). As the gas availability in FY15 remained almost at last year' level, this allowed industry to grow at 4.6 percent.

Revival of construction activities- new hopes for cement, steel and other allied sectors
Most of the construction related industries (cement, steel, paints and polish) performed well in FY15, reflecting robust growth in the construction sector. The strong demand for cement stemmed from local projects in both, the government and the private sector. This demand is likely to continue in near future as well, given the nature of ongoing and upcoming projects (e.g., Karachi-Lahore

[57] Although the import of palm oil started faltering after December 2014, the overall quantum of 2.39 million tons during FY15 exceeded the last year's level of 2.26 million tons.

Motorways, Metro-bus project in Multan, road network under China-Pakistan Economic Corridor, etc.).

The export demand for cement however remained depressed as: (1) the cheaper import from Iran, and a fall in infrastructure spending, lowered the demand for cement in Afghanistan; and (2) South Africa imposed anti-dumping duty (ranging from 14.29 percent to 77.15 percent) on different cement companies.[58] Cement export to the Indian market, on the other hand, rose by 2.8 percent, mainly to cater for the demand in Northern parts of India.[59]

The cement manufacturers in Pakistan, which are already under stress due to anti-dumping duties in South Africa, are likely to face another challenge from Iranian manufacturers, once the economic sanctions on Iran are lifted. Iran has the fourth largest cement production capacity in the world, and it can out-compete Pakistan in the global market with its low-cost production at the back of abundant gas supplies.

The strong growth in construction activity was well reflected in the steel sector, where the production grew by 35.4 percent – the highest level in the last five years. Apart from residential and infrastructure projects, the auto sector also made a strong contribution to demand for different steel products. The steel sector also benefited from lower prices of main raw materials, and the revival of production in Pakistan Steel Mills (PSM). Undoubtedly, this sector has immense growth potential given the very low per capita steel usage in Pakistan. However, sustaining high growth would be a major challenge for the industry.

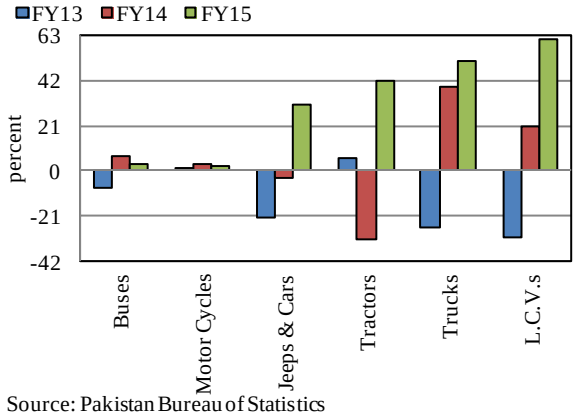
Within the construction related industries, wood and glass manufacturing however recorded a decline in production. While continuing gas shortage hampered the production of glass, the wood output declined, as one of the manufacturing units (included in the PBS dataset) went out of business due to strong competition from the newly established. However, country's largest wood plant (that does not appear in the PBS data set) continues to perform strongly during FY15.

Strong demand steered growth in the auto sector

After declining for the two consecutive years, the auto sector recorded a strong and broad-based recovery in FY15 (**Figure 2.3**).

The budgetary measures for FY15 provided a much needed boost, as the government reduced the sales tax on tractors from 17 percent to 10 percent; and removed 10 percent excise duty on more than 1800cc cars. Furthermore, Punjab government introduced 'Apna Rozgar Scheme' that led to a surge in demand for Suzuki Bolan and Suzuki Ravi.[60] Within the passenger car segment, the higher demand stemmed from

Figure 2.3: Production Trend in Different Segments of Automobile Sector (YoY Growth)



Source: Pakistan Bureau of Statistics

[58] As the International Trade Administration Commission (ITAC) of South Africa initiated its investigation on dumping allegation in August 2014, this immediately started impacting imports from Pakistan. However, these duties came into effect from May 15th 2015 for a period of six months. At the end of this period, the decision will be reviewed.

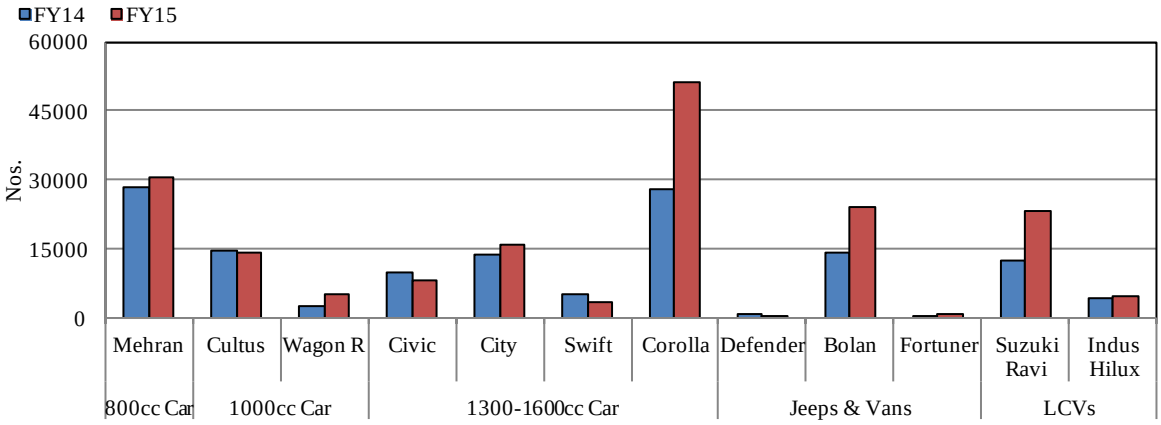
[59] According to market sources, price of cement in India increased substantially during FY15, which made imports from the Pakistan feasible.

[60] The government of Punjab and Suzuki motors had entered in an agreement, according to that the company would deliver 50,000 units of Suzuki Bolan and Suzuki Ravi during Dec2014-Feb2016. During Jan-Jun 2015, the company had provided 19,893 units under this scheme.

new model of Toyota Corolla; other models could not post any material rise in their demand (**Figure 2.4**).

In the segment of road transport, the production of tri-wheelers showed an increasing trend. While this growth is understandable given the state of urban transport and large population pressure, the policy focus should be on production of buses which are cost efficient, more environmental friendly, and can cater to large number of people.[61,62] We expect the new auto policy would consider this issue and would come up with a comprehensive plan for a mass transit system with the consent of provincial transport authorities.

Figure 2.4: Production Trend in Different Passenger Cars & Jeeps and LCVs

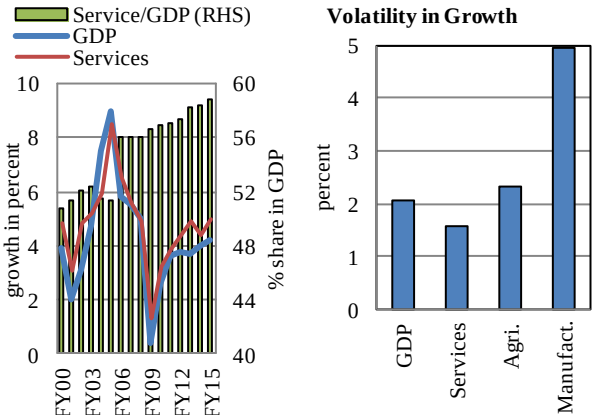


Source: PAMA

2.4 Services Sector

The services sector is the leading contributor to country's economic growth. Besides enjoying strong two-way linkages with rest of the economy,[63] this sector also absorbs around one-third of the employed labor force. As evident in **Figure 2.5**, this sector has been growing more rapidly than the overall GDP, pushing its share in GDP from 50.7 percent in FY00 to 58.8 percent in FY15.

Figure 2.5: Services Sector



Source: Pakistan Bureau of Statistics

Despite its growing importance, data on services output is available only once in a year. The resulting information gap has become significant, given the policy implications of this economic transformation. For example, from the perspective of a central bank, it is important to understand how the gradual shift from more volatile agriculture and manufacturing, to relatively stable services sector, impacts the GDP growth trends or the business cycle.[64] Similarly, as the capital intensity and the ability to generate export

[61] During last 5 years, auto industry manufactured 2713buses, whereas three-wheeler production reached to 192,942.
[62] The role of tri-wheelers is important in small cities and town, where they meet the demand from commuters, and are used as delivery vehicles.
[63] While economic activities in commodity producing sector generate demand for services (e.g., trading activities), the services sector also provides essential input to non-services segment of the economy.
[64] Since external shocks affect agriculture and manufacturing activities more significantly (making them volatile – **Figure 2.5**), we expect a transition to service-based activities would result in smoother business cycle.

earnings is less in services, we should expect the domestic production to respond differently to interest rate and exchange rate changes. Likewise, some of the sub-sector in services are under-taxed (wholesale and retail trade and transport) mainly due to poor documentation and the weak enforcement.[65]

In FY15, the services sector grew by 5.0 percent; though slightly lower than the target of 5.2 percent, this still surpassed the FY14 growth of 4.4 percent. In overall terms, this sector explains more than two-third of the GDP growth in FY15.

Within services, all subsectors contributed positively to growth; however, the impetus came from *general government* and *finance & insurance services* (**Table 2.16**). Since these two sectors had already witnessed a sluggish growth in FY14, a sharp recovery was expected in FY15.

As mentioned earlier, the increase in salaries, explain a sharp rise in contribution from *general government;* whereas, the improvement in *finance & insurance* stems from strong performance by commercial banks (mainly driven by massive investments in risk-free government securities). The remaining subsectors recorded a lower growth in FY15 than the last year.

Table 2.16: Performance of Services
Share and growth in percent; contribution in percentage points

	Share in GDP FY15	Growth			Contribution to services growth	
		FY14[R]	FY15 [T]	FY15	FY14	FY15
Wholesale & retail trade	18.3	4.0	6.1	3.4	1.3	1.1
Transport, storage and communication	13.4	4.6	4.5	4.2	1.0	1.0
Finance and insurance	3.1	4.2	5.8	6.2	0.2	0.3
Housing services	6.8	4.0	4.0	4.0	0.5	0.5
General government services	7.4	2.9	4.3	9.4	0.4	1.1
Other private services	9.9	6.3	5.8	5.9	1.0	1.0
Services	58.8	4.4	5.2	5.0	4.4	5.0

Source: Pakistan Bureau of Statistics

Wholesale & retail trade: this largest subsector generally captures the margins earned by traders from domestic sales of locally produced commodities and imported goods.[66] The trends in this sub-sector closely follow the production of manufactured goods.[67] During FY15, the weak performance by both, the manufacturing and the crop sectors, pulled down the growth in *wholesale & retail trade.* This happened despite an unusual rise in import quantum during the year.[68,69]

Transport, storage and communication:[70] this subsector posted a slightly lower growth than the last year, mainly due to weak performance by the cellular companies (**Table 2.17**).

Table 2.17: Transport, Storage and Communication

GVA (Constant) in Rs billion; contribution in percentage points

	GVA Rs bln		Growth		Contribution to growth	
	FY14	FY15	FY14	FY15	FY14	FY15
Road transport	997	1,034	3.7	3.8	2.7	2.7
Communication	219	219	4.4	0.0	0.7	0.0
Water transport	53	51	10.1	-4.0	0.4	-0.2
Air transport	67	86	12.7	27.3	0.6	1.3
Pipeline transport	3	3	-6.1	-7.9	0.0	0.0
Railways	3	7	233.6	121.4	0.2	0.3
Storage	34	35	3.9	3.2	0.1	0.1
Total	**1,376**	**1,435**	**4.6**	**4.2**		

Source: Pakistan Bureau of Statistics

[65] Despite having 58.8 percent share in GDP, the services sector contributes only 37 percent in taxes, with high dependence on indirect taxes on telecom and banking sector.
[66] PBS adopts a top-down approach. Instead of tracking individual wholesalers and retailers, PBS computes the likely supply of goods in the market (i.e., crops and livestock products, output of manufacturing sector, and imports), and then applies *fixed* average trade margins, which are derived from surveys on various commodities.
[67] Manufacturing contributes more than half of the value addition by the *wholesale & retail trade*.
[68] According to PBS data, quantum impact of imports was US$ 1,179 million in FY15 compared to US$ 443 million in the preceding year.
[69] The credit off take by *wholesale & retail trade* also remained lower compared to last year.
[70] This subsector includes road transport, railways, air transport, communication, pipeline transport, storage etc. with road transport having a share of 72 percent followed by communication 15.3 percent in FY15.

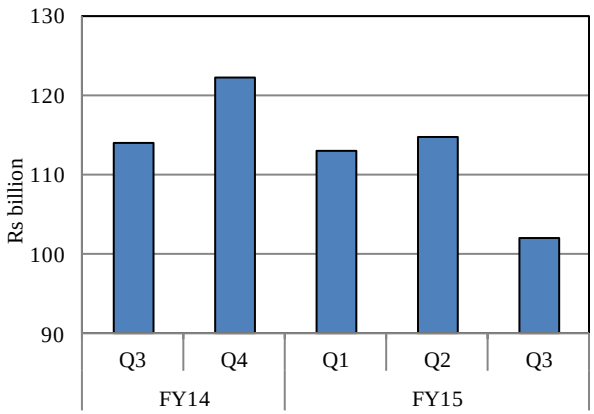
Specifically, the decline in number of subscribers; high tax incidence; and the intense price competition, has pulled down the average revenue of this sub-sector. In addition, the growth in 'road transport' – the largest component – remained largely unchanged compared to last year.

Within telecom, the financial performance of *Pakistan telecommunication (PTCL)* was not up to the mark due to the lower sales and increased cost (**Figure 2.6**). The drop in sales revenues is attributed to decline in revenue from Ufone,[71] and lower tariff from international incoming minutes due to abolishment of ICH arrangement. The market share also reduced for Mobilink and Warid. On the other hand, Telenor and Zong improved their performance and repatriated significantly higher profits in FY15 compared to last year (see **Chapter 7** for details).

Encouragingly, railways and air transport showed reasonable growth, mainly reflecting benefits from a sharp decline in fuel costs during FY15. The value addition from *rail transport* continues to record a strong growth. This was mainly driven by lower fuel prices; increase in the number of freight trains; better availability of locomotives; and improved operation of trains (timely departures and arrivals of passenger trains; better facilities to travelers; lower fares for passenger).

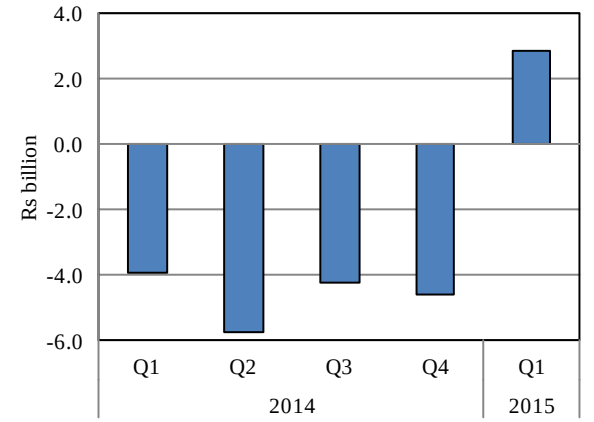
Air transport further consolidated its growth, increasing by 27.3 percent in FY15, on top of 12.7 percent last year. PIA is the market leader in terms of market share, fleet size and route covered. The operational performance and financial indicators of PIA also improved during the course of the year. The corporation reported gross operating profits of Rs 2.8 billion in Q1-2015, compared to losses of Rs 3.9 billion last year (**Figure 2.7**). This reversal in financial performance is attributed to the declining jet fuel prices, and induction of fuel efficient narrow body aircrafts in the fleet. The later not only improved airline operations, but also brought efficiency and better control on fuel cost which is around 54 percent of the total cost.

Figure 2.6: Telecom Revenues



Source: PTA

Figure 2.7: PIA Operating Profit /Loss



Source: PIAC, Financial Reports.

Table 2.18: Financial Soundness Indicators of Banking System

	Jun-13	Jun-14	Jun-15
Deposits (billion Rs)	8,310.5	8,773.6	9,969.9
Advances (net) (billion Rs)	4,110.2	4,188.6	4,552.1
Investments (net) (billion Rs)	4,313.3	4,512.5	6,209.1
Capital adequacy ratio	14.9	15.1	17.2
Profit before tax (billion Rs)	162	112.6	171.0
Profit after tax (billion Rs)	112.4	73.9	99.1
Total assets	10,487	11,115	13,244
NPL to total loans (gross)	13.3	12.8	12.4
NPL to total loans (net)	3.4	2.9	2.7
ROA (before tax)	1.6	2.1	2.7
ROE (before tax)	17.9	23.5	27.5
Liquid assets/ Total deposits	61.3	60.6	69.5
Advances to deposits	49.5	47.7	45.7

Source: State Bank of Pakistan

[71] The market share of Ufone dropped to 16 percent at end March 2015, compared to 19 percent market share in June 2013.

Within *finance and insurance*, the banking sector of Pakistan (having more than 80 percent share in this sub-sector) continued to show strong performance on the back of improved earnings. The profit (before tax) increased sharply by 51.9 percent, largely due to banks' investment in government securities. This higher profitability, together with SBP's efforts to align regulatory capital requirement in Pakistan with international standards, further strengthened the banks' capital. As a result, the capital adequacy ratio, a measure of solvency, further improved to 17.2 percent at end-June 2015 (**Table 2.18**), well above the benchmark of 10 percent set by SBP and international standard of 8 percent. Having said this, banks' performance in terms of their lending to private sector remained quite disappointing (**Chapter 4**).

The overall asset base also recorded a robust growth of 19.1 percent in FY15 on top of 11.0 percent last year. This was mainly on account of 13.6 percent growth in total deposits that almost reached Rs 10.0 trillion. The advances however could grow by 8.7 percent in FY15, which was considerably lower than the increase in investment.