2 Aggregate Supply[1]

2.1 Overview

FY12 was the first year for the Planning Commission's 'Economic Growth Framework'. This strategy envisages a greater role of the private sector in the development process, by promoting market-oriented policies, and replacing direct government intervention with more efficient regulation.[2] Accordingly, the Annual Plan for FY12 assumed some easing in energy constraints; an improvement in the business environment; observance of fiscal prudence; and a recovery in global demand.[3] With these assumptions, a GDP growth target of 4.2 percent was set for the year.

The actual GDP growth of 3.7 percent, however, fell short of the Annual Plan target. Though the commodity producing sector succeeded in achieving its target, the underperformance by the services sector held back overall GDP growth.[4]

Nonetheless, this growth seems reasonable as the economy continues to face multiple challenges. For example, on the domestic front, heavy rains in August 2011 caused significant flooding in lower Sindh. Apart from displacing people and livestock, and damaging infrastructure, the floods destroyed 2.2 million bales of cotton, and damaged minor crops. In lower Sindh, the impact of floods stretched to the *rabi* season, when stagnant floodwater led to a decline in area under wheat cultivation. However, on an encouraging note, the FY12 floods were less damaging than in FY11:[5] despite flood-related damages, the cotton crop of 13.6 million bales in FY12 surpassed the conservative target of 12.8 million bales.

Contrary to the assumption made in the Annual Plan, energy constraints intensified during FY12, forcing a number of industries to scale down production.[6] In the gas sector, mispricing led to a widening of the demand-supply gap (for a more detailed discussion, see **Chapter 3**).

Despite these setbacks, economic growth was not only higher, but also more broad-based compared to FY11. In FY11, the impetus to growth came mainly from the services sector, which contributed more than three-fourth of the overall increase in GDP. This year, the commodity producing sectors have made a larger contribution, as both agriculture and industry witnessed an improvement over FY11.

The improvement in agriculture mainly came from major *kharif* crops (particularly rice and cotton), where water availability has emerged as a key growth determinant. The improved and timely availability of water supported these crops, whereas wheat (a key *rabi* crop) suffered due to a fall in the area under cultivation. While the latter can be traced to a level of water scarcity, this issue is likely to become a very important factor in determining the fate of agriculture in the country.

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[1] Commonly represented by the Gross Domestic Production (GDP), the aggregate supply reflects the total value of final goods and services produced in the economy during a year.
[2] Source: http://www.pc.gov.pk/hot%20links/growth_document_english_version.pdf
[3] Source: Annual Plan 2012-13, Planning Commission, Pakistan.
[4] The less-than-target performance in *wholesale & retail trade* and *transport, storage and communication* constrained growth in the services sector.
[5] According to Economic Survey 2011-12, the floods of 2011 led to a loss of Rs 324.5 billion to the economy, which was on top of Rs 855 billion damages caused by 2010 floods.
[6] The power shortage became more acute as the rise in international oil prices inflated the volume of circular debt, which forced a number of power plants to remain idle due to the lack of funds to purchase fuel.

In the industrial sector, manufacturing and construction largely explain the growth in FY12 (**Table 2.1**). However, the constant 7.5 percent growth in small-scale manufacturing appears overstated, since such units are particularly vulnerable to prolonged energy shortages.

Table 2.1: Gross Domestic Product (at constant prices of 1999-2000)

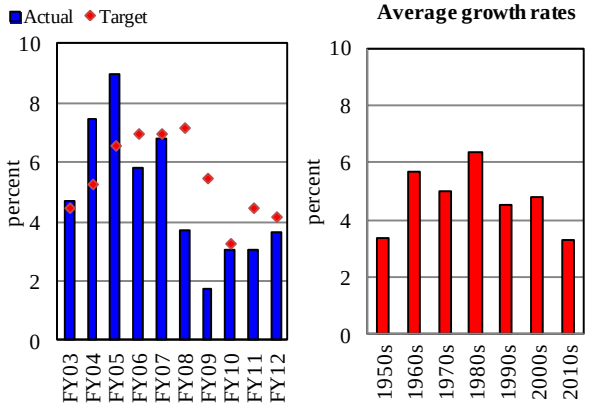
percent	Share in GDP		Growth			Contribution to growth	
	FY11	FY12	FY11	FY12[T]	FY12	FY11	FY12
1. Commodity producing sector	46.6	46.5	1.5	3.2	3.3	0.7	1.5
(a) Agriculture	21.2	21.1	2.4	3.4	3.1	0.5	0.7
Major crops	6.7	6.7	-0.2	3.0	3.2	0.0	0.2
Minor crops	2.2	2.1	2.7	2.0	-1.3	0.1	0.0
Livestock	11.6	11.6	4.0	4.0	4.0	0.5	0.5
Fishing	0.4	0.4	1.9	2.0	1.8	0.0	0.0
Forestry	0.2	0.2	-0.4	-1.0	0.9	0.0	0.0
(b) Industry	25.5	25.4	0.7	3.1	3.4	0.2	0.9
Mining & quarrying	2.4	2.4	-1.3	1.0	4.4	0.0	0.1
Manufacturing	18.7	18.6	3.1	3.7	3.6	0.6	0.7
Large scale	12.1	11.9	1.1	2.0	1.8	0.1	0.2
Small & household	5.1	5.3	7.5	7.5	7.5	0.4	0.4
Construction	2.1	2.2	-7.1	2.5	6.5	-0.2	0.1
Electricity and gas distribution	2.3	2.2	-7.2	1.0	-1.6	-0.2	0.0
2. Services	53.4	53.5	4.4	5.0	4.0	2.3	2.1
Transport, storage & communication	9.9	9.6	0.9	4.5	1.3	0.1	0.1
Wholesale & retail trade	17.1	17.1	3.5	5.0	3.6	0.6	0.6
Finance & insurance	4.7	4.8	-1.4	0.2	6.5	-0.1	0.3
Ownership of dwellings	2.7	2.7	1.8	3.5	3.5	0.0	0.1
Public admn. & defence	6.7	6.6	14.2	6.0	2.6	0.9	0.2
Social and community services	12.3	12.6	6.9	7.0	6.8	0.8	0.8
GDP (fc)	**100.0**	**100.0**	**3.0**	**4.2**	**3.7**	**3.0**	**3.7**

T: target
Source: Pakistan Economic Survey 2010-11, and Annual Plan 2011-12

The modest improvement in large-scale manufacturing was concentrated within a few sectors. Consumer goods performed well, mainly due to domestic consumption, but this growth decelerated during the course of the year due to an increased preference for imported goods.

The services sector, which has the largest share in GDP, recorded lower growth during FY12 compared to the previous year. Contrary to FY11, when a large increase in public salaries and flood-related social spending boosted services, the growth in FY12 was more broad-based. Increasing profitability of the banking sector led to a turn-around in *finance and insurance*. Similarly, *transport, storage and communication* posted higher growth in FY12 compared to FY11.[7] This mainly reflects the increased volume of imported petroleum products that were transported (via pipelines) to the northern parts of the country.

Figure 2.1: Real GDP Growth



Source: Economic Survey 2011-12

[7] This was despite the continued losses in PIA and Pakistan Railways.

Although the economy has shown some recovery in FY12, the growth still remains below the historical norms. In fact, persistently low GDP growth has become one of the major concerns for the economy, as average long-term growth is declining (**Figure 2.1** and **2.2**).

Pakistan's growth was also weaker compared to other emerging economies (e.g., Brazil, Philippines, Malaysia, Indonesia, Sri Lanka, India, Vietnam and China). As evident from **Figure 2.2**, despite some slowdown in these countries after the 2008 credit crunch, growth in most of these countries remained higher than Pakistan.

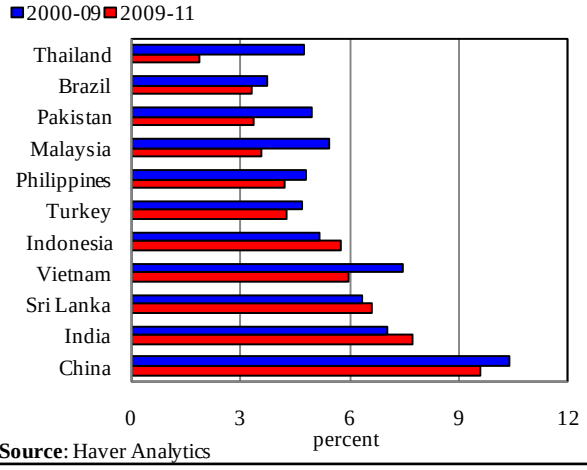
We associate the slower growth in Pakistan more with domestic constraints, than with the global economic conditions. In particular, the worsening energy shortages; falling investment; persistent macroeconomic imbalances; and the recurring floods, have held back economic activity. Hence, there is an urgent need to address these issues to revive economic growth, bring down poverty and absorb the growing labor force.[8]

2.2 Agriculture

Despite the floods of August 2011, the agriculture sector recorded a modest improvement, growing by 3.1 percent in FY12 compared to 2.4 percent in the previous year. However, farmers' margins came under pressures due to a sharp increase in input costs, and a fall in agri prices.

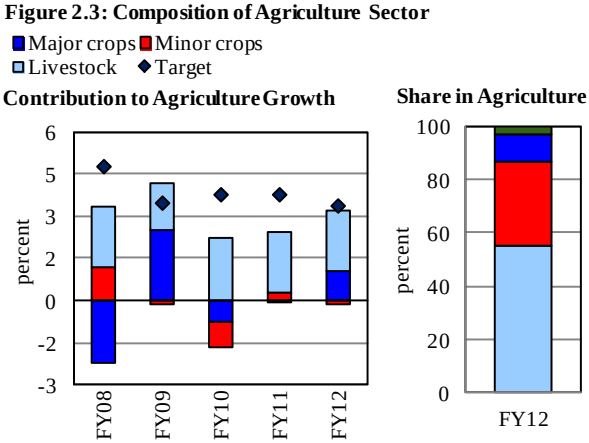
The livestock sub-sector (with a 55.1 percent share in agriculture) remained the main contributor to growth, followed by major crops. Minor crops, however, suffered due to the floods and extremely low temperatures in the winter season (**Figure 2.3**).

Figure 2.2: Pakistan's GDP Growth Rate vis-à-vis Other Countries



Source: Haver Analytics

Figure 2.3: Composition of Agriculture Sector



Source: Economic Survey 2011-12

Table 2.2: Major Crops

	FY10	FY11	FY12	Growth (%)	
				FY11	FY12
Area (000 hectare)					
Cotton	3,106	2,689	2,835	-13.4	5.4
Sugarcane	943	988	1,058	4.8	7.1
Rice	2,883	2,365	2,571	-18.0	8.7
Maize	935	974	1,083	4.2	11.2
Wheat	9,132	8,901	8,674	-2.5	-2.6
Production (000 tons, cotton is in 000 bales of 170 kg)					
Cotton	12,914	11,460	13,595	-11.3	18.6
Sugarcane	49,373	55,309	58,397	12.0	5.6
Rice	6,883	4,823	6,160	-29.9	27.7
Maize	3,261	3,707	4,271	13.7	15.2
Wheat	23,311	25,214	23,337	8.2	-7.4

Source: Pakistan Bureau of Statistics

[8] The Economic Growth Framework acknowledges that to absorb the young and growing population, the economy has to grow over 7 percent per annum on a sustained basis.

Major crops

The main contribution to value addition came from major *kharif* crops. The production of cotton, sugarcane and rice improved over the previous year, whereas wheat (the main *rabi* crop) declined during the year (**Table 2.2**). While improved soil moisture after the floods, and timely availability of water supported crop yields (**Table 2.3**),[9] the higher use of agri inputs (e.g., fertilizer) compared to the *kharif* crop of FY11, also enhanced production.

Table 2.3: Irrigation Water Situation

million acre feet

	Kharif			Rabi		
	FY11	**FY12**	**%△**	**FY11**	**FY12**	**%△**
Punjab	29.0	34.3	18.2	18.7	17.6	-6.0
Sindh	22.6	23.3	3.0	14.5	10.1	-30.2
Khyber Pakhtunkhwa	0.8	1.0	27.4	0.5	0.6	16.7
Balochistan	1.2	1.9	53.4	0.9	1.1	27.8
Total	**53.6**	**60.5**	**12.8**	**34.6**	**29.4**	**-14.96**

Source: Suparco

In the *rabi* season, the decline in wheat production can be traced to a decrease in area under cultivation and lower availability of water. Southern Sindh remained inundated at the time of sowing, while some farmers could not prepare their land for wheat sowing due to late harvesting of the sugarcane crop; others simply preferred to sow cotton earlier at the direct expense of wheat.

Water availability and other agri inputs

Water availability has become a major concern for the agriculture sector. In *rabi* FY12, lower winter precipitation and extended periods of low temperature (which reduced glacier melting) led to a decline in river flows. Unfortunately, water availability did not improve even for *kharif* FY13, due to delays in the monsoon rains.

The situation is likely to worsen in the future, as freshwater supplies continue to be overwhelmed by mounting demand pressures. In this context, building water storage capacity is crucial to buffer against dry seasons. At the same time, the price of irrigation water needs to be raised to reflect excess demand and the resource cost of water availability (see **Special Section 2.1** for more details).

Finally, the use of credit and fertilizer also dropped during the *rabi* season, compared to the same season in the previous year (**Table 2.4**). Fertilizer demand declined mainly due to higher prices coupled with lower expected crop income as the prices of cotton, sugarcane and maize fell during the year. According to our estimate, the price decline more than offset the gains from quantum growth. On top of that, the cost of pesticides, diesel, and seeds also increased substantially, further squeezing growers' margins, especially in Sindh, where farmers were already grappling with the second floods in a row (**Figure 2.4**).[10]

Table 2.4: Fertilizer Sales and Prices

	Volume (000 tons)		Prices (Rs/bag)	
	Urea	**DAP**	**Urea**	**DAP**
Kharif				
FY11	2,777	471	852	2,625
FY12	3,014	486	1,461	4,049
%△	**8.5**	**3.2**	**71.5**	**54.2**
Rabi				
FY11	3,160	815	985	3,142
FY12	2,710	564	1,766	4,138
%△	**-14.2**	**-30.8**	**79.3**	**31.7**

Source: Suparco

To hedge against such production risks (water and cash availability; crop and input prices), farmers depended more on traditional means (e.g., *arhtis*, investing in livestock, and earning through non-farm

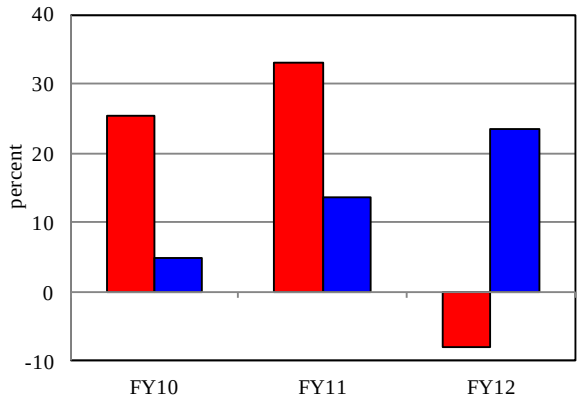
[9] In the case of cotton, exceptionally high prices of cotton lint during the previous crop season, increased use of BT cotton, and a better control over cotton leaf curl virus and sucking pest (particularly in Punjab), led to a higher production. In fact, gains in Punjab more than offset the flood-related losses in Sindh.

[10] Sugarcane growers faced an additional burden due to payment disputes with sugar mills. While some payments were delayed due to disagreements over prices, there were reports that sugar mills - facing liquidity problems owing to large inventories - held back payments to farmers. In this situation, the government intervened in the sugar market by purchasing 4.75 million tons of sugar through TCP. Thus the decline, as well as postponement, in revenue from *kharif* 2012 crops also added to the list of reasons for low wheat cultivation this year.

labor). In some cases, farmers also opted for crop diversification.[11] More recently, there has been a growing focus on developing market-based instruments (e.g., forward market in commodities, crop insurance) as risk management measures. To facilitate this, SBP has developed a comprehensive framework for a commercially viable warehouse receipt system, which will allow farmers to have a reliable storage facility, and the receipts against stored commodities could be used as collateral for bank financing.[12]

The government continues to subsidize key agri inputs (e.g., fertilizer, water, and electricity) and intervenes in the market by setting benchmark prices as well as directly procuring strategic crops.[13] While such interventions have ensured adequate supply of food staples, the resulting economic costs has become a growing concern. Specifically, even with substantial government support, this sector suffers from lack of innovation and productivity gains, as crop yields remain low (**Table 2.5**) and harvest losses are alarmingly high.[14] Going forward, as natural resources (primarily water) come under stress, agriculture production could suffer a great deal, having serious repercussions for the food security in the country.

Figure 2.4: Crop Output Prices vs. Input Prices (growth 12-m ma)



* WPI of wheat, rice, sugar crops and fiber crops (incl. cotton)
** WPI of tractors, fertilizers, insecticides and pesticides
Source: Pakistan Bureau of Statistcis

Table 2.5: Yield Gap of Major Crops
tons per hectare

	Progressive farmer's yield	National 3-year average yield	Gap (%)
Wheat	4.6	2.6	43.5
Cotton	2.6	1.8	30.8
Sugarcane			
Sindh	200.0	55.0	72.5
Punjab	130.0	50.0	61.5
Maize	6.9	2.9	58.0
Rice	3.8	2.1	44.7

Source: Final Report of the Task Force on Food Security, Planning Commission, 2009

For now, Pakistan's food supply is adequate for meeting the country's needs. Nevertheless, poor infrastructure and rising income inequality could threaten food security.[15] The country needs to revisit its policy priorities to ensure that efforts for ensuring food availability are stepped-up (see **Special Section 2.2** for more details).

Livestock

The output estimates for livestock – the largest contributor to agriculture and a major source of rural income after crops – are based on previous census growth rates.[16] Generally, these estimates are not

[11] To hedge against changing climate conditions or fluctuating prices, farmers generally adopt crops that are either more resilient to weather conditions or have more stable prices. Sometimes, farmers even experiment with crop cycle to protect their produce from pest attacks.
[12] The implementation of the project rests with Pakistan Mercantile Exchange (PMEX) and a Collateral Management Company is being formed under PMEX for the purpose.
[13] The wheat support price was enhanced to Rs 1,050 per 40 kg. Huge subsidy was provided on the imported fertilizers, and 25 percent of power sector subsidy is provided to the agriculture sector.
[14] The Planning Commission's report on food security suggests the supply-chain losses of over 10 percent for wheat and other grain; such losses swelled to 30-40 percent for horticulture products.
[15] Food security is a blanket concept that refers to the food supply chain from production to actual absorption of food by people.
[16] The current estimates use the growth rate in the last census of 2006 over the 1996 census. While the head count of livestock is based on inter-census growth, the quantity of livestock products is computed on the basis of some fixed ratio for

as rigorous as those computed from the census; hence they remain within a close range during the inter-census years. During FY12, the computed growth for livestock was 4.0 percent, which was unchanged from the previous year.

Being a major source of savings and investment for small farmers, livestock assumes a central role in economic development. Particularly, a number of developing countries have expanded their livestock production in response to higher global demand stemming from an expanding population, rising incomes and faster urbanization (**Table 2.6**).

Table 2.6: Livestock Production Growth in Selected Countries

annual average growth in percent

	2000-2005	2005-2010	2000-2010
Vietnam	8.1	6.3	7.2
Malaysia	4.9	6.5	5.7
Indonesia	5.1	4.6	4.8
Egypt	3.2	4.2	3.7
India	3.4	4.0	3.7
Pakistan	2.8	4.4	3.6
Brazil	5.4	0.8	3.1
China	3.5	2.7	3.1
Thailand	1.1	4.6	2.8
Turkey	1.7	3.5	2.6
Mexico	2.7	1.8	2.3
Argentina	1.7	-0.4	0.6
Australia	-0.4	-0.7	-0.6

Source: World Bank

In some of these countries, the technological advances and the increase in incomes have induced major structural changes in the livestock sector.[17] For example, China has increased its share in world meat production (beef and veal) from 0.6 percent in 1980 to around 10.0 percent in 2011.[18] Similarly, Brazil has doubled its share to 16.0 percent during the same period. In terms of swine meat, China increased its share from 23.0 percent in 1980 to 49.0 percent in 2011. Although poultry meat production is more evenly distributed between developed and developing countries, growth rates in China have been very high.

Compared to these developing countries, livestock production in Pakistan has not seen any significant change. Although Pakistan's performance appears reasonable, it is far below potential considering Pakistan's ranking in terms of livestock holding. According to the Food and Agriculture Organization of the United Nation, Pakistan ranks 2nd in the world in terms of number of buffaloes, 4th in terms of number of goats, 7th in terms of cattle, and 8th in terms of number of sheep. Despite this, the country has not been able to transform its stock advantage into higher value addition.

Table 2.7: Category-wise Industrial Growth

percent		Growth			Contribution to growth	
Category	**Share in industry**	**FY10**	**FY11**	**FY12**	**FY11**	**FY12**
Industry		6.1	0.7	3.4		
Electricity & gas	8.6	6.2	-7.2	-1.6	-0.7	-0.1
Construction	8.5	16.3	-7.1	6.5	-0.6	0.5
Mining	9.4	2.2	-1.3	4.4	-0.1	0.4
SSM	21.0	7.5	7.5	7.5	1.4	1.5
LSM	46.9	4.8	1.1	1.8	0.5	0.8
	Wt. in LSM	**FY10**	**FY11**	**FY12**	**FY11**	**FY12**
Consumer goods	41.1	3.0	7.0	4.9	3.0	2.2
Durables	7.0	31.8	8.2	5.8	0.5	0.4
Non-durables	34.2	-0.8	6.8	4.7	2.5	1.8
Intermediates	55.5	-2.4	-2.4	-1.3	-1.3	-0.7
Capital goods	3.3	13.2	-7.2	-13.0	-0.2	-0.3

SSM: Small Scale Manufacturing, LSM: Large Scale Manufacturing

Source: Pakistan Bureau of Statistics; SBP calculations

2.3 Industry

The industrial sector grew by 3.4 percent in FY12 – higher than 0.7 percent in the previous year. Despite this visible recovery, industrial performance during FY12 was far from satisfactory. To begin with, the growth in value addition by small scale manufacturing, which is assumed constant at

each product (e.g., average milk yield for a buffalo) and some additional information (e.g., production numbers of poultry and eggs).

[17] The new technology allowed large-scale animal-farms to operate with efficient systems for slaughtering, processing and distribution of meat. The industry is now offering a variety of fresh and processed items (such as cooked, refrigerated, and ready-to-eat) while meeting quality, nutritional and safety standards.

[18] The meat production generally rises with consumption. For example, the per capita meat consumption in China rose from 13.7 kg/year in 1980 to 59.5 kg/year in 2005.

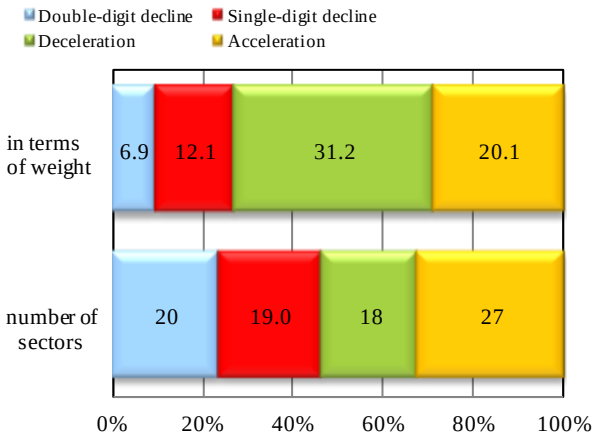
7.5 percent each year, contributed almost 45 percent of the increase in industrial activities (**Table 2.7**). In our view, this seems overstated given the large decline in SME exports during the year (e.g., garments, bed-wear, sports goods, and electric fans).

Secondly, the modest improvement in large-scale manufacturing was concentrated in a few sectors (**Figure 2.5**). Many industries suffered production declines due to supply-side constraints, necessitating higher imports (**Figure 2.6**). A modest slowdown was seen in sectors with relatively large weights in the LSM index due to bearish export sales (e.g., textiles and footwear), lower growth in agri-production (e.g., sugar and wheat milling), and increased consumers' preference for imported goods (e.g., cars and home appliances).

Only the construction sector displayed strong growth during the year, mainly on the back of post-flood reconstruction activities, increase in public works, project loan inflows, and a rebound in private sector demand. Resultantly, construction-based industries (including cement, glass, wood, etc.) also performed well during the year.[19]

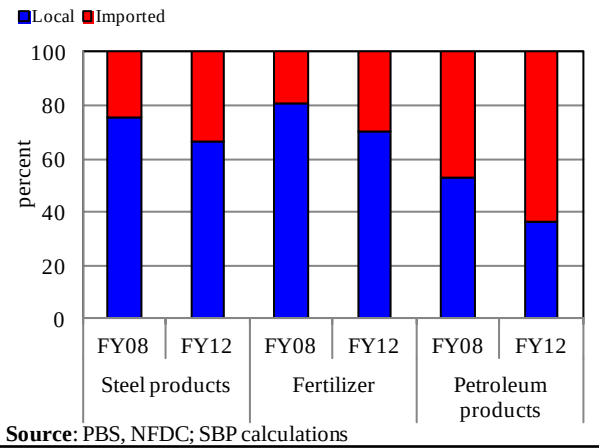
Within LSM, the decline in intermediate goods continued for the fourth year in a row. SBP reports have repeatedly mentioned issues faced by the steel, petroleum refining, and fertilizer sectors, which are operating well below capacity. This is an acute challenge in the energy sector (circular debt) and in fertilizer (gas shortages). Furthermore, ad-hoc decisions regarding fertilizer imports[20] and delays in the restructuring of Pakistan Steel Mills, have weakened the financial structure of these industries.[21]

Figure 2.5: Performance of LSM Sectors during FY12



Source : Pakistan Bureau of Statistics

Figure 2.6: Declining Share of Local Products in Key Intermediate Goods



Source: PBS, NFDC; SBP calculations

Table 2.8: Production and Import of Consumer Durables in FY12

percent growth

	Production	Imports
Cars	14.7	268.0
Rubber tyres and tubes	-23.2	12.0
Footwear	2.3	6.8
Refrigerators	7.7	79.6
A/Cs	-6.5	50.9
Pharmaceuticals	7.0	5.4
Electric fans	-4.3	17.8

Source: Pakistan Bureau of Statistics

In contrast, consumer goods posted yet another year of strong growth. While food processing continues to benefit from good harvests and rising demand from Afghanistan, the durable goods industry benefited from a favorable duty structure

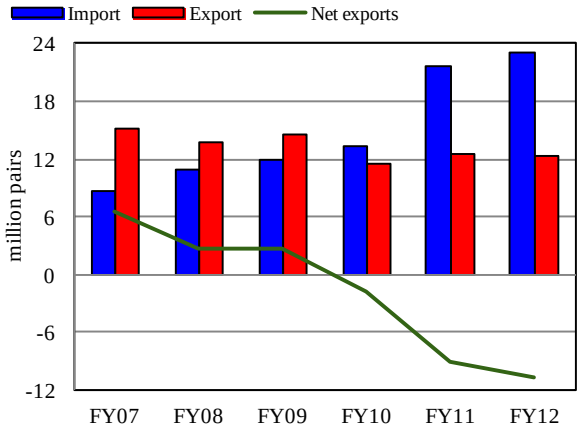
[19] Cement and glass sub-sectors grew by 2.7 percent and 1.8 percent during FY12, respectively.
[20] See Annexure 3 of the SBP Third Quarterly Report for FY12.
[21] For details on issues related with fertilizer import policies, please see section on Fertilizer in SBP Third Quarterly Report for FY12.

and growing domestic demand.[22] However, we believe durable goods have actually under-performed (during the year), as a large part of domestic demand was met through imports, despite available local capacity. For instance, although the production of cars, rubber tyres, footwear, refrigerators and pharmaceuticals increased during the year; the import of these goods has also increased (**Table 2.8**). For TV sets, the increased penetration of imported/smuggled items has caused a decline in local production. Indeed, this trend highlights serious competitiveness issues for the local industry, not to mention the use of the kerb market to secure foreign exchange.

In the case of household appliances and automobiles, high domestic prices remained an issue. These can be traced to high assembly costs and producer margins. In addition, there are certain products which are not being assembled locally. This is a major reason why consumers prefer reconditioned imported cars over brand-new locally manufactured units. They also prefer imported fans, bulbs and wooden furniture, over products manufactured locally.[23]

Similarly, the local footwear industry has been facing stiff competition from products imported from China, Thailand and Vietnam. In the past, Pakistan had been a net exporter of footwear, but in the previous 3 years, it has become a net importer (**Figure 2.7**). Anecdotal evidence suggests that imported products cater mainly to lower-to-middle income households. A similar trend is also seen in the clothing industry, where products from China and Thailand have flooded the low-end market. Furthermore, import of used clothing has increased sharply, suggesting that local manufacturers cannot compete.[24]

Figure 2.7: Pakistan's Trade in Footwear



Source: Pakistan Bureau of Statistics

These trends are discomforting. This is either due to high manufacturing margins for local producers, or simply because local manufacturers are not producing what consumers want. We are certain about one thing: to keep customers satisfied, manufacturers must not only step-up their marketing, but also need to tailor their products to changing tastes and styles.

In our view, quality of domestic investment (and entrepreneurship) in the consumer durable sector should be enhanced. Furthermore, in the previous 5 years, with the exception of intermediate goods like fertilizers, cement, steel, and petroleum refining, no sector has attracted much investment. For instance, despite strong demand, we find little or no local manufacturing of cellular phones and their accessories, rechargeable fans, energy saving bulbs, synthetic fabrics, moulds and dies for auto parts, processed/powdered milk, children-wear, low-tech electrical appliances, remote controls, and office equipment. Similarly, despite having a strong agriculture base, Pakistan spends millions of dollars every year to import food products like cereals, macaroni/pasta, juices, sauces/pastes, seasonings, etc.[25] Furthermore, in many consumer industries, local firms are losing market share by not investing in research and development, and continue to offer products with obsolete designs and inferior quality. We have also observed that imported products have been making strong in-roads in the

[22] Government reduced federal excise duty on automobiles and electronic items in FY12 budget.
[23] Rechargeable fans and energy saving bulbs are not manufactured locally despite huge demand.
[24] Import of used clothing has increased from around US $ 128.6 million in FY11 to US$ 148.0 million in FY12.
[25] Despite a strong agri-base and a large grain milling industry, Pakistan imported US$ 91.3 million on import of pastas, cereals and other prepared food of flour, starch and milk during FY12. Similarly, Pakistan spent some US$ 14.2 million on fruit juices; and another US$ 17.7 million on prepared stuff of vegetables and fruits during the year.

domestic market for apparel, footwear, articles of home décor like ceramic tiles, furniture, kitchen gadgets, tableware and sanitary fixtures.

With vibrant domestic demand and awareness of product offerings, local manufacturers of consumer products should upgrade not just their manufacturing units but also strategize about how to position themselves. In fact, reclaiming the domestic market should be a goal, especially when global market conditions appear unfavorable. This is easier said than done. The persistent energy and security issues have dented what would otherwise have been a lucrative environment and incentive for investment. These issues must be resolved to fill competitiveness gaps, and make this consumption-led growth more sustainable and welfare enhancing.

2.4 Services

The services sector contributed over 55 percent of GDP growth in FY12. Unlike FY11, when a large increase in government salaries and flood-related social spending led the growth in services, the performance in FY12 marks an improvement in almost all sub-sectors.[26] Nonetheless, the absence of the aforementioned factors has pulled down growth in services to 4.0 percent during FY12, from 4.4 percent in FY11 (**Table 2.9**).

Table 2.9: Contribution in Services Sector Growth

percent

	Growth			Contribution	
	FY11	**FY12[T]**	**FY12**	**FY11**	**FY12**
Growth in services	4.4	5.0	4.0	4.4	4.0
Wholesale & retail trade	3.5	5.0	3.6	1.1	1.1
Transport, storage & communication	0.9	4.5	1.3	0.2	0.2
Finance & insurance	-1.4	0.2	6.5	-0.1	0.6
Ownership of dwellings	1.8	3.5	3.5	0.1	0.2
Public admin. & defence	14.2	6.0	2.6	1.8	0.3
Community, social & personal services	6.9	7.0	6.8	1.6	1.6

T: Target

Source: Pakistan Bureau of Statistics

After declining for three consecutive years (FY09-FY11), the value addition in *finance and insurance* rebounded strongly in FY12 (**Table 2.10**). Besides commercial banks, insurance companies and pension funds also contributed to this resurgence. Specifically, substantial profits earned by heavily investing in risk-free government securities, propped up the value addition of this sub-sector.[27] Commercial banks also benefited from the slowdown in the incremental stock of non-performing loans, and some ease in provisioning requirements by SBP.[28] Finally, the strong growth in SBP profits also supported value addition in this sector (**Table 2.10)**.

Table 2.10: Contribution to Value Addition in Finance & Insurance

percent

	Growth		Contribution	
	FY11	**FY12**	**FY11**	**FY12**
Finance & insurance	**-1.4**	**6.5**	**-1.4**	**6.5**
SBP	-3.4	6.7	-1.1	2.1
Other depository corporations	-0.6	1.4	-0.3	0.7
Other financial intermediaries	0.1	6.4	0.0	0.5
Insurance and pension funds	-0.2	28.7	0.0	3.3

Source: Pakistan Bureau of Statistics

The growth in *wholesale and retail trade* remained almost unchanged from the previous year. The improvement in manufacturing, along with continued expansion in the hotel industry, supported growth in this sub-sector (**Table 2.11**).

[26] Within services, *public administration and defence* was the only sub-sector that recorded a sharp slowdown from a peak of 14.2 percent in FY11 to a mere 2.6 percent in FY12. This slowdown, mainly reflecting absence of government salary increase and flood-related social spending in FY12, is not alarming. The value addition by public administration & defence is mainly based on wages & salaries of government employees (i.e., for federal, provincial, and district and *tehsil* municipal administration) and expenditure on defence related activities.

[27] To put things into perspective, the investment-to-advances ratio for commercial banks, which was 77.4 in June 2011, was around 92 percent in June 2012. Since these risk-free assets do not attract capital requirement, the compositional shift in assets has significantly improved banks' profitability.

[28] In November 2009 and October 2011, the SBP eased provisioning requirements for banks by relaxing rules related to forced sale value of collaterals.

The steady increase in the number of hotels and restaurants over the past few years is in response to rising demand, which reflects higher disposable income and the growing informal economy (see **Chapter 4**). In fact, the emergence of a number of shopping malls and supermarkets in the large urban centers of the country, points toward a major shift in the trading business. These trends should help shore-up Pakistan's baseline commercial activities.

Despite the sustained losses in Pakistan Railways and PIA during FY12, value addition in *transport, storage & communication* witnessed a marginal increase due to oil transport (via pipeline) and the telecom sector (**Table 2.12**).[29] While plans to improve the financial conditions of these two public sector enterprises (PSEs) have been under discussion for some time, urgent and concrete steps are needed to limit the resource drain through these entities (**Box 2.2**).

The value addition in the telecom sector increased by 0.9 percent during FY12, compared to a 11.6 percent decline recorded in FY11. Available data shows an increase in telecom revenues during Jul-Mar 2012, particularly from cellular operation (**Table 2.13**). We understand that while intense competition among firms has constrained average revenues per user, a steady increase in the usage of telecom services is supporting revenues. Importantly, total tele-density in the country has more than doubled to 72.1 percent in May 2012 during the last six years.[30]

Table 2.11: Percentage Point Contribution to Real Growth in Wholesale and Retail Trade

percent

	FY11	FY12
Wholesale and retail trade	**3.5**	**3.6**
Crops	-0.1	-0.2
Other agriculture	0.4	0.4
Manufacturing	1.4	1.7
Imports	0.1	-0.2
Hotels and restaurants	1.8	1.9

Source: Pakistan Bureau of Statistics

Table 2.12: Contribution to Growth in Transport, Storage and Communication

percent

	Growth		Contribution	
	FY11	FY12	FY11	FY12
Transport storage & communication	**0.9**	**1.3**	**0.9**	**1.3**
Pakistan Railways	178.5	-73.3	-0.35	0.40
Water transport	-1.7	-3.1	-0.05	-0.09
Air transport	17.4	-27.9	0.85	-1.58
Pipeline transport	-2.7	34.6	-0.01	0.16
Communication	-11.6	0.9	-1.71	0.12
Road transport	2.8	2.9	2.09	2.18
Storage	2.1	2.1	0.06	0.06

Source: Pakistan Bureau of Statistics

Table 2.13: Telecom Sector Revenue Growth

percent

	Cellular	Other	Total
FY08	36.8	-5.9	18.2
FY09	16.6	26.0	19.9
FY10	11.1	-11.4	3.1
FY11	11.3	-6.9	5.4
FY12*	14.2	4.4	13.6

* Jul-Mar

Source: Pakistan Telecommunication Authority

[29] Pipeline transport registered a 34.6 percent increase in FY12, compared to a 2.7 percent *decline* recorded in FY11. Higher fuel imports largely explain this sharp reversal. The value addition came from transporting this imported petroleum (via pipelines) from Karachi to the northern parts of the country.

[30] The tele-density was just 26.3 percent at the end of FY06.

Box 2.1: Progress of Reforms in the Transport Sector PSEs

While efforts to introduce reforms in PSEs are still underway, the operational efficiency of these loss making entities showed no improvement during FY12. Specifically, in 2011, Pakistan Railways repeated the operational loss of the previous year. Likewise, the 2010 operational surplus for PIA turned into a large deficit in 2011. Hence, the financial distress of these entities continue to drain government's resources during FY12 as well (**Figure 2.1.1**).

The Cabinet Committee on Restructuring (CCOR), working since 2010, has already finalized various structural reforms. The key pillars of the restructuring plans are:

a) Improving governance structure;
b) Achieving financial sustainability;
c) Undertaking operational restructuring;
d) Promoting private sector participation; and
e) Introducing supportive legal framework, if needed

Though comprehensive, these reforms need to be implemented urgently, as any delay would only aggravate the financial losses of these entities and, hence, increase the fiscal burden for the government.

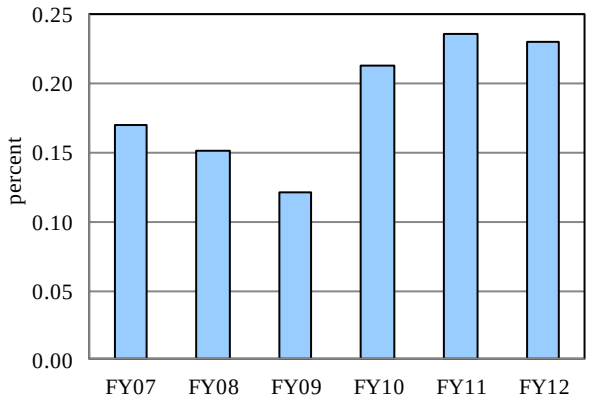
PIA

After achieving a nominal operating surplus during 2010, PIA recorded huge operating losses of Rs 17.9 billion during 2011. A sharp increase in international oil prices and faltering demand for air travel contributed to the lackluster performance of PIA during 2011.

In addition, poor governance and slower implementation of reforms added to financial distress of PIA. The resulting shortage of funds even delayed availability of spare parts. The operational tasks become more complicated as the average age of aircrafts is significantly higher compared to other airlines (**Table 2.1.1**).[31] Hence, not surprisingly, out of a scheduled fleet of 39 aircrafts for 2012, a large number of aircrafts are not operational.

To improve its operations and financial position, PIA is developing its Business Plan in consultation with the Ministry of Finance since 2010. At the same time, five Boeing-777 aircrafts are being acquired. However, the key reforms (for example, restructuring of PIA's Board of Directors, rationalization of human resource, etc.) are still pending. More importantly, the implementation of reforms becomes challenging due to frequent changes in the leadership.

Figure 2.1.1: Fiscal Burden of Transport Sector PSEs as percent of GDP



Source: Ministry of Finance

Table 2.1.1: PIA Active Fleet Details

Aircraft	Number of planes	Average age in years	Rank by Age	
			Pakistan	Among
Boeing 737	6	26	200	284
Boeing 747	5	25.9	71	92
Boeing 777	9	6.7	30	60
Airbus A310	12	19.7	7	33
ATR 42	7	5.8	41	157
Memorandum items				
PIA	39	16.2 years		
Emirates	178	6.4 years		
Air India	100	8.8 years		

Source: PIA and airfleets.net

Table 2.1.2: PR - Financial Summary

billion Rupees, growth in percent

	FY09	FY10	FY11	FY12
Revenues	**23.2**	**22.1**	**17.5**	**15.0**
growth	*14.6*	*-4.6*	*-20.8*	*-14.3*
Expenditure	**46.2**	**47.1**	**48.6**	**45.4**
growth	*71.2*	*1.9*	*3.2*	*-6.7*
Operating expense	14.5	15.5	14.6	14.0
Other expenses	31.7	31.6	34.0	31.4
Repair & maintenance	9.9	10.1	11.8	12.0
General admin	3.7	4.3	5.5	6.1
Profit /loss	**-23.0**	**-25.0**	**-31.1**	**-30.4**

Source: Ministry of Railways

Pakistan Railways

While revenues of Pakistan Railways (PR) continue to decline during FY12, a slight improvement in operating expenses led to a marginal decline in operating losses, which fell from Rs 31.1 billion in FY11 to Rs 30.4 in FY12 (**Table 2.1.2**).

As a part of the restructuring process, various reforms were initiated in PR during FY12. These included: (i) the formation of new Board of Directors (BoDs), which started working after the amendment of the Railway Order; (ii) financial assistance

[31] Average fleet age of PIA is 16.2 years, one of the highest in the region (e.g., Thai Airline, Emirate Airline and Air India)

from the banking system for the rehabilitation of locomotives;[32] (iii) the establishment of an asset management company for optimum utilization of PR's assets; (iv) the outsourcing of non-core functions (e.g., ticketing operation) is also in the pipeline, with an aim to improve efficiency of rail operations; and (v) private sector trains (after the start of Business Express operations, etc.) to enhance public-private partnership.

In addition, the government has allocated funds to procure locomotives, improve track and signal system. At the same time, National Logistics Cell (NLC) is also in the process of procuring reconditioned locomotives from Korea Rail for freight trains.

Despite these reforms, the dwindling strength of locomotives kept hampering revenue generation capacity during FY12 (**Table 2.1.3** & **Table 2.1.4**). The number of passengers plunged to 25.0 million in Jul-Feb 2012, from 64.9 million in FY11. Similarly, freight operations also witnessed a drastic reduction from 2.6 million tons of cargo during FY11 to a mere 0.9 million tons during Jul-Feb 2012 (**Table 2.1.4**).

Table 2.1.3: PR's Locomotives Strength

in numbers

	FY10	FY11	FY12
Total owned	536	521	510
Active on passenger	187	169	124*
Active on freight	95	40	10
Repairs	12	-	-
Purchases	-	-	-

* This number includes 34 locomotives involved in shunting and balancing operations[33]

Source: Pakistan Railways Headquarter

Table 2.1.4 : Pakistan Railway Operations

millions

	FY10	FY11	FY12 (Jul-Feb)
Number of passenger carried	74.9	64.9	25.0
Freight carried tons (Rs)	5.8	2.6	0.9
Freight tones km (Rs)	4,846.9	1,757.3	279.3

Source: Pakistan Economic Survey 2011-12

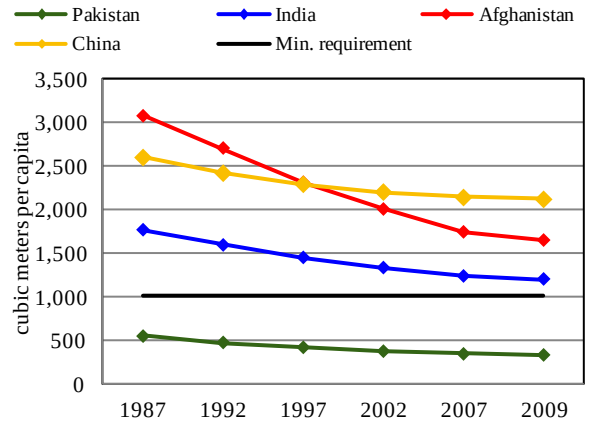
The fiscal cost of such operational setback is huge: the government provided Rs 30.5 billion as subsidy during FY12, against a targeted amount of Rs 25.0 billion.[34] This was in addition to Rs 9.9 billion provided as a PSDP grant to PR during FY12. To plug this continuing resource drain, the government must speed up the restructuring process.

[32] These funds have not been disbursed to PR yet.
[33] Shunting and balancing operations, involve the process of sorting items of rolling stock into complete train sets.
[34] Importantly, a large part of this amount was provided for the payment of salaries and pensions.

Special Section 2.1: Water Scarcity: Issues and Options in Irrigation Water Governance

With increasing scarcity, the irrigation water– which claims 94 percent of the total water supply in the country – is also coming under stress.[35] According to the World Bank, Pakistan is one of the most arid countries in the world, having the lowest per capita freshwater supplies in the region - less than half the global benchmark of 1000 cubic centimeters (**Figure S2.1.1**). On top of it, the declining water supply through canals has led to heedless rise in tube-wells,[36] which is fast depleting the underground water-table.

Figure S2.1.1: Per Capita Freshwater Supply

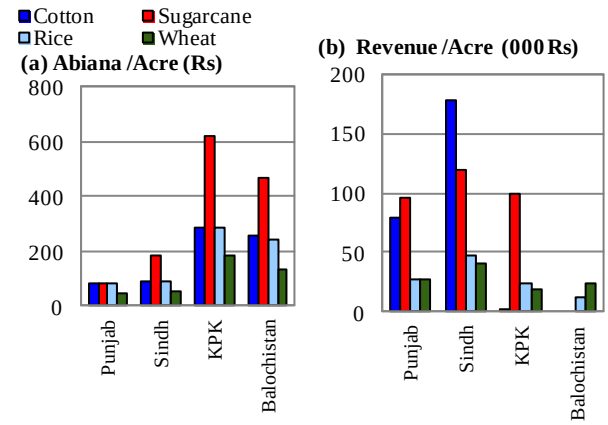


Source: World Bank

Several factors contribute to growing water shortages. The flows through Indus River – the primary source of freshwater supply – are shrinking as climatic changes, along with rapid population growth and increased water diversion to hitherto un-irrigated areas, are adding to demand pressures.[37]

The distinct cycles for water demand and supply also add to the difficulty. Specifically, while supply peaks during summer because of monsoon rains and glacier melting, demand is spread over the year; hence, without storage, excess water simply runs off into the sea. Hence ironically, over 40 percent of the water that flows through the Indus River in Pakistan is lost each year:[38] transpiration and seepage through the *kachchi* canals and tributaries (unlined with brick and concrete) account for part of this loss; the rest flows out to sea simply because we do not have enough dams.

Figure S2.1.2: Abiana and Revenue Comparison



Source: www.wfp.org/food-security

While any increase in water supply has physical limitation, a better management can always ease such shortages to some extent. The immediate focus can be on: (i) prudent supervision of existing water resources (i.e., recovering bills, controlling theft, building storage, controlling seepage, and encouraging water efficient irrigation technologies); (ii) financial sustainability of irrigation agencies in the government; this will enable them to bear regular repair and maintenance costs; and (iii) an increased awareness of the real cost of water.

Financially sustainable supply

To a large extent, problems in Pakistan's water supply have their roots in a public goods supply model – similar to that in the power sector. In a nutshell, the resource is under-priced (dis-incentivizing

[35] World Bank is the source for data on annual water withdrawal.
[36] Over the past decade, the number of tube-wells has grown by 52 percent, reflecting an addition of 0.4 million tube-wells.
[37] The first phase in the construction of three major canals (Rainee, Kachchi, and Greater Thal) will be completed by Q4-FY13.
[38] Hussain, et al., 2011.

conservation and efficient use); the transmission system is replete with line-losses; and low cost recovery and heavy subsidies have led to persistent losses, crumbling the finances of supplying agencies.[39] An obvious outcome is that there is an absolute dependence on the government and foreign financial institutions for funding new investments, while regular support is also sought to meet the running costs.[40] With low foreign funding and growing fiscal constraints, the irrigation water supply system suffers from massive underinvestment in Pakistan.[41]

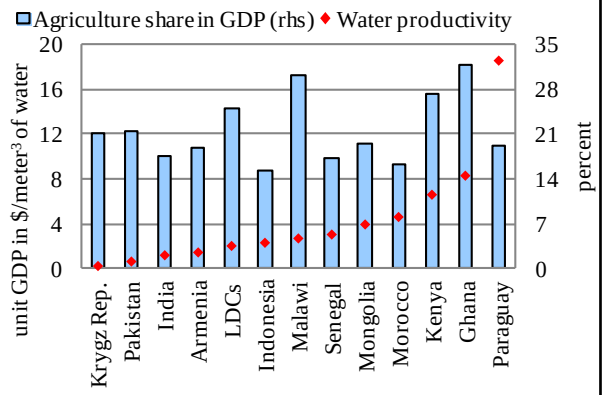
Hence, cost recovery becomes an important issue in irrigation water governance. The 'right' price of water fully recovers supply costs (operational and capital), and also places a value on the resource (the opportunity cost of supplying water to that user, and the economic and environmental externalities).[42] A price that is based on these principles ensures financial and environmental sustainability. While full cost recovery from irrigation may not be possible in a country with rural poverty as high as in Pakistan, at least the supply costs need to be completely recovered with a long-term vision to move towards full recovery.

Unfortunately in Pakistan, we are not even close to recovering supply costs. Irrigation water tariff (*abiana*) is extremely low, accounting for less than 0.5 percent of the crop revenue in Punjab and Sindh (**Figure S2.1.2**). Even with these low rates, average revenue collected is just 60 percent of the total receivables. Thus, the collected revenues cover merely one fourth of the annual operation and management (O&M) costs.[43]

To achieve financial sustainability, the system needs a massive overhaul, beginning with a large upward revision in tariffs. Encouragingly, the government is already working along this line. This year, the Planning Commission came up with an extensive study on Canal Water Pricing in Pakistan.[44] The study recommends full recovery of O&M costs, and suggests that tariffs should reflect water scarcity.

Secondly, volumetric use should be accounted for and the tariff rate should increase with consumption. Currently, a flat rate is charged per unit of area cropped, which means that small and large landholders are charged by the same proportion. Graduating the tariff structure with increasing consumption will put a tax on large landholders, and can also be used as a mechanism for cross-subsidizing supply costs for small farmers.

Figure S2.1.3: Water Productivity in Similar Income Countries with a Strong Agricultural Base



Source: World Bank database.

Tariffs and efficiency

Low tariffs result in high inefficiency in the use of water. Hence, flood irrigation, the most common irrigation method in Pakistan, is highly water inefficient. The sown field is completely inundated, with water being subject to continuous evaporation, while exposure to

[39] According to the Planning Commission (2012), receivables from irrigation water supply cover only 24 percent of the supply cost.
[40] Usually provincial governments provide financial support to irrigation departments; in FY12, Punjab, Sindh and Khyber Pakhtunkhwa together provided Rs 17.3 billion to cover deficits in irrigation system.
[41] In the federal budget of FY13, capital expenditure on water claimed 10 percent of the total PSDP outlay (Rs 44 billion). This was in addition to PSDP allocation of Rs 27.8 billion by four provinces.
[42] Rogers, P., Bhatia, R., and Huber, A. (1998), Global Water Partnership.
[43] Planning Commission, 2012.
[44] See reference number 5 to this article.

excess moisture can even reduce crop yield. Not surprisingly, Pakistan has one of the lowest rates of water productivity compared to similar income countries with a strong agriculture base (**Figure S2.1.3**).[45] More worryingly, farmers have no incentive to shift from this inefficient irrigation method.

The solution is to invest in micro-irrigation methods, such as drip and sprinklers. Although such methods require an expensive outlay of pipes and electricity to pump water, the costs are not entirely prohibitive: India and Nepal have successfully introduced low-cost drip technology on large-scale. The government of Pakistan also introduced a drip and sprinkler irrigation scheme through which the system could be installed at a low cost;[46] however, any tangible impact is not yet visible. With a bleak water situation in the medium-to-long run, technology adoption needs to be expedited.

Plugging water wastage

Although water conservation through tariff rationalization is important of its own accord, a tariff increase will only be acceptable if the government can put the water thus saved to a better use. Specifically, farmers may be willing to pay higher tariffs only if off-season water supply is guaranteed.

Dam construction has remained a priority area for all governments, but the construction of mega projects, e.g., Diamer Bhasha dam, has been delayed due to lack of funding. One point of view, propagated by a group of water experts, economists, and environmentalists, is that smaller dams might be a better solution in the backdrop of Pakistan's fiscal constraints.[47] In any case, we need to find a solution to this imbroglio before our water resources run dry.

Summing up

Both supply and demand management are interlinked. Traditionally, governments in Pakistan have responded to scarcity issues in the provision of public utilities by augmenting supplies, without placing a meaningful price on the good. As a result, expensive new projects do not break-even, adding to the fiscal burden. On the other hand, a tariff increase will only be acceptable when the government ensures better service delivery against it: augmenting storage to balance out off-season shortages, and controlling seepage.

Without simultaneously tackling the two issues, the vicious cycle of chronic losses, under-investment, and debt-build-up will go on unceasingly.

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[45] Water productivity, as defined by the World Bank, is the GDP produced per cubic centimeter of freshwater withdrawal.

[46] http://www.presidentofpakistan.gov.pk/index.php?lang=en&opc=5&sel=9

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Special Section 2.2: Inefficiency and Inequality, not Shortage, behind Food Insecurity in Pakistan

In the book "Poverty and Famines: An Essay on Entitlement and Deprivation", Nobel Laureate Amartya Sen gave a novel perspective on the Great Bengal Famine of 1943. Sen argued that it was not the shortage of food, but the lack of entitlement, or access to an adequate amount of food, that led to the large-scale starvation.

It is now a universally accepted idea that shortage is only one of the many facets of food security. In 1996, the World Food Program adopted the following definition of food security (FS): "People are considered food secure when they have an all-time access to sufficient, safe, nutritious food to maintain a healthy and active life".[48] Thus, along with availability of food, the concept of FS also entails physical and economic access, as well as enabling health and environment required for the proper utilization of food. **Table S2.2.1** gives a snapshot of these so-called 'three pillars' of FS.

Table S2.2.1: The Three Pillars of Food Security

Availability	Access	Utilization
Production and storage	Resources to buy food	Good health to ensure absorption
Ability to import	Physical access	Adequate water & sanitation

Based on the World Food Program's concept;
Source: www.wfp.org/food-security

However, economic policies in Pakistan have for a long time focused only on increasing food production. Input subsidies (fertilizer, water, and electricity), fertilizer import, subsidized credit, seed distribution, crop procurement, crop price setting, tractor schemes, among others, are all efforts geared towards encouraging crop production – wheat claiming most of the benefits.

As a result, while the total food production in Pakistan is not a cause of food insecurity, wastage and lack of access has left a large part of the population food insecure. A recent global rating of country food security ranked Pakistan 75th out of 105 countries sampled, substantially below regional countries like India (ranked 66th), Sri Lanka (63), Vietnam (55), China (39), and Malaysia (33).[49,50]

Production is not the problem

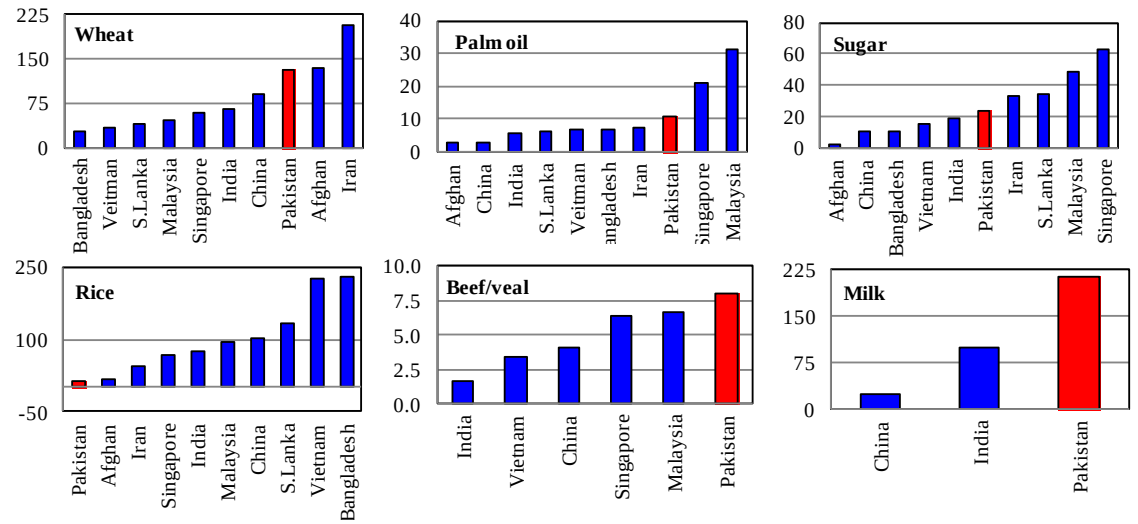
A glance at average per capita consumption of key food items in regional countries illustrates that lack of food is certainly not the problem in Pakistan (**Figure S2.2.1**). In terms of food available for consumption (domestic production adjusted for inward and outward trade), Pakistan ranks higher than many regional countries, even surpassing countries like India, China, and Sri Lanka, which rank higher on the overall food security index.

Two facts explain this anomaly:

(i) **Wastage:** The total "consumption" number measures food available at source (such as grain available at the farm gate and landed quantity of imports). It lacks information about food wasted due to improper storage, mishandling, and smuggling. The Competitiveness Support Fund (CSF) in 2008 estimated that Pakistan annually loses 15 percent of its wheat crop due to improper handling: 5 percent of the grain is lost immediately after harvest, while another 10 percent is destroyed by moisture and poor handling of flour.[51]

[48] Definition adopted at the World Food Summit. http://www.wfp.org/food-security
[49] The index developed by Economist Intelligence Unit (EIU), of the Economist magazine, was released in August 2012.
[50] On an absolute scale, Pakistan's FS index value is 6.6 percent below that of India, the lowest ranking country among the group cited.
[51] Bastin and Kazmi (2008).

Figure S2.2.1: Annual Per Capita Consumption of Major Food Commodities in 2011 (kgs/capita) - Regional Comparison

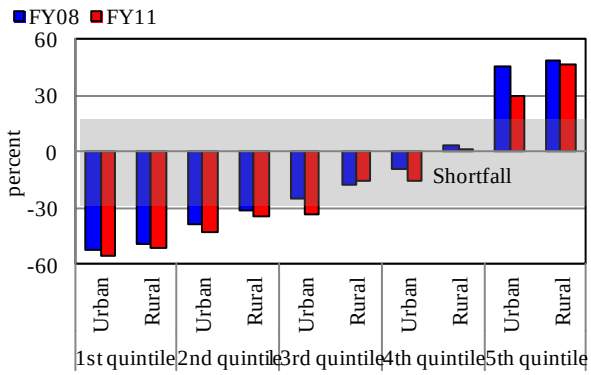


Source: Consumption data from US Department of Agriculture (World Agriculture Statistics), except milk production in Pakistan (Pakistan Agriculture Statistics) is used as consumption proxy. Consumption is adjusted for population (World Bank database).

Lack of proper storage is also a major cause of food wastage. Although hard numbers on national (public and private) storage capacity is not available, provincial storage capacity information is insightful. For example, Punjab and Khyber Pakhtunkhwa, which together produced around 19 million MT of wheat in 2011 (75 percent of national production), have a combined public storage capacity of only 2.5 million MT.[52] According to the CSF, 70 percent of the country's total capacity in 2008 comprised of temporary emergency stores[53] – these do not provide adequate shelter from rain or floods.

(ii) **Income inequality:** Not surprisingly, persistent income inequality is one of the key reasons for lack of access to food. Food is costly as it claims 57 percent of income of the lowest four quintiles. Even so, our estimates show that at least 60 percent of population is spending less on food than required for a healthy and active life.[54] The situation has changed little over the past three years. Moreover, data shows that for the lowest income quintiles, the situation is worse in cities than in the rural areas (**Figure S2.2.2**).

Figure S2.2.2: Percentage Difference in Per capita Food Spending over Minimum Requirement



Source: Analyst estimates; based on PSLM and Planning Commission data.

Encouragingly, the government is making efforts towards improving the situation. To address storage issues, the government has undertaken a project to construct 0.5 million MT of storage capacity in Sindh over the next few years. Direct cash

[52] Development Statistics of Khyber-Pakhtunkhwa 2011 and Development Statistics of Punjab 2011.
[53] Bastin and Kazmi (2008)
[54] The calculations were made as follows: (i) average household spending on food by income quintile (from Pakistan Social and Living Standards Measurement Survey, PSLM) was divided by quintile-wise household size (also from PSLM) to obtain per capita spending on food; (ii) minimum cost of (adequate) food basket was obtained from the Planning Commission's Annual Report on "Change in the Cost of Food Basket". This was taken as benchmark; (iii) percentage difference between benchmark spending and actual spending was computed using the standard formula.

subsidies are also being provided under the Benazir Income Support Program (BISP). Indeed, the BISP buffered a large part of the population against poverty in the aftermath of floods.

However, to be food secure in real terms, state efforts should be guided by a vision towards promoting self-reliance and financially sustainable governance. Both these objectives entail similar ideology: (i) that the role of state is not to dole out charity (whether in the form of food stamps or subsidies); (ii) that if subsidies must be given out, they need to be highly targeted and should help the poorest sections become self-reliant in a practical timeframe; and finally (iii) while market forces should not entirely dictate the supply of public goods (like transport lines, ports, and storage), proper investment in, and maintenance of, public facilities is only possible if the relevant government bodies gain some level of financial sustainability. This can be achieved by eliminating untargeted subsidies and promoting efficiencies in the working of the government.

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