2 Real Sector

2.1 Overview

The major indicators pertaining to Q1-FY19 suggest that the economic activity is losing momentum after observing a 13-year high in FY18. Rising macroeconomic imbalances in the fiscal and the external sectors have mainly arrested the forward motion in economic growth. The economy had begun to show signs of overheating, and policy actions in the form of regulatory measures, exchange rate depreciation and an increase in the policy rate were implemented to contain it. Consequently, some moderation was observed in domestic demand, which affected activities in the commodity-producing sector of the economy. This weak performance of the commodity-producing sector, coupled with a deceleration in import growth has constrained the performance of services sector as well.

Large scale manufacturing (LSM) witnessed a broad-based contraction of 1.7 percent during Q1-FY19, in stark contrast to the impressive growth of 9.9 percent observed during Q1-FY18. In particular, (i) regulatory measures such as the ban on purchase of new vehicles for non-filers; (ii) changes in the sales tax structure on cigarettes; (iii) the increasing share of imported RLNG and coal in the electricity generation mix in place of locally processed furnace oil; and (iv) PKR depreciation, all had a negative impact on domestic demand. On the external front, rising international commodity prices served as an adverse shock for the economy (**Box 2.1)**.

In the agriculture sector, a reduction in the area under cultivation, lower water availability, and a drop in fertilizer offtake led to an overall under-performance of the *kharif* crop sector in FY19. Though all the major *kharif* crops (except cotton) achieved their targets, their output remained considerably lower than last year's record harvests.[1]

Box 2.1: LSM and International Commodity Prices

The increase in international commodity prices is one of the factors that led to a contraction in the LSM growth in Q1-FY19. In the last few years, LSM had been on an upward path as international prices had remained calm. That, coupled with stable exchange rate spurred private sector investment, leading to an expansionary phase in many of the sectors. Recent bout of exchange rate depreciations and increase in international commodity prices has changed the earlier situation. The

[1] According to the Ministry of National Food Security and Research (MNFSR), targets of each crop are decided and allocated to the provincial governments after taking into consideration the input situation (water, fertilizer, seeds and pesticides availability) and weather forecast. The targets set for all *kharif* crops in FY19 are marginally different from those set for FY18.

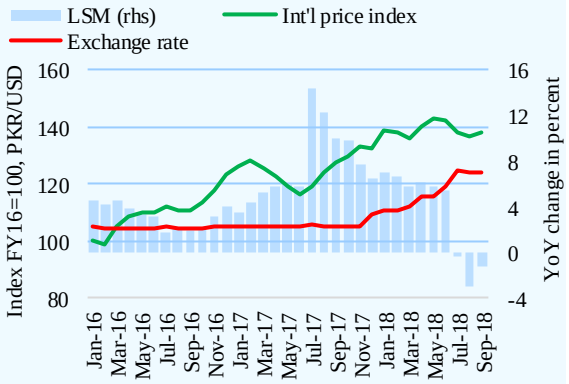
cumulative effect of price movements may continue to leave its footprint on LSM over the forthcoming quarters as well. Latest Consumer and Business Confidence Surveys conducted by SBP somewhat mimic these sentiments about the future state of the economic activity in general.

Prices of raw materials in the international market had been increasing since January 2016.[2] The domestic economy was able to absorb some of the earlier effect, as stable exchange rate insulated the LSM sector from price volatility. No significant change in administered prices of the imported energy products also shielded the domestic producers to some extent.

However, as the twin deficits swelled, the exchange rate started to depreciate and protection afforded to the industry from external commodity shock started to erode. The transmission of the exchange rate to domestic prices became more apparent in Q1-FY19. WPI rose in double digits in three out of last four months. It was the highest quarterly growth in five and a half years and the resultant price shock hampered manufacturers' production activities **(Figure 2.1.1** and **2.1.2)**.

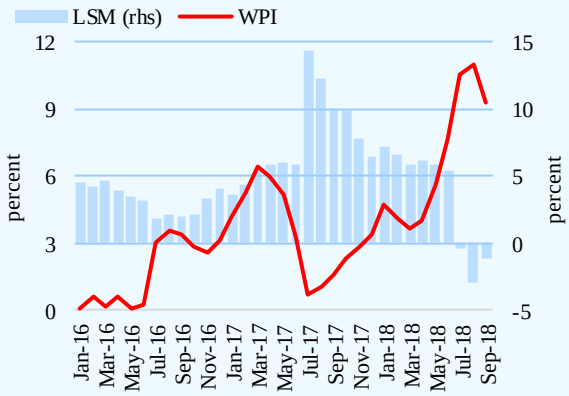
Going forward, it would not be easy for the producers to pass on all the increase in cost of production to the consumers easily,[3] amid slowdown in aggregate demand. It is therefore likely that the performance of the LSM sector would face headwinds in the forthcoming quarters.

Figure 2.1.1: Exogenous Commodity Price Shock and LSM



Data source: Pakistan Bureau of Statistics, State Bank of Pakistan, World Bank

Figure 2.1.2: WPI and LSM (YoY change)



Data source: Pakistan Bureau of Statistics

2.2 Agriculture

Preliminary estimates for the major *kharif* crops, namely cotton, rice, sugarcane and maize, reveal a subdued performance of the sector. This is largely explained by a considerable decline in the area under cultivation, especially in Sindh where

[2] International commodity price index is calculated using the World Bank commodity price indices weighted by their respective share in imports for Pakistan. The weights used for the purpose of calculating the index are; machinery 38 percent, energy 26 percent, agriculture inputs 16 percent, food 11 percent and textile 9 percent.

[3] This is evident from falling margins as reported in quarterly reports of the corporate sector.

water shortages resulted in a drought-like situation. The total area sown under *kharif* crops for FY19 stood at 7.54 million hectares, a decline of 7.7 percent over FY18. Moreover, water shortages and lower fertilizer application might also have an adverse impact on crop yields. Thus, in overall terms, the contribution of *kharif* crops in the gross value addition (GVA) of the agriculture sector might fall significantly below the FY18 level.

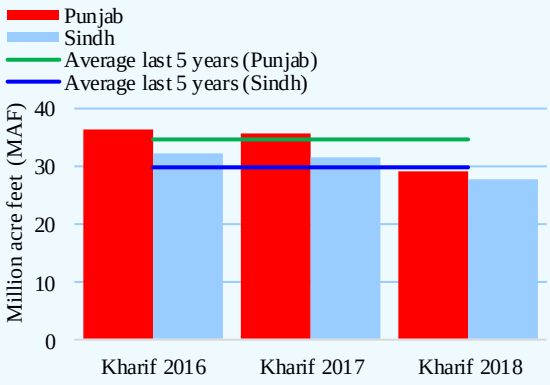
Input situation:

On the input front, the situation was not encouraging either. The total water availability for the *kharif* crops (Apr-Sep 2018) remained considerably lower than last year, as canal water (a major water source for irrigation) availability remained lower compared to last year by 17.8 percent and 11.6 percent for Punjab and Sindh, respectively. The water shortfall in Punjab was covered to some extent by groundwater withdrawals. However, owing to constraints such as brackish and saline groundwater, Sindh suffered a reduction in the area under cultivation (**Box 2.2**).

Box 2.2: Water Situation: Need for Managing Erratic Supplies

The *kharif* 2018 season has witnessed alarming shortages of canal water alongside changing patterns of rainfall in the country. When compared to the average of the last five years (Apr-Sep), the irrigation water withdrawal remained 15.9 and 6.6 percent lower for Punjab and Sindh, respectively. Furthermore, replenishment in groundwater was lower on accounts of below-normal monsoon rainfalls. This reduced water availability was the main cause of reduction in area under cultivation of cotton, sugarcane and rice crops, especially in Sindh. The situation is expected to get more volatile in near future especially under climate change, which is why there is an urgent need to manage water flows during and between the seasons.

Figure 2.2.1: Canal Water Withdrawals for Kharif (Apr-Sep 2018)

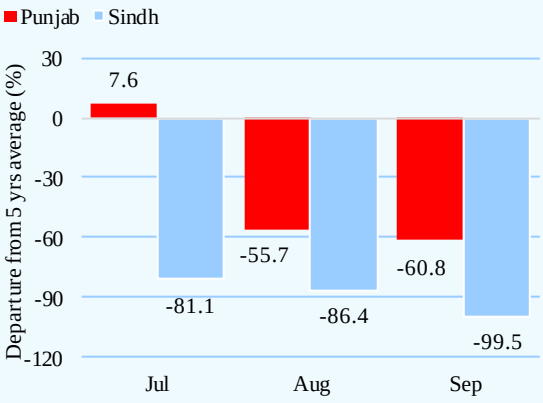


Data source: Indus River System Authority

The low rainfall in Sindh, 89 percent below the 5-year average, in the monsoon season is further aggravating the situation. Recorded rainfall in Punjab for three months of Jul-Sep FY18 was also lower by 33 percent compared to the last five years' average (Apr-Sep 2013-2017) **(Figure 2.2.1** and

2.2.2). The changes in rainfall and irrigation flows is the result of climate changes as weather patterns are changing.[4] It is also important to note that certain crops will be affected more than the others due to this phenomenon.[5] Going forward, *Rabi* season is expected to receive 35-40 percent lower canal water flows compared to the actual allotment of 37.0 MAF. The erratic nature of river inflows and monsoon rainfall requires proper management at the provincial level for meeting the crop water requirement. The following measures at the provincial level are urgently required:

Figure 2.2.2: Monsoon Rainfall Q1 FY19



Data source: Pakistan Meteorological Department

- ***Developing small storages at water-course/canal level:*** Storages at the watercourse and canal level are crucial for managing the timings issue between demand and supply within a cropping cycle. Storages are also needed to store the rainwater.
- ***High Efficiency Irrigation Systems (HEIS):*** Encouraging HEIS by subsidizing drip/ sprinkler irrigation and laser land leveling is also needed. These technological measures will help farmers conserve water, increase per hectare yields, and save costs of electricity/ fuel on water pumping. There is a need for further expansion of the systems, as they help save 50-60 percent of water and 40-50 percent savings on fertilizer.[6]
- ***Farmer participation*** in managing the canal infrastructure would increase the accountability of the system and hence improve the system maintenance. Farmers' organizations and area water boards have been the successful models as farmers take ownership of the system, resulting in reduced wastages. This will also ensure an adequate allocation of water for each season.
- ***Water pricing:*** Increasing water tariffs at par with the value of water would affect farmers' behavior. Additionally, aligning water rates with supply is also required, such as sugarcane may be charged higher per hectare for using more water. A tier system based on the placement/location at the water-course levels would also yield efficient results.

Lower availability of water, coupled with a decline in the area under cultivation and increased urea and DAP prices,[7] resulted in a lower fertilizer offtake during

[4] The start of the rainy season has been delayed by up to 30 days per decade in the past 20 years. This delays the sowing of many crops. Source: Climate Risks and Food Security Analysis: A Special Report for Pakistan. World Food Programme and SDPI. http://vam.wfp.org.pk/publications.aspx

[5] Increase in precipitation for instance does not harm rice crop but is harmful for the cotton crop. Source: Siddiqui, R., Samad, G., Nasir, M., and Jalil., H., (2012) The Impact of Climate Change on Major Agricultural Crops: Evidence from Punjab, Pakistan. *The Pakistan Development Review* 51:4, 261 276.

[6] Source: Agriculture Department, Government of Punjab

[7] Average prices of urea increased by 23.8 percent in Q1-FY19. On average in July and August prices of urea rose by 24 percent whereas DAP prices rose by 28 percent.

the *kharif* season. Specifically, urea offtake contracted by 10.7 percent and Diammonium Phosphate-(DAP) by 9.3 percent compared to growth of 19.6 percent and 43.1 percent, respectively, for the *kharif* season last year.[8] One possible reason could be stockpiling of fertilizers by the agents who expected the prices to increase in the likely event of the withdrawal of subsidies amidst rising international prices.[9] Anecdotal evidence also indicates that the retailers/ agents may have built up the reserves before the start of the season to reap benefits of an expected price hike later.

Table 2.1 Agriculture Credit Disbursements in Q1

	billion Rupees			Growth in %	
	FY17	**FY18**	**FY19**	**FY18**	**FY19**
Farm sector					
A. Production	41.5	57.5	82.4	38.8	43.3
All crops	31.0	38.5	40.1	24.3	4.2
B. Development	3.2	3.3	6.0	2.8	81.5
Tractor	0.7	1.1	1.0	52.7	-8.0
C. Total farm sector (A+B)	44.7	60.8	88.4	36.2	45.3
Non-farm sector					
Livestock/dairy	29.0	41.2	61.5	42.1	49.2
Poultry	15.8	24.7	26.6	56.1	7.5
Other	14.3	29.1	35.7	102.9	22.5
D. Total non-farm sector	59.2	95.0	123.7	60.6	30.2
Total agriculture (C+D)	103.9	155.9	212.1	50.1	36.1

Data source: AC&MFD, State Bank of Pakistan

Table 2.2: Cotton Crop Performance

			FY19		Growth in %	
	FY17	**FY18**	**Target**	**Provisional**	**FY18**	**FY19**
Area ('000 hectares)						
Punjab	1,815	2,053	2,300	1,947	13.1	-5.2
Sindh	637	612	620	422	-4.0	-31.0
Pakistan	2,489	2,700	2,955	2,406	8.5	-10.9
Production ('000 bales)						
Punjab	6,980	8,077	10,000	8,077	15.7	0.0
Sindh	3,600	3,776	4,200	2,600	4.9	-31.1
Pakistan	10,676	11,945	14,370	10,847	11.9	-9.2
Yields (Kg/hectares)						
Punjab	654	669	739	705	2.3	5.4
Sindh	961	1,049	1,152	1,047	9.2	-0.2
Pakistan	729	752		766	3.1	1.9

Data source: Central Cotton Crop Assessment Committee and Federal Committee on Agriculture.

On an encouraging note, credit disbursements to the agriculture sector grew by 33.9 percent during the *kharif* season (Apr-Sep 2018) over the same period last year. Amid the discouraging major *kharif* crop situation, higher borrowings by the agriculture sector indicate that the requirements for other purposes, especially non-farm requirements for livestock/dairy and poultry farming, are on the rise. This is a continuation of the trend observed in FY18,

[8] Source: Fertilizer Review, Mid October 2018, National Fertilizer Development Corporation (NFDC)

[9] Offtake in Jan-Mar, 2018 preceding the *kharif* season increased by 43.7 percent on YoY basis.

during which the non-farm segment had a significantly higher share in the total disbursements than the farm segment (**Table 2.1**).

Cotton:

The latest estimates for cotton crop reveal a worrying picture, as the total production in FY19 is estimated at 10.8 million bales,[10] a decrease of 9.2 percent over the last year's production level, and trailing 24.3 percent behind the targeted level of 14.4 million bales for the year (**Table 2.2**). This below-expectation performance of the cotton crop was largely due to a contraction in the cultivated area. It is pertinent to highlight here that the cotton cultivated area was the lowest in the last seven years;[11] this was mainly due to a lower than average availability of canal water and poor quality of the groundwater.

Estimates of lower production in the country and rising international cotton prices have put upward pressure on prices of seed cotton in the domestic market.[12] Given the stability in the cotton prices, farmers are expected to improve their agronomic practices (pesticides application and soil management) which might enhance cotton production and yield in the coming seasons.

Given the average mills' annual consumption of around 14 million bales in the country,[13] the production is expected to remain short by around 23 percent for the ginners as per their installed capacity for value addition. It is important to note here that raw cotton imports for the Q1-FY19 already stand at 218 thousand bales compared to imports of 113 thousand bales in Q1-FY18, and it is likely that this trend would continue going forward.[14]

Sugarcane:

Estimates place sugarcane production at 68.3 million tons, matching the set target of 68.2 million tons for the year, but falling 16.9 percent short of the production level achieved in the last year (**Table 2.3**). The decline in sugarcane production was expected due to several factors: i) irrigation water shortages, ii) lower area

[10] The production estimates are provided by the first assessment of the Cotton Crop Assessment Committee (CCAC) held on 12th September 2018.

[11] The decline was most prominent in Sindh, which observed a 31.3 percent decline in area under cultivation on a YoY basis. Cotton cultivation in Punjab also reduced by 5.2 percent because of 32 percent lower canal water availability in sowing season of April- June 2018.

[12] Monthly prices of Cotlook 'A' index rose to US$ 1,995.2 per ton in Sep 2018 from US$ 1,782.1 per ton in Sep 2017, mainly on expectations of lower global cotton output. Cotton Outlook: ICAC Washington DC. Meanwhile, the prices of 40 kg of seed cotton in July 2018 was Rs. 4,232 compared to Rs. 3,286 per 40 kg in July 2017. Monthly Review of Cotton Prices for October 2018

[13] Source: All Pakistan Textile Mills Association (APTMA)

[14] Source: Daily Cotton Market Report, 29-10-2018, Pakistan Central Cotton Committee

under crop production after the crushing season delays and price disputes experienced by the farmers last year; and iii) profitability concerns amidst pending payments to the farmers by the sugar mills for last season's crop FY18

In Punjab specifically, the major sugarcane producing districts such as Rahimyar khan, Faislabad, Jhang, and Chiniot, all witnessed a decline in the area under cultivation. This occurred simultaneously with an increase in the area under rice cultivation, as farmers shifted to the latter to avoid the chance of facing the above-mentioned challenges associated with the sugarcane crop for the second year in a row. Contraction in yields, with the poor quality of seeds and irregular application of fertilizer and pesticides also playing a role in suppressing the production.

Meanwhile, in Sindh, water availability issues translated not only into a decline of 22.7 percent in the area under cultivation but also into a sizable contraction in yields.[15] Moreover, poor quality of seeds and irregular application of fertilizer and pesticides also played a role in suppressing the production. As mentioned in earlier reports, the policy of indicative pricing has caused distortions in the overall agriculture commodity market in recent years. In particular, sugarcane production has been consistently exceeding the domestic demand at the cost of a decline in production of cotton and other crops, such as oil seeds (**Box 2.3)**.

Table 2.3: Sugarcane Crop Performance

			FY19		Growth in %	
	FY17	FY18	Target	Provisional	FY18	FY19
Area ('000 hectares)						
Punjab	778	859	728	733	10.5	-14.7
Sindh	321	333	322	270	4.0	-19.0
Pakistan	1,218	1,342	1,161	1,115	10.2	-16.9
Production ('000 tons)						
Punjab	49,613	55,068	44,000	47,186	11.0	-14.3
Sindh	18,160	20,612	18,752	15,730	13.5	-23.7
Pakistan	73,433	82,128	68,157	68,252	11.8	-16.9
Yields (Kg/hectares)						
Punjab	63,786	64,099	60,406	64,385	0.5	0.4
Sindh	56,660	61,842	58,236	58,236	9.1	-5.8
Pakistan	60,309	61,207		61,198	1.5	0.0

Data source: Ministry of National Food Security & Research and Federal Committee on Agriculture

Box 2.3: Sugarcane - the Cost of Indicative Pricing

The policy of indicative pricing for sugarcane is aimed at protecting the sugarcane farmers and to meet the domestic demand of sugar. The policy has culminated in increase in the number of sugar mills in Punjab and Sindh. Consequentially in FY18, the production of cane reached a record of 82.1 million tons - an increase of 31 percent above the output of 62.8 million tons in FY15. The expansion is largely based on an area increase of 18 percent, with the yield growth contributing around 11 percent only.

[15] Sugarcane consumes 0.05 million cubic meters to hectares compared to 0.02 for cotton and 0.03 for rice crop. Source: Development of Integrated River Basin Management for Indus Basin: Challenges and Opportunities. Simi Kamal, Dr. Pervaiz Amir, Khalid Mohtadullah. WWF- Pakistan 2012

Resultantly, sugar production has exceeded demand levels, as the pace of growth in sugar production remained significantly higher than consumption; during FY18, sugar production amounted to 7.5 million tons with domestic consumption standing at 5.5 million tons. To ensure that the price of sugar remains in sync with the indicative prices, the domestic market is shielded by a 40 percent tariff on imports. However, this indicative pricing practice has led to several issues:

- **Even farmers could not benefit:** Farmers have been suffering as excess sugar stocks with mills means depressed prices for sugarcane that are lower than the provincially announced per 40 kg rates. In FY18, payment to farmers was as low as Rs 120-140 per 40 kg compared to the notified prices of Rs 180 per 40 kg in Punjab and Rs 182 in Sindh. Inability to dispose off cane at even lower rates became problematic, as the market was glutted with excess supply.
- **Huge subsidy cost:** To offload excess stocks, export subsidies at federal level are announced before the start of the crushing season. The average monthly price of domestic sugar was US$ 448.3 per ton compared to the global price of US$ 329.7 during FY18. Technically, the exports are costing more to the government than its benefits as a significant expenditure is incurred. In FY18, exports subsidy announced by the federal government at Rs 10.7 per kilogram resulted into a total expenditure of Rs 14 billion that is still due. Given the precarious fiscal situation, this expenditure is unnecessary.
- **Distorted signals for competing crops:** The mushroom growth of sugar mills in the main cotton-growing regions of Southern Punjab and Sindh has placed the cotton crop in direct competition with sugarcane for area and resources. According to calculations, the share in area in dominant cotton districts of Punjab was 11.1 percent in FY14, which rose to 14 percent in FY18. Hence, the crop heavily affects cotton production resulting into higher imports for cotton and a burden on the foreign exchange reserves.
- **Excessive use of water in the crop:** Given the lower water availability situation in the country, rationalization of water according to food security and value addition is required. Sugarcane crop consumes relatively large quantities of water, while the production exceeds local consumption and fails to generate export earnings under the current pricing mechanism.

In a nutshell, indicative pricing has distorted the agriculture commodity market in the country. The resultant inefficiencies call for the need to liberalize the market and align domestic pricing with the global prices.

Rice:

Initial estimates indicate that rice production stood at 7.1 million tons during the FY19 *kharif* season, higher than the target of 6.9 million tons but 4.4 percent lower than the record crop witnessed during FY18. While the basmati performance in Punjab is laudable as the estimated crop exceeded the 4 million tons mark, the production in Sindh suffered a contraction of 15.2 percent on a YoY basis, largely due to a contraction in the area under cultivation.

Variety-wise breakdown suggests that the production of basmati has increased in Punjab on the back of an expansion in the area sown due to several factors: i) improved relative profitability for the rice variety compared to sugarcane and

cotton in the previous period;[16] ii) the increasing demand of the commodity in international markets, and iii) a general stability in domestic basmati prices.

However, irri and hybrid varieties in Sindh suffered due to exceptional water shortages (a decline of 43 percent during the period under review) and the poor quality of groundwater, [17] resulting in a total area contraction of 17.1 percent compared to FY18. **(Table 2.4).**

Table 2.4: Rice Crop Cultivated Area for Punjab and Sindh

	FY17	FY18	FY19		Growth in %	
			Target	1st Estimates	FY18	FY19
Area cultivated in Punjab ('000 hectares)						
Basmati	1,352.8	1,416.4	-	1,494.1	4.7	5.5
Irri	145.3	134.8	-	133.5	-7.2	-0.9
Others	238.4	289.8	-	296.2	21.6	2.2
Total	1,736.5	1,840.9	1,800.0	1,923.9	6.0	4.5
Area cultivated in Sindh ('000 hectares)						
Basmati	51.0	55.2	-	56.1	8.2	1.6
Irri	333.4	351.6	-	258.3	5.5	-26.5
Hybrid	343.7	393.9	-	352.6	14.6	-10.5
Others	22.4	27.2	-	19.5	21.4	-28.1
Total	750.5	827.9	770.0	686.5	10.3	-17.1

Data source: Ministry of National Food Security & Research and Federal Committee on Agriculture

As domestic rice production exceeds the annual requirement of 3 million tons,[18] major production is left for exports dominated by the non-basmati variety. Hence, global prices play a dominant role in determining the rice production and domestic prices.

It is worth mentioning here that the overall value-addition of the crop segment in GDP would largely depend on the production of wheat, the largest crop of the year. Looming challenges such as increased fertilizer prices, higher cost of borrowing, and, above all, a 35-40 percent decline in water availability in the *rabi* 2018-19 season hold the potential to adversely affect prospects in this regard.[19] Moreover, delay in harvesting of sugarcane crop in certain areas will have a significant bearing on the performance of the upcoming wheat crop as the area may not be vacated in time.

2.3 Large Scale Manufacturing (LSM)

LSM contracted by 1.7 percent during Q1-FY19 compared to a remarkable growth of 9.9 percent during the same period last year **(Table 2.5)**. This subdued performance can largely be attributed to a deceleration in the construction-allied industries and consumer durables. It may be noted that these two sectors had mainly driven the growth in LSM during the last few years. Factors such as: (i) a

[16] Source: Punjab Crop Reporting Centre
[17] Source: Sindh Crop Reporting Centre
[18] Food Security Commissioner: Ministry of National Food Security and Research
[19] Source: Indus River System Authority.

decline in public sector development spending; (ii) exchange rate depreciation; (iii) increasing costs of raw material; (iv) rising inflation; (v) policy measures like barring/ restricting non-filers from purchase of certain assets; and (vi) regulatory bottlenecks that resulted in the buildup of circular debt, all restricted the growth in the specific industries.

Table 2.5 : YoY Growth in LSM (Q1)

growth in percent, contribution in percentage points

		YoY Growth		Contribution in Growth	
	wt.	FY18	FY19	FY18	FY19
LSM	70.3	9.9	-1.7		
Textile	20.9	0.8	-0.2	0.2	0.0
Cotton yarn	13.0	0.1	0.0	0.0	0.0
Cotton cloth	7.2	0.0	0.1	0.0	0.0
Jute goods	0.3	98.1	-8.1	0.1	0.0
Food	12.4	12.3	-4.2	1.8	-0.6
Sugar	3.5	0.0	0.0	0.0	0.0
Cigarettes	2.1	92.0	4.4	1.1	0.1
Vegetable ghee	1.1	11.1	2.4	0.2	0.0
Cooking oil	2.2	9.1	-9.4	0.3	-0.3
Soft drinks	0.9	2.6	-8.3	0.1	-0.3
POL	5.5	13.6	-5.4	0.9	-0.4
Steel	5.4	47.0	-2.9	1.8	-0.2
Non-metallic minerals	5.4	12.3	-1.5	1.4	-0.2
Cement	5.3	12.4	-1.4	1.4	-0.2
Automobile	4.6	29.1	-1.5	2.0	-0.1
Jeeps and cars	2.8	31.4	4.7	1.1	0.2
Fertilizer	4.4	-5.8	-4.8	-0.4	-0.3
Pharmaceutical	3.6	1.9	-3.7	0.2	-0.3
Paper	2.3	9.6	4.2	0.4	0.2
Electronics	2.0	76.9	7.8	1.4	0.2
Chemicals	1.7	5.6	-1.8	0.1	0.0
Caustic soda	0.4	18.1	17.2	0.1	0.1
Leather products	0.9	-0.3	1.5	0.0	0.0

Data source: Pakistan Bureau of Statistics

Construction allied activities

A multitude of factors constrained the pace of the construction activities in Q1-FY19. A fall in development spending during the interim government, which was in office for almost the first half of Q1-FY19, lowered the demand on the public sector front, while the imposition of ban on transfer and purchase of properties in excess of Rs 5.0 million dented the demand of the private sector.

Fiscal consolidation measures also resulted in a reduction in development spending in the revised budget for FY19. Consequently, during Q1-FY19, PSDP dipped to Rs 106.6 billion from Rs 165.0 billion during the same period last year.[20] Private sector spending on housing projects also slowed down with the resurgence of inflationary pressures and certain regulatory measures. CPI data indicates that prices in the construction sector rose sharply from 4.1 percent in Q1 FY18 to 9.6 percent in Q1-FY19. Construction items that have a heavy import footprint such as paints, ceramics, sanitary and steel surged in tandem with an increase in the international prices and depreciation of the domestic currency.

[20] Data source: Ministry of Finance

Cement

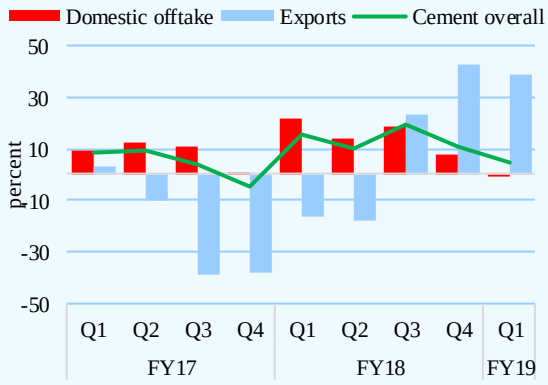
The cement sector's output contracted by 1.4 percent in Q1-FY19 against a sizeable growth of 12.4 percent during the same period last year. The decline came despite the fact that the sector's capacity grew from 49.4 million tons to 54.2 million tons during the review period. A slowdown in cement dispatches in the midst of capacity enhancements resulted in a fall in the utilizations levels by 4 percent in Q1-FY19 to 80 percent.

For the last few years, robust domestic demand had helped cement manufacturers increase their capacity utilization significantly, thereby ensuring healthy margins for the cement industry. However, in Q1-FY19, the domestic sales witnessed a decline of 0.4 percent on a YoY basis, putting considerable pressure on the utilization levels. Encouragingly, however, exports grew remarkably, as they did during the previous expansionary phases as well **(Figure 2.1)**. In quantum terms, the manufacturers exported 39.1 percent more cement during Q1-FY19, which was in stark contrast to the last year's decline of 16.7 percent (**Chapter 5**).

Steel

Steel output shrank by 2.9 percent in Q1-FY19 compared to a significant growth of 47.0 percent during same period last year. Given the dependence of the steel industry solely on domestic market, this deceleration is in tandem with the overall slowdown in construction activities in the country. Furthermore, the demand for steel from the automobile sector slowed down, as the sector experienced a notable moderation during the period under review.

Figure 2.1: Cement Growth



Data source: All Pakistan Cement Manufacturers' Association (APCMA)

The increase in raw material prices in the aftermath of exchange rate adjustments also played a pivotal role in undermining the sector's performance.[21] Imported scrap and raw iron products, the major raw materials of the steel industry in the country, became expensive,

[21] The steel manufacturers of Pakistan are dependent on imported raw materials for their products; hence, the industry is prone to developments in global commodity prices as well.

with a rise in the energy costs further escalating the cost of production. With the price differential between locally produced and imported finished products (especially from China) widening, a sizeable share of domestic demand continued to be met by the imports.

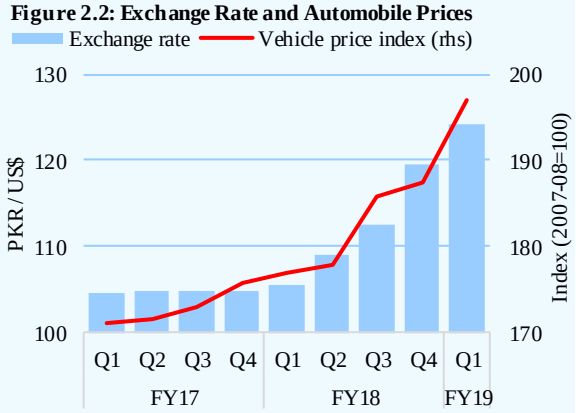
Automobile

Production in the automobile sector contracted by 1.5 percent in Q1-FY19 compared to a significant growth of 29.1 percent that was observed during the same period last year. The primary factors that contributed to this decline are: (i) a ban on non-tax filers on registration of vehicles; (b) an increase in interest rates by 275 basis points since January 2018 that pushed up the borrowing costs; and (c) PKR depreciation which led to a considerable increase in vehicle and fuel prices. This culminated in the lowest quarterly growth in auto sales in the last five years.

The enforcement of a regulatory measure that requires buyers to be active tax filers had a negative impact on the auto demand. While there is still some growth in the cars segment, the shortening of car delivery times from the date of booking is reflective of the impact this regulation has had on the industry. Earlier, the delivery times were 6-9 months for certain popular variants; the lag has now gone down to 2-4 months recently. Importantly, the measure has had a major bearing on the prospective buyers from the rural economy, which is largely informal. According to industry sources, car assemblers have stopped booking of cars to non-filers since the amendment in income tax ordinance 2001 in June 2018.

Furthermore, the increase in car prices, along with higher financing costs, might also have contained the demand for automobiles during Q1-FY19. As shown in **Figure 2.2**, the vehicle prices have responded quite strongly to the movement in the exchange rate, as all the major assemblers passed on the impact of rising input costs to the customers. Meanwhile, the off-take of car loans from commercial banks also posted a sharp decline during Q1-FY19.[22]

Figure 2.2: Exchange Rate and Automobile Prices



Data source: Pakistan Bureau of Statistics and State Bank of Pakistan

[22] Please refer to section on credit to private sector in **Chapter 3** for more details

The demand for two and three wheelers dampened by 3.0 percent in Q1 FY19. It was the first quarterly drop since Q4-FY15 (**Table 2.6**). Anecdotal evidence points to a strong relationship between the performance of the agriculture sector and the demand for motorcycles. As the agriculture segment underperformed during the *kharif* season relative to the same period last year, it negatively affected the sales of bikes and three-wheelers.

Table 2.6: Automobile Sector Production during Q1

	Units in numbers			Growth (percent)	
	FY17	**FY18**	**FY19**	**FY18**	**FY19**
All cars	38,601	49,298	53,258	27.7	8.0
Cars <800 cc	9,083	11,851	12,854	30.5	8.5
Cars between 800-1000 cc	7,957	13,007	13,515	63.5	3.9
Cars >1000cc	21,561	24,440	26,889	13.4	10.0
Sports utility vehicles	219	2,769	2,147	1,164.4	-22.5
Light commercial vehicles	12,076	12,753	11,803	5.6	-7.4
Trucks	1,798	2,452	2,049	36.4	-16.4
Buses	372	294	281	-21.0	-4.4
Tractors	7,237	15,618	13,939	115.8	-10.8
Motorbikes	364,536	468,681	454,502	28.6	-3.0

Data source: Pakistan Automotive Manufacturers' Association (PAMA)

Fertilizer

The fertilizer industry continued on its downward trajectory, contracting by 4.8 percent in Q1-FY19 on top of the 5.8 percent decline witnessed in Q1-FY18. The contraction came on the back of the lowest production levels since FY06 of the smaller urea plants during the quarter. Significant decline in other fertilizers such as CAN, NP, SSP and DAP also restricted growth.[23] One of the main reasons behind the overall decrease in production was the complete closure of processing activities at Pak Arab fertilizer plant which, in addition to urea, produces sizeable quantities of CAN and NP products.

The smaller urea units had ceased production due to the non-availability of domestic natural gas at affordable rates. Feedstock gas at Rs 123 per mmbtu for larger units was not provided to the smaller units.[24] Moreover, operating these units on imported RLNG in an increased prices scenario remained financially infeasible. Natural gas, which is a primary input for domestic urea plants, constitutes more than 60 percent of the total cost of the production. During Q1-

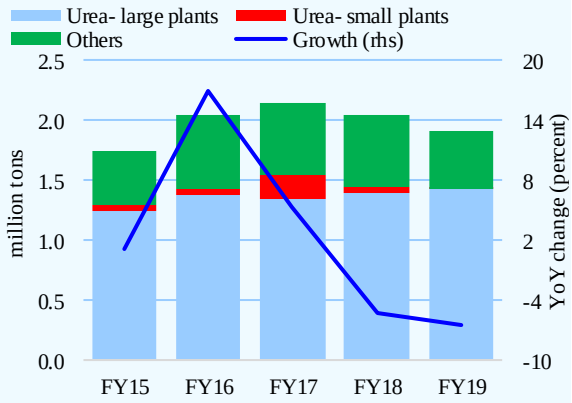
[23] CAN, NP, SSP and DAP are calcium ammonium nitrate, nitrogen-phosphorous, single superphosphate and di-ammonium phosphate respectively.
[24] Data source: OGRA, https://www.ogra.org.pk/consumer-gas-prices

FY19, the difference between feedstock gas from domestic sources and imported RLNG amounted to around Rs 1440 per MMBTU.

On the other hand, large urea producers remained largely unaffected, registering a growth of 2.3 percent during Q1-FY19 compared to 3.1 percent last year on the back of smooth and affordable domestic gas supplies **(Figure 2.3)**. Despite larger units operating at almost full capacity, the performance of these companies was not enough to compensate for the losses from the smaller production units.

Going forward, the announced increase in the gas prices for the fertilizer plants will have a considerable effect on the production levels, as natural gas is one of the critical inputs in fertilizer production especially in case of urea. The resultant price pressure on the fertilizer products, coupled with an uninspiring performance by the crop sector, would weaken their demand. Increasing international fertilizer prices and declining rupee would further exacerbate the situation for the manufacturers. Recognizing these concerns, the government has proposed a solution to the smaller urea plants in the form of the provision of some blend of imported RLNG and domestic gas with revised prices to keep their operations afloat.

Figure 2.3: Fertilizer Production and Growth during Q1



Data source: National Fertilizer Development Corporation (NFDC)

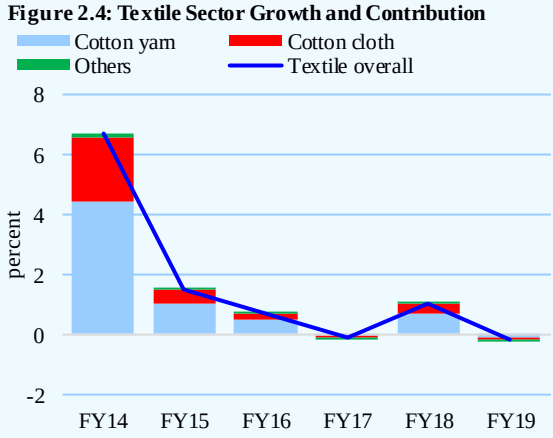
Electronics

Continuing on its strong growth trajectory, the electronics industry posted a growth of 7.8 percent during Q1-FY19, on top of the 76.9 growth observed during the same period last year. The uptick was driven primarily by an increase in the production of electric motors and various cooling equipment. Improvement in electricity supplies alongside an extended summer season, drove the demand for the electronic goods. The consistent growth of the segment has attracted the attention of the foreign investors as well. For instance, TCL, the third largest television set producer in the world, has announced plans to expand its footprint in the Pakistani electronic market.

Textile

The performance of the textile sector remained subdued during the period under review, as a contraction of 0.2 percent was observed against a meagre 0.8 percent growth during Q1-FY18 **(Figure 2.4)**.

Figure 2.4: Textile Sector Growth and Contribution



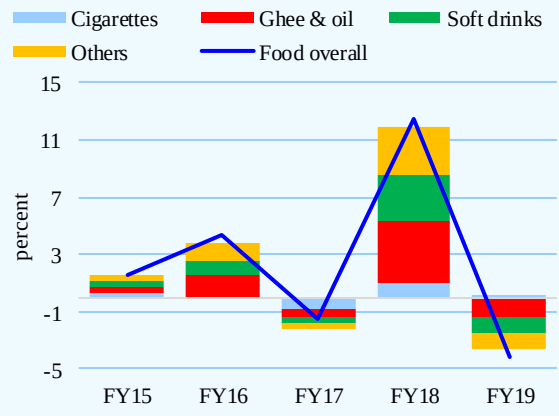
Data source: Pakistan Bureau of Statistics

Contrary to the LSM data that points to a rather stagnant textile sector, the exports data reveals encouraging growth (especially in quantum) during Q1-FY19. This discrepancy is primarily explained by a difference in the coverage of the two data sets: the exports data is more extensive than the LSM data, as in addition to cotton yarn and fabrics, it also includes the higher value-added items like hosiery, knitwear, towels, and readymade garments. Furthermore, this data is reflective of the exporting activities of both the LSM and the SME segments.

Food

The food sector also recorded a contraction of 4.2 percent in Q1-FY19 compared to a growth of 12.3 percent in the corresponding period last year **(Figure 2.5)**. Mainly, a decline in the production of the cooking oil and soft drinks categories overshadowed the growth in the cigarettes production.

Figure 2.5: Food Sector Contribution in Growth (Q1)



Data source: Pakistan Bureau of Statistics

The production of cigarettes expanded by 4.4 percent during Q1-FY19 against an exceptional growth of 98.1 percent during same period last year. It is pertinent to highlight here that during FY18, factors such as the introduction of a three-tier tax structure, a crackdown on the illicit production facilities, and curbs on illegal imported products provided a strong stimulus to the domestic industry. The prominent impact of the latter is

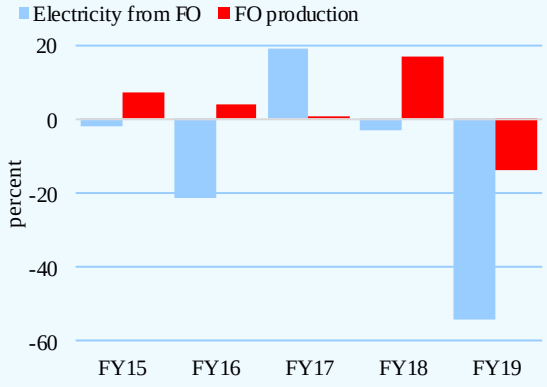
evident from the fact the industry managed to record growth despite an increase in the federal excise duties during Q1-FY19.

POL

The POL sector is undergoing a significant shift in the country owing to the government's policy of reducing the reliance on electricity generated from furnace oil based power plants **(Figure 2.6)**. The resultant fall in demand for furnace oil has escalated the cost of production, as the product is one of the major outputs of the crude oil cracking process. Consequently, this has contributed to a buildup of furnace oil stocks and has exacerbated the storage situation. The refineries, therefore, had to lower their production levels, which resulted in a contraction of 5.4 percent in the sector's output in Q1-FY19, in stark contrast to an impressive growth of 13.6 percent that was observed during the same period last year.

Furnace oil production that had recorded growth of 16.7 percent in Q1-FY18 contracted sharply by 13.9 percent in the current year. This can be explained with reduction in electricity generated from furnace oil based power plants, which fell by 54.3 percent in Q1-FY19 compared to output of 8,650 Gwh last year. Industry leaders remain apprehensive about investing in processing units for cracking furnace oil into other petroleum products due to ad-hoc policy changes regarding the product. Meanwhile, foreign investors are taking keen interest in setting up new mega refineries in the country.

Figure 2.6: Growth in Furnace Oil (FO) Production and Electricity Generation from FO (Q1)



Data source: NEPRA and Pakistan Bureau of Statistics

It may also be noted that, in the changing scenario, where RLNG and coal are emerging as major fuel for electricity generation and industrial usage purposes, the indicator of POL sales would not be able to gauge the economic activity in the country. An energy index based on the relative weights of all the components may prove to be a better indicator.

2.4 Services

The services sector holds the dominant share (i.e. 60 percent) of Pakistan's real GDP. As such, its performance has an important bearing on the state of the economy. However, while the services sector either achieved or surpassed its annual target in the last three years, early indications suggest that achieving the FY19 target of 6.5 percent growth may prove to be challenging (**Table 2.7)**.

Table 2.7: Services Sector Indicators (Q1)

	FY18	FY19
Wholesale and Retail Trade (34.4%)		
Credit off take- flow (billion Rs)	6.2	-4.9
Imports (billion US$)	14.2	14.2
LSM (Jul-Sep; YoY growth)	9.9	-1.7
Agriculture credit (disbursements - billion Rs)	155.9	212.1
Transport, Storage and Communication (20.0%)		
Credit off take - flow (billion Rupees)	3.9	7.7
POL sales to transport sector (million MT)	4.1	3.6
Commercial vehicle sales (units)	14,223.0	11,014.0
Cellular tele density (percent)	71.8	73.2
Broadband users (million)	48.1	61.6
Finance and Insurance (3.6%)		
Assets (billion Rs)*	17,560.0	18,118.0
Deposits (billion Rs)*	12,609.0	13,603.3
Profit after tax (billion Rs)	21.9	34.8
General Government Services (14.2%)		
Expenses on general government & defense**	783.7	932.8

Note: Values in brackets indicate sectoral shares within the services sector, as of FY18. The remainder consists of housing services (10.0 percent) and other private services (17.8 percent).
* Stocks, as of end-September 2018
**Only Federal Government
Data source: SBP, PBS, OCAC, PAMA, PTA and MoF

Specifically, the prospects for *wholesale and retail trade* may be dampened to some extent by lackluster industrial activity. For instance, subsectors like cement, steel and automobiles registered notable declines during Q1-FY19, compared to a sizable growth during the same period last year. Secondly, imports in general experienced a marked slowdown (0.42 percent) during the quarter, compared to growth of 21.4 percent seen in Q1-FY18.

Thirdly, there were net retirements of credit amounting to Rs 4.9 billion for *wholesale and retail trade* during Q1-FY19, compared to borrowings of Rs 6.2 billion during the same period last year. Moreover, though agriculture credit disbursements during the review period were higher compared to last year, the preliminary assessment of crops (discussed earlier) suggests that other factors may ultimately hold back the crop production and related trading activities.

With regards to *finance and insurance*, the commercial banks remained active in lending to the private sector during Q1-FY19, a departure from the seasonal retirements witnessed in the comparable period last year. In part, this was because the banks' expectations of further interest rate hikes did not materialize in terms of rollover of longer tenor PIBs. As for the demand side, the borrowing by private

sector businesses was substantial compared to net retirements observed in the comparable period last year, owing to a combination of factors like (1) expedited work on projects already in the pipeline, (2) price pressures, emanating from both PKR depreciation and global commodity price increase, and (3) higher activity, as reflected in exports of certain sectors (for details, see **Chapter 3**). Overall, the profit after tax reported for Q1-FY19 was higher compared to the same period last year.

As for *transport, storage and communication*, its leading indicators present a mixed picture. On the one hand, credit off-take to the segment doubled compared to its level in Q1-FY18. On the other hand, commercial vehicle sales and POL sales to the transport sector declined by 22.6 percent and 12.2 percent, respectively. As for the telecom sector, the marked increase in broadband users and continuing gains in cellular tele-density are encouraging. That said, it is unlikely that the gains in the communication sub-segment would boost the overall performance of *transport, storage and communication*, since it is the transport component that tends to account for the dominant share in the gross value addition within the segment.[25]

In the bigger picture, marked deficiencies in urban public transport appear to have fueled the demand for private motor vehicles in the past few years in a manner that may not be sustainable (**Box 2.4**). This pattern of shifting preferences on a large scale – away from efficient public transport to less efficient private means of commuting – tends to be associated with negative externalities, and requires that the root cause, i.e. the gaps in public transport, is urgently addressed.

Box 2.4: The Deficiencies in Urban Public Transport

Urbanization is on the rise in Pakistan. While the degree of urbanization varies across different parts of the country, each province has witnessed a rising share in its urban population over time. These trends have put a significant amount of burden on the government to design and implement comprehensive urban planning programs in order to ensure social welfare.

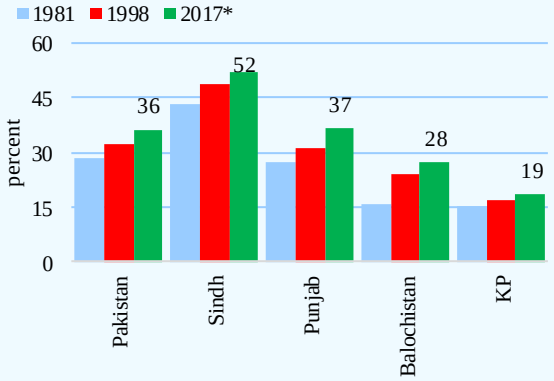
Transport infrastructure is one such area where governments invest heavily to facilitate the general public. This is because despite the positive externalities (associated with environmental concerns), public transport may be under-supplied if left purely to market forces. Thus, government intervention is often required, either in the direct provision of public transport, or indirectly in the sense that the government may regulate and even subsidize private sector operators. Also, since public transport typically benefits the lower-income strata of the society more, its provision at

[25] The individual contributions within the *transport, storage and communication* segment during FY18 (in terms of gross value addition, based on provisional figures released by PBS) were: transport (81.0 percent); communication (16.4 percent); and storage (2.6 percent).

subsidized fares is a transfer payment that redistributes income from the privileged tax-payers to the lower-income segment of the population.

In case of Pakistan also, growing urbanization makes a strong case for a sound public transport infrastructure across major cities (**Figure 2.4.1**). However, a very low road density compared to other Asian countries reinforces its significance (**Table 2.4.1**).

Figure 2.4.1: Share of Urban Population



* Provisional results from sixth Population and Housing Census
Data source: Pakistan Bureau of Statistics

Despite this, there are notable deficiencies in the existing public transport system in the country's urban areas. Neither the quantity nor the quality of public transport provision across the country is particularly encouraging. In terms of quantity, the lack of investment in public transport is reflected in limited fleet additions in the past several years (**Figure 2.4.2**).

Moreover, the quality of public transport, as viewed by commuters, also raises grave concerns. In a survey conducted by the Social Policy and Development Centre (SPDC), a non-profit think tank based in Karachi, a significant share of respondents deplored the state of public transport services in cities (**Table 2.4.2**), on aspects ranging from the condition of vehicles, to reliability, uncertainty, fares, and even the behavior of bus operators.

Table 2.4.1: Estimated Road Density

	Year	Total roadways (km)	Land area (sq. km)	Road density (km/100 sq. km)
Japan	2015	1,218,772	364,485	334.4
India	2015	4,699,024	2,973,193	158.0
Philippines	2014	216,387	298,170	72.6
China	2015	4,577,300	9,326,410	49.1
Pakistan	2014	263,942	770,875	34.2

Data source: SBP' computations using The World Factbook (CIA) data

Karachi's Public Transport System Epitomizes the Deficiencies

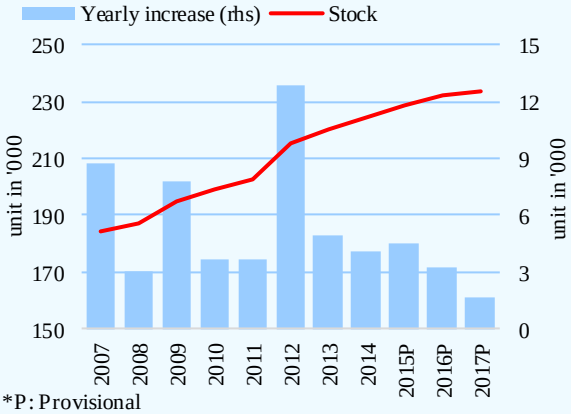
While dissatisfaction with public transport services is widespread, the perceptions relating to Karachi present a particularly grim picture. A recent World Bank (2018) report sheds light on the myriad shortcomings, including the following observations:[26]

[26] World Bank. 2018. *Transforming Karachi into a Livable and Competitive Megacity: A City Diagnostic and Transformation Strategy.* Directions in Development. Washington, DC: World Bank. doi:10.1596/978-1-4648-1211-8. License: Creative Commons Attribution CC BY 3.0 IGO

- The size of the bus fleet in Karachi has been declining; an estimated 8,000 more buses are required to meet the immediate demand alone. Furthermore, the number of minibuses in the city has also fallen from 22,000 in 2010-11 to around 9,500 at present.

- In terms of the number of vehicles on the roads, public transport has a share of 5 percent, while cars and motorcycles have a share of 84 percent. Yet, it is public transport that shoulders the burden of 42 percent of travelers, while cars and motorcycles only account for 40 percent of the commuters.

Figure 2.4.2: Number of Bus Registrations



*P: Provisional
Data source: Pakistan Bureau of Statistics

- Existing buses are overcrowded. Around 45 passengers compete for a single bus seat in Karachi, compared to just 8 passengers in Hong Kong, China, and 12 passengers in Mumbai.

- The roads are also overcrowded. To be specific, 110 percent of the total capacity of roads is utilized, as implied by average volume-to-capacity road traffic ratio of 1.1.

Table 2.4.2: Quality of Public Transport (2015)
percent of households which described the quality of public transport as 'bad' or 'very bad'

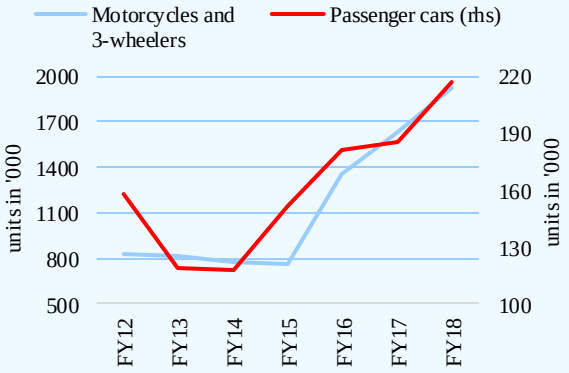
	Operator's behavior	Fare	Uncertainty*	Reliability**	Vehicle condition	Road conditions
Provinces						
Punjab	38	39	38	38	30	28
KP	51	34	43	61	49	33
Balochistan	54	77	25	75	64	70
Sindh	65	68	65	63	57	70
Metropolitan/Municipal Corporation						
Multan	26	39	34	25	15	11
Lahore	33	29	33	35	22	25
Sialkot	36	43	35	40	37	26
Faisalabad	37	40	47	45	36	22
Peshawar	48	30	44	59	46	32
Rawalpindi	55	38	56	43	41	43
Quetta	62	71	28	74	67	77
Sukkur	64	74	71	72	66	88
Karachi	76	65	61	61	53	51

* Arriving time ; ** Time to destination
Data source: SPDC Citizens' Perceptions of Urban Public Services, Research Report No. 97, May 2016

Private vehicles filling the gap across the country

When public transport fails to meet the expectations, citizens by and large tend to prefer owning and commuting via private motor vehicles instead. This idea receives support from the data, with sales of passenger cars, motorcycles and three-wheelers all on an upward trajectory during the past few years (**Figure 2.4.3**).

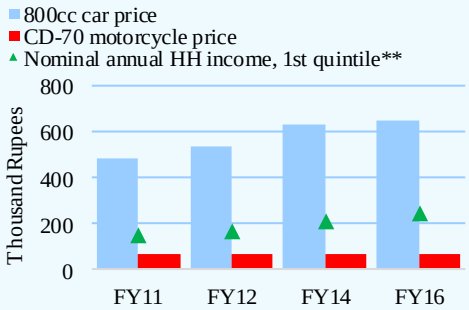
Figure 2.4.3: Motor Vehicle Sales



Data source: Pakistan Automotive Manufacturers Association (PAMA)

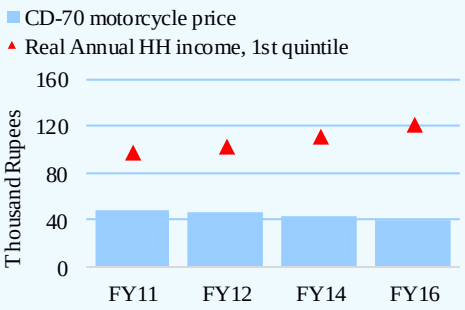
To some extent, this development has been supported by rising real incomes on the one hand, and relative affordability of motor vehicles on the other. Specifically, even urban households belonging to the lowest income bracket (or first quintile), who are prime candidates for public transport, have seen their incomes rise over the past few years (**Figure 2.4.4a and Figure 2.4.4b**). Purchasing an 800cc car still remains a stretch for such households; however, the decline in motorcycle prices (in real terms), coupled with enhanced income, appears to have made two-wheelers an affordable and attractive alternative to public transport, even for the low income segment.

Figure 2.4.4a: Nominal Urban Household (HH) Income, 1st Quintile vs Motor vehicle Prices*



*Prices for Suzuki 800cc car and Honda CD-70 motorcycle, as measured by CPI
** Annualized from average monthly HH income
Data source: HIES, PBS, and SBP's calculations

Figure 2.4.4b: Real Urban HH Income vs Motorcycle Prices*



*HH income deflated by CPI index; vehicle prices deflated by motor vehicle index
Data source: HIES, PBS, and SBP's calculations

But this entails negative externalities

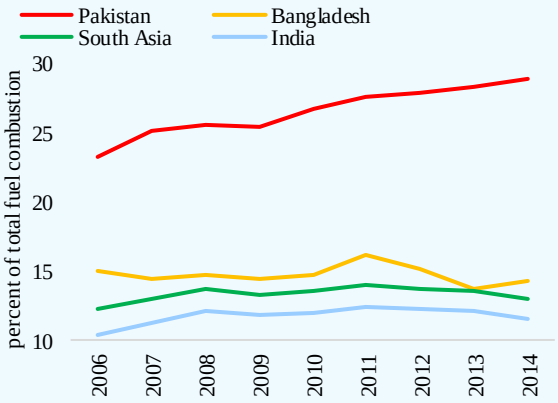
In the big picture, increasing car and motorcycle ownership (boosted in part by gaps in the public transport) tends to exacerbate environmental concerns. In this regard, carbon dioxide emissions associated with transport, which were already higher for Pakistan as compared to regional peers, have worsened since 2009 (**Figure 2.4.5**). More broadly, air quality in megacities like Lahore and Karachi has been ranked among the worst in the world of late. This underscores that, while vehicular emissions are only a part of the broader air quality problem, such cities cannot afford

further deterioration in air quality. In particular, Lahore's Air Quality Index (AQI) values repeatedly breached the 300 mark during October 2018.[27]

And a burden on balance of payments

Equally important are the import pressures that accompany the rising motor vehicle demand. Pakistan is no stranger to such pressures. In particular, the country spent US$ 1.2 billion on average on the import of passenger cars and motorcycles during the last 3 years. The spillover effect is also strong, as the increased use of passenger vehicles has led to a higher consumption of transport fuels. It is important to note that 59.3 percent of the total petroleum sales in the country in FY18 was consumed by road transport alone.[28] In dollar terms, the country had imported US$ 11.7 billion worth of crude and petroleum products during the year, which takes the contribution of road transport roughly to US$ 7 billion. Not only does this reflect a significant drain on the country's FX reserves, it also represents the economy's overall vulnerability to global oil price fluctuations.

Figure 2.4.5: CO2 Emissions from Transport



Data source: World Development Indicators

Policy Implications

In future, the broad two-pronged strategy to address the deficiencies in public transport may involve: (i) developing efficient public transport systems across the country as a viable alternative to private modes; (ii) incentivizing the use of public transport (via targeted subsidies), or gradually taxing the use of private modes, in order to encourage more individuals to shift to public transport. There is a need to develop a homegrown approach to overhaul the public transport system, both in terms of quantity and quality. Karachi's experience with respect to the KCR in particular, and an under-supplied and overburdened bus fleet in general, illustrates what happens when investment in public transport fails to keep pace with the growing mobility needs of the citizens. In the absence of corrective interventions, the general public may have no option but to devise their own solutions to mobility issues. These individual choices, like the growing preference for private motor vehicle ownership and use, may be sub-optimal from the perspective of the economy as a whole.

[27] Source: AirVisual. For reference, AQI values in the 201 to 300 range are deemed to be very unhealthy, while values in the 301 to 500 range are classified as hazardous (source for classifications: United States Environmental Protection Agency report, 'Air Quality Index: A Guide to Air Quality and Your Health', February 2014).

[28] Source: Oil Companies Advisory Council