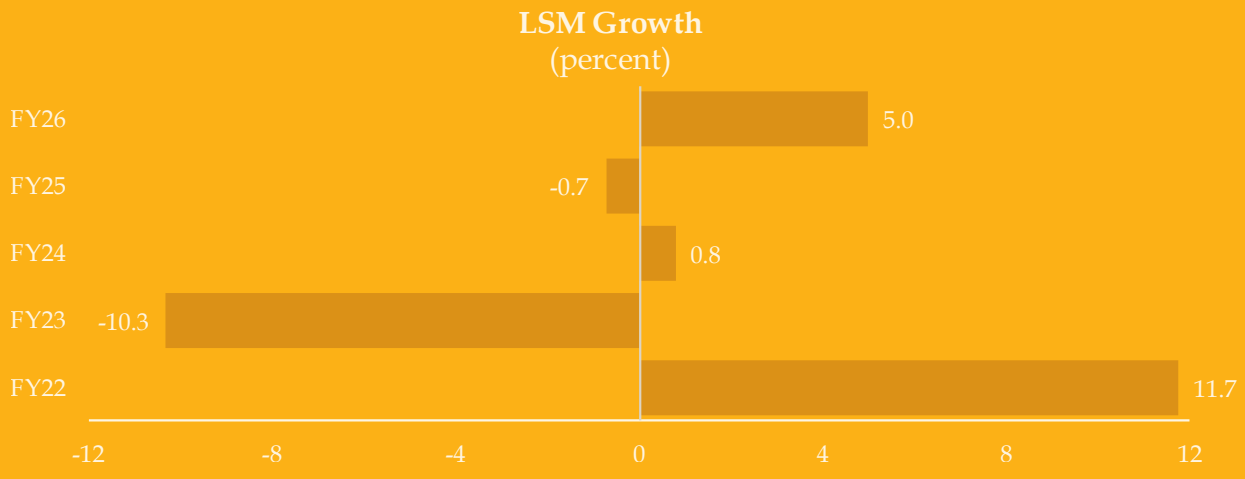


2

Economic Growth

Real GDP growth has gradually picked up pace over the last three years, after witnessing a contraction in FY23. In FY26, real GDP grew by 3.7 percent despite floods in the start of the year, and the Middle East conflict related disruptions in the later part. The major impetus to growth in FY26 came from a strong recovery in large scale manufacturing having strong forward and backward linkages. The LSM benefitted from growing domestic demand amidst easing financial conditions and improving business and consumer confidence. However, the overall industrial sector growth moderated due to sharp decline in value addition of electricity, gas & water supply, mainly reflecting reduced power sector subsidies. The labour market performance remained mixed with Punjab industrial employment and online job postings showing a decline, while trends in newspaper-based job postings (mostly services) remained broadly unchanged.



2 Economic Growth

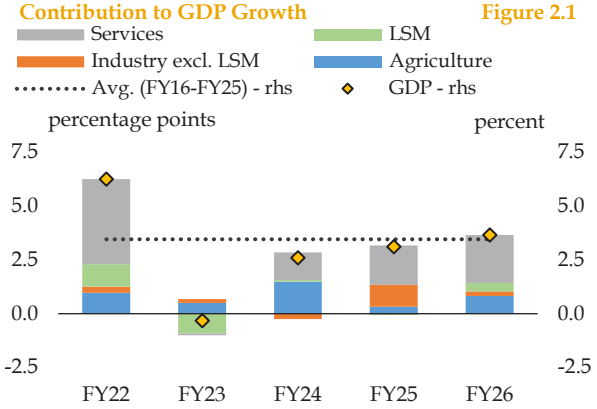
2.1 GDP Growth

Real GDP grew by 3.7 percent in FY26, marking a moderate but steady improvement since FY23 (**Figure 2.1**). The major impetus came from the rebound in large scale manufacturing (LSM), despite trade-related uncertainty and the Middle East conflict that weighed on growth momentum. Nonetheless, the growth was broad-based with major contribution from services sector, followed by agriculture and industry (**Table 2.1**).

The environment underpinning this performance was broadly supportive for most of the year. This is attributable to ease in financial conditions, pick-up in domestic demand, improvement in external account, better availability of imported inputs, low and stable inflation, except for the post-conflict months, and improving business and consumer sentiments. Moreover, the impact of floods on agriculture output and domestic supply chain turned out to be less severe than initially anticipated.

Growth remained higher in the first three quarters compared to FY25. However, it moderated in fourth quarter in the wake of the Middle East conflict. The growth momentum in first three quarters, along with the trends in high-frequency demand indicators (**Figure 2.2a & b**), suggested that outcome in Q4-FY26 would have been even better in the absence of conflict-related disruptions.[1]

Contribution to GDP Growth **Figure 2.1**



Note: FY26 numbers are provisional estimates
Source: PBS

Further, reduction in power subsidies substantially lowered the gross value addition (GVA) of electricity, gas, and water supply, dragging the overall growth of the industry (by 1.5 percentage points) and GDP (by 0.3 percentage points). Nonetheless, all other segments of the industry recorded expansion. LSM witnessed a sharp turnaround; construction activity remained strong; and mining & quarrying recovered after showing contraction consecutively in the previous four years.

Agriculture sector performed better compared to the previous year with recovery in crops and

Real GDP Growth **Table 2.1**

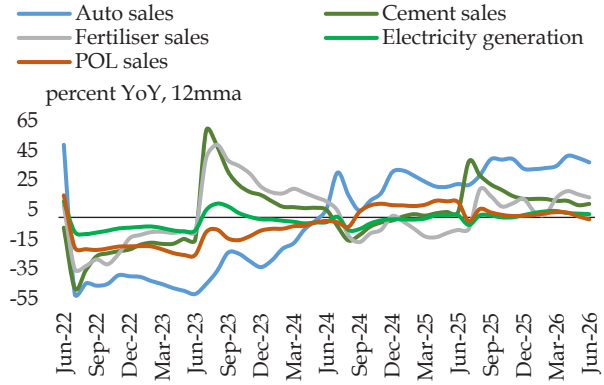
growth in percent, contribution in percentage points

	Growth in FY25[R]					Growth in FY26[P]					Contribution	
	Q1	Q2	Q3	Q4	Year	Q1	Q2	Q3	Q4	Year	FY25[R]	FY26[P]
GDP	**1.5**	**2.4**	**2.5**	**6.1**	**3.1**	**3.9**	**4.3**	**4.4**	**2.0**	**3.7**	**3.1**	**3.7**
Agriculture	1.0	1.5	2.1	0.6	1.3	3.2	3.3	3.8	3.7	3.5	0.3	0.8
Important crops	-12.7	-12.7	-9.4	-17.8	-13.0	-0.5	2.1	2.6	2.2	1.6	-0.6	0.1
Industry	0.2	1.7	0.5	20.0	5.5	7.8	6.6	4.9	-4.7	3.3	1.0	0.6
LSM	-0.9	-2.6	-2.0	3.0	-0.7	3.9	5.7	9.6	0.4	5.0	-0.1	0.4
Services	2.0	3.0	3.2	4.2	3.1	3.0	4.0	4.5	3.6	3.8	1.8	2.2

R: Revised, P: Provisional
Source: PBS

[1] Pakistan did relatively well as literature shows that shocks are absorbed with less output loss by the economies having strong fiscal and external buffers. For details, see Blanchard, O., Dell'Ariccia, G. and Mauro, P. (2010), "Rethinking Macroeconomic Policy", *Journal of Money, Credit and Banking*, Vol. 42, Supplement 1, pp. 199-215.

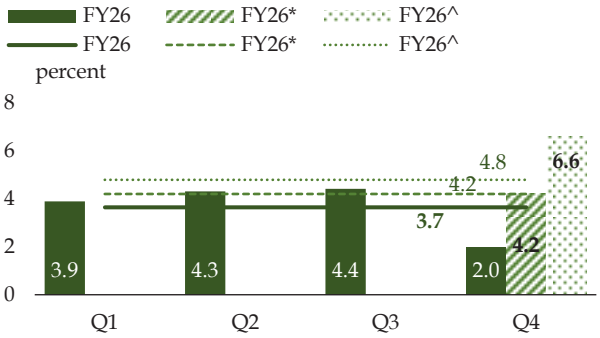
Growth in Demand Indicators **Figure 2.2a**



12mma = 12-month moving average

Sources: NEPRA; APCMA; OCAC; PAMA; NFDC

GDP Growth Quarterly Trend **Figure 2.2b**



* Based on the trend continuing till Q3

^ Based on the average of years between FY17-FY25, where GDP growth has increased in the last quarter

Sources: PBS; SBP staff calculations

strong growth of livestock. With the exception of few crops, the recovery in farming output, largely owes to improved yields amid adequate soil moisture, sufficient water availability and increased access to farm credit. Moreover, forestry and fishing continued to contribute positively in FY26.

Reflecting the performance of commodity-producing sectors, the services sector growth moderately accelerated in FY26. The strong performance of commodity producing sectors particularly facilitated wholesale and retail trade, transport and storage, and information and communication services.

On the demand side, consumption remained the dominant contributor to real GDP growth in FY26. The share of consumption increased in FY26 compared to last year. This was because of higher government spending while private consumption remained close to the last year's level. At the same time, investment-to-GDP ratio remained low at 14.5 percent, marginally increasing from the previous year **(Table 2.2)**. Moreover, the trade gap widened as exports fell more than imports as percent of GDP.

Taken together, these trends highlight the importance of strengthening investment and exports for supporting sustainable growth and job creation in Pakistan. Historical data shows that the decline in investment has been more pronounced in sectors such as LSM and ICT, which are important for productivity growth and export expansion. In this context, **Box 2.1** examines the factors underlying these investment patterns and draws lessons from economies that have successfully directed investment towards productive and export-oriented activities.

Composition of Aggregate Demand **Table 2.2**

percent of GDP

	FY22	FY23	FY24	FY25	FY26
Total consumption	96.4	93.5	93.6	92.9	93.5
Household*	85.9	83.2	84.8	83.5	83.8
Government	10.5	10.3	8.8	9.4	9.7
Investment	15.5	14.0	13.2	14.4	14.5
Net exports	-11.9	-7.5	-6.8	-7.3	-7.9
Exports	10.5	10.5	10.4	10.0	9.1
Imports	22.5	18.0	17.1	17.2	17.0
Memorandum item					
National savings**	10.9	13.0	12.6	14.9	14.1

* Including non-profit institutions serving households

** Annual Plan 2026-27 estimates

Sources: PBS

2.2 Agriculture

Higher growth in agriculture sector in FY26 was underpinned by recovery in crops and stronger growth in livestock (**Table 2.3**). Within crops, the major contribution came from other crops, while output of important crops witnessed a turnaround. Moreover, the contribution of livestock also increased, accounting for approximately two-third of agriculture growth in FY26.

Agriculture, Forestry and Fishing **Table 2.3**

growth in percent, contribution in percentage points

	Growth in FY25[R]					Growth in FY26[P]					Contribution	
	Q1	Q2	Q3	Q4	Year	Q1	Q2	Q3	Q4	Year	FY25	FY26
Agriculture	**1.0**	**1.5**	**2.1**	**0.6**	**1.3**	**3.2**	**3.3**	**3.8**	**3.7**	**3.5**	**1.3**	**3.5**
Crops	-0.1	-2.6	1.9	-2.4	-0.9	1.2	3.6	3.4	2.6	2.8	-0.3	1.0
Important crops	-12.7	-12.7	-9.4	-17.8	-13.0	-0.5	2.1	2.6	2.2	1.6	-2.7	0.3
Other crops	20.6	19.9	19.4	19.1	19.7	4.3	6.1	4.0	2.6	4.3	2.6	0.7
Cotton ginning	-3.1	-20.3	-26.6	-24.3	-19.0	-11.5	-0.6	6.4	7.8	0.0	-0.3	0.0
Livestock	2.0	5.5	2.6	2.1	2.9	4.2	2.9	3.7	3.9	3.7	1.8	2.3
Forestry	-9.7	-9.9	-7.8	-3.1	-7.7	4.4	10.2	13.7	15.0	10.8	-0.2	0.2
Fishing	1.0	1.2	2.4	1.3	1.4	0.9	1.2	2.5	1.3	1.4	0.0	0.0

R: Revised, P: Provisional

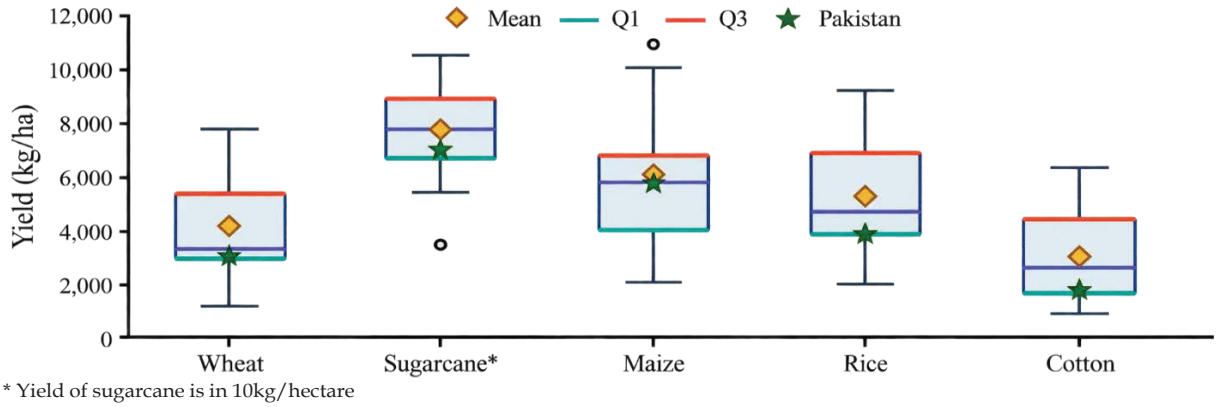
Source: PBS

Among important crops, higher output of wheat, rice and sugarcane offset the decline in production of cotton and maize. Wheat benefitted from a larger cultivated area, rice from better yields, and sugarcane from improvements in both. Maize recorded another year of lower production as floods affected the crop during the growing stage, while cotton continued its downtrend as farmers shifted area towards more profitable and alternative *Kharif* crops.

The recovery in crops was despite the floods during Jul–Sep 2025, which affected standing crops in several areas but had a limited overall impact. Rather, improved post-flood water availability and soil moisture had a favourable impact on crop yields, barring maize and to some extent wheat. The yield of the wheat crop remained stagnant due to higher temperature at sowing time and rains and wind at the harvest time, while floods had unfavourable impact in the case of maize. Further, timely rescue and relief operations helped protect livestock and supported the resumption of farm activities, and improved access to agricultural credit eased pressures on affected farmers.

Despite the improvement in FY26, agriculture still faces a severe productivity challenge. Among major crop-producing countries, Pakistan's yields lie at the lower end of the distribution for all important crops except maize (**Figure 2.3**).[2] This yield gap reflects persistent constraints: poor seed quality, suboptimal fertiliser application, inefficient water use, and outdated farm practices. Concurrently, climate change is causing extreme

Crop Yield Distribution: Top 16 Producing Economies **Figure 2.3**



* Yield of sugarcane is in 10kg/hectare

Source: FAO

[2] Yield estimates reported by FAO may not be directly comparable with those of the PBS due to differences in data sources, coverage, estimation methodologies, reference periods, and subsequent revisions to production and area estimates.

heat, uneven rainfall and recurring floods, adding further stress on agricultural production. In this context, achieving and sustaining higher agricultural growth requires enhancing productivity and building resilience to climate shocks.

Climatic Conditions

Weather conditions were mostly challenging in FY26, marked by erratic rainfall and above-normal temperatures through much of the crop calendar (**Figure 2.4a and 2.4b**). The Apr–Jun 2025 period began with weak precipitation, as rainfall was below its historical average, increasing irrigation requirements early in the season. The monsoon then intensified during Jul–Sep 2025, with heavy rainfall causing flash floods across several agricultural districts.[3]

Conditions were also not favourable for Rabi crops as reflected by below-average precipitation and above-normal temperatures during Oct-Mar FY26. Temperatures were particularly higher during wheat sowing and there were strong winds and rainfall around the harvest period.[4] Looking ahead, emerging El Niño conditions pose an additional risk to crop performance in FY27 **(Box 2.2)**. Besides the immediate need to prepare for worsening El Niño conditions, Pakistan must also address the longer-term challenge of adapting agriculture to climate change, while using its land and water resources more efficiently **(Box 2.3)**.

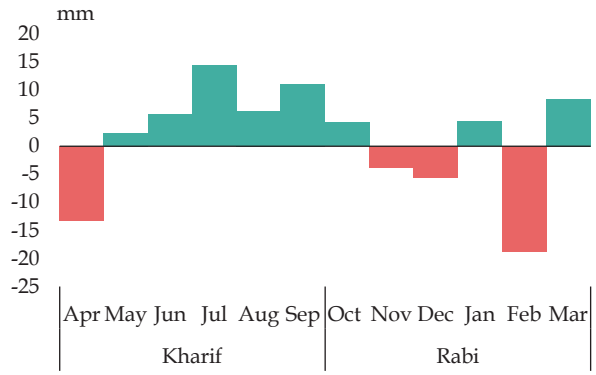
Inputs

Water

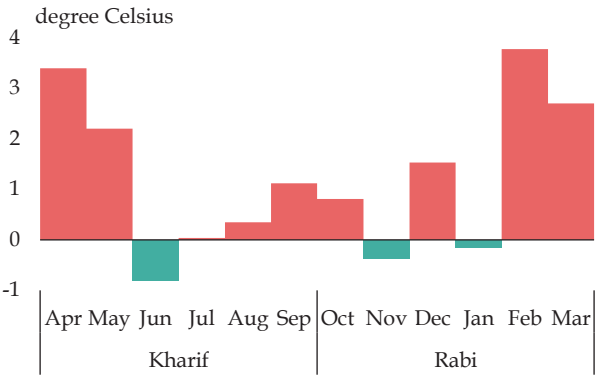
Canal-water availability improved but remained below the average system availability.[5] *Kharif* water supply stood at 60.6 million acre-feet (MAF), almost unchanged from last year, while availability for *Rabi* rose slightly. Combined availability of 92.0 MAF, however, remained 11.1 percent below the average system use (**Figure 2.5**). Heavy monsoon rainfall reduced canal-water demand in parts of Punjab, whereas improved *Rabi* releases supported wheat and other crops.

Tubewells and lift pumps have become a supplementary source of irrigation.[6] The number of installed tubewells and lift pumps rose from 0.9 million in 2004 to around 1.9 million in 2026, driven by the rapid adoption of solar-powered pumps and a decline in diesel-powered units (**Figure 2.6**). While this expansion improved

Rainfall Deviation from Normal* - FY26 **Figure 2.4a**



Temperature Deviation from Normal - FY26 **Figure 2.4b**



* Normal period of respective months is for 1961-1990

Source: PMD

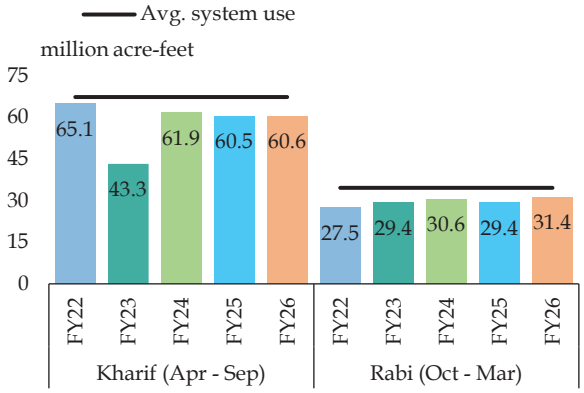
[3] Dera Ghazi Khan and Rajanpur were exposed to monsoon flooding from hill torrents along the Sulaiman Range, while Jhang, Multan, Muzaffargarh and Kasur were among the rural districts affected by the monsoon floods. NDMA, *Post-Monsoon Review 2025*.

[4] USDA Foreign Agricultural Service, Pakistan: Grain and Feed Annual, April 2026.

[5] The reference period for average system use is 1977–82, as specified in paragraph 14(b) of the 1991 Water Apportionment Accord.

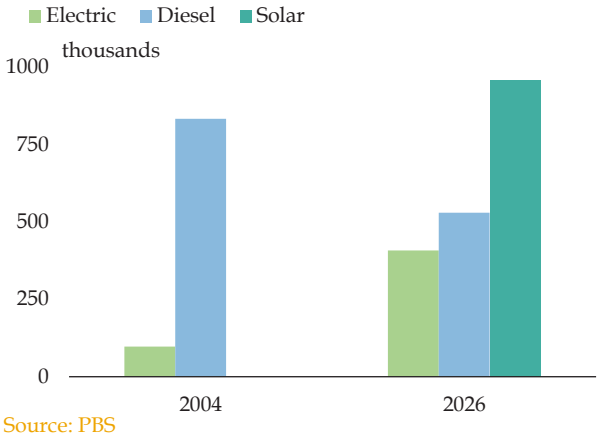
[6] The country receives, on average, 138.4 MAF of water annually from its western and eastern rivers, while the total groundwater contribution stands at approximately 50 MAF annually, extracted through tubewells and lift pumps. Source: Pakistan Economic Survey (2025-26).

Irrigation Water Releases Figure 2.5



Source: IRSA

Tubewells and Lift Pumps by Power Source Figure 2.6



Source: PBS

irrigation access, it has also added to pressure on groundwater. The concern is greatest in Punjab, where groundwater reserves are estimated to have declined by around two percent a year as extraction exceeds recharge from rainfall and surface-water.[7]

Seed

In FY26, supply of certified seed stayed below the requirements for most of the major crops, except for paddy (**Table 2.4**). Seed availability improved for wheat and cotton but remained below requirements. In contrast, maize seed availability declined. These gaps left farmers to rely on farm-saved and other non-certified seeds, a practice that has implications for crop yields.

To address these gaps, the recently submitted National Seed Policy aims to improve access to quality seed by expanding domestic production, strengthening testing and certification, and introducing digital traceability. It also calls for better federal–provincial coordination and greater private-sector participation.[8] In this regard, effective implementation will be key to improving certified seed supply.

Availability of Certified Seeds Table 2.4

	FY25		FY26	
	Availability (MT)	% of Req.	Availability (MT)	% of Req.
Cotton	16,717	27.1	20,872	52.7
Paddy	68,319	114.2	68,767	127.8
Maize	29,420	78.8	22,906	62.6
Wheat	569,761	46.3	592,213	51.8

Source: FSC&RD

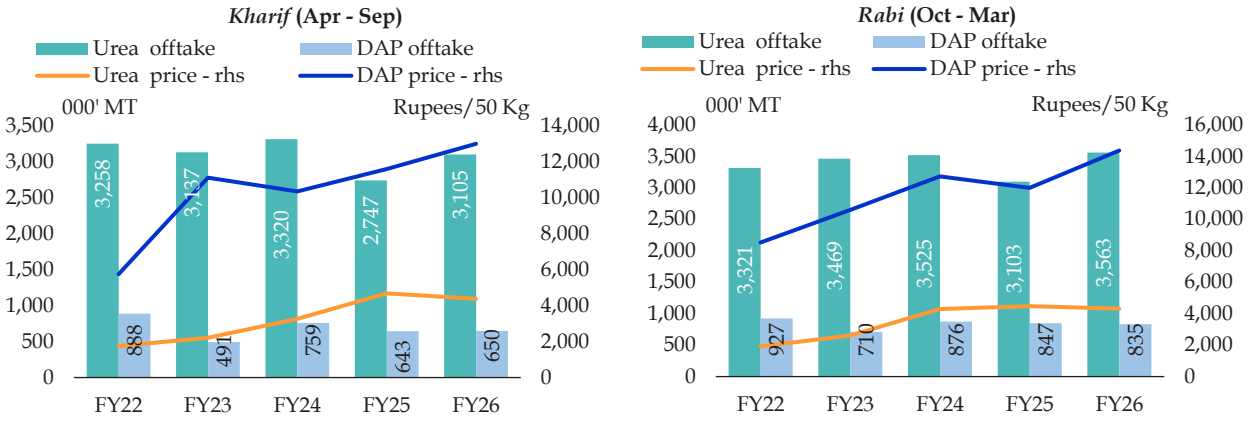
Fertiliser

Fertiliser offtake rose in both *Kharif* and *Rabi* FY26, as reflected by higher urea sales (**Figure 2.7**). Stable prices through most of the year, strong domestic production and large carryover stocks supported greater use of urea during both seasons.[9] DAP sales also edged up in *Kharif* but declined in *Rabi* as higher prices weighed on farmers' purchasing decisions. The increase in domestic DAP prices partly reflected higher international prices, as Pakistan relies on imports to meet about half of its demand.[10]

Fertiliser prices in Pakistan remained elevated during FY26, particularly for DAP. The relatively high cost of phosphate fertiliser, alongside the continued use of urea, contributed to a widening imbalance in nutrient application. Consequently, the nitrogen-to-phosphate ratio increased to around 5:1 in FY26, more than twice the recommended 2:1.[11] This imbalance can reduce

[7] Government of Punjab, Environment Protection Department, State of Environment Report 2023.
[8] Source: National Seed Policy, MNFSR. https://mnfsr.gov.pk/SiteImage/Misc/files/NSPolicyProvince.pdf
[9] National Fertiliser Development Centre, Fertiliser Review, September 2025.
[10] World Bank, Fertiliser Prices Gain Momentum amid Strong Demand and Geopolitical Tensions, July 2025.
[11] The nitrogen-to-phosphate ratio is estimated from FY26 urea and DAP offtake, based on nutrient contents of 46 percent nitrogen in urea while 18 percent nitrogen and 46 percent phosphate (P_2O_5) in DAP.

Fertiliser Offtake and Prices **Figure 2.7**



Sources: NFDC; PBS

fertiliser-use efficiency and affect crop yields.[12]

Agriculture Credit

Agriculture credit grew significantly across all major categories in FY26 (**Table 2.5**). Farm-sector lending was driven by higher financing for crop production, tractors, and farm machinery, while corporate farming credit declined.[13] In the non-farm sector, growth came from working-capital loans for livestock and dairy, whereas poultry financing remained weak. The rise in crop production and livestock lending was also consistent with post-flood financing needs, as farmers required funds to purchase inputs and resume farming activities.[14]

Several measures led to the rise in agriculture credit during FY26. These included: (i) the risk coverage scheme for small farmers and underserved areas, which lowered credit risk for banks and created an incentive to bring new farmers into formal credit;[15] (ii) the launch of SBP's Zarkhez-e scheme, which allowed subsistence farmers and tenants to apply digitally for collateral-free loans **(Box 2.4)**;[16] (iii) a higher

Agriculture Credit Disbursement **Table 2.5**

billion Rupees

	FY24	FY25	FY26
Farm Sector (Production)			
All crops	483.0	538.6	723.8
Corporate farming	155.5	254.1	157.6
Others	438.2	513.2	719.1
Subtotal	**1,076.7**	**1,305.9**	**1,600.6**
Farm Sector (Development)			
Tractor	48.3	17.8	54.3
Farm machinery	16.1	10.6	20.8
Others	69.5	109.6	135.9
Subtotal	**133.9**	**138.0**	**211.1**
Non-Farm Sector (Working Capital)			
Livestock/Dairy	486.7	602.6	733.1
Poultry	313.8	332.3	324.0
Others	131.1	116.7	238.1
Subtotal	**931.6**	**1,051.6**	**1,295.2**
Non-Farm Sector (Fixed Investment)			
Livestock/Dairy	42.3	51.6	54.6
Poultry	21.3	20.1	26.4
Others	9.9	10.1	20.9
Subtotal	**73.5**	**81.8**	**101.9**
Grand Total	**2,215.7**	**2,577.3**	**3,208.7**

Source: SBP

[12] Using Pakistan's 2010 fertiliser-use data and assumptions about nutrient recycling, Akram et al. (2018) estimated that phosphorus supply was 58 percent below estimated crop needs. Experimental evidence indicates that phosphorus raised wheat yield by 21.9 percent over the control group (Khan et al., 2007), while phosphorus deficiency reduced paddy production by 35.3–44.2 percent across two rice cultivars in a pot experiment (Irfan et al., 2020).

[13] Corporate farming credit had increased sharply in the preceding two years, reaching Rs 254.1 billion in FY25. Its decline in FY26 may be because of a high base effect and the timing of a few large, project-based disbursements.

[14] Finance Division, Monthly Economic Update & Outlook, September 2025, p. 1. The report notes flood damage to crops and livestock and a 19.5 percent increase in overall agricultural credit disbursements during Jul–Aug FY26.

[15] The Risk Coverage Scheme provides banks with first-loss coverage of up to 10 percent and an incentive for each additional borrower. Zarkhez-e was launched in October 2025, while Punjab's mechanization programme offers interest-free financing of up to Rs 30 million. Sources: SBP and Punjab Agriculture Department

[16] After Zarkhez-e scheme was launched in October 2025, it reached 4,416 borrowers with disbursements of Rs 1.7 billion.

Important Crops **Table 2.6**

production in 000 metric tons, area in 000 ha., yield in kg/ha, change in percent

	Production			Area			Yield			Change		
	FY24	FY25R	FY26P	FY24	FY25R	FY26P	FY24	FY25R	FY26P	Prod.	Area	Yield
Wheat	31,814	28,477	29,739	9,734	9,074	9,466	3,268	3,138	3,142	4.4	4.3	0.1
Cotton*	10,223	7,084	7,052	2,424	2,043	2,012	717	589	596	-0.5	-1.5	1.2
Rice	9,859	9,723	9,998	3,637	3,899	3,758	2,711	2,494	2,660	2.8	-3.6	6.7
Maize	9,740	9,037	8,900	1,641	1,588	1,643	5,935	5,691	5,417	-1.5	3.5	-4.8
Sugarcane	87,638	84,238	89,450	1,180	1,193	1,222	74,269	70,610	73,200	6.2	2.4	3.7

* Production and yield in 000 bales
R: Revised, P: Provisional
Source: PBS

financing allocation under the Prime Minister's Youth Business and Agriculture Loan Scheme; (iv) Kissan Card;[17] and (v) Punjab's High-Tech Farm Mechanization Financing Program, which provided interest-free loans for modern agricultural machinery.[18]

Outputs

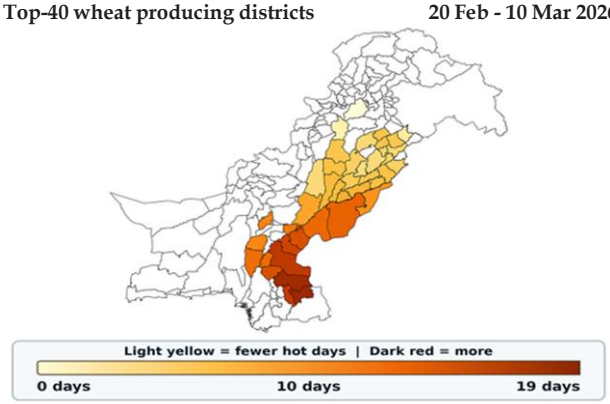
Wheat

Wheat production rose in FY26, driven mainly by increased area under cultivation, while yield remained broadly stagnant (**Table 2.6**). The announcement of the Interim National Wheat Policy ahead of the sowing season, together with improved credit and input availability, supported an increase in area under cultivation of wheat.

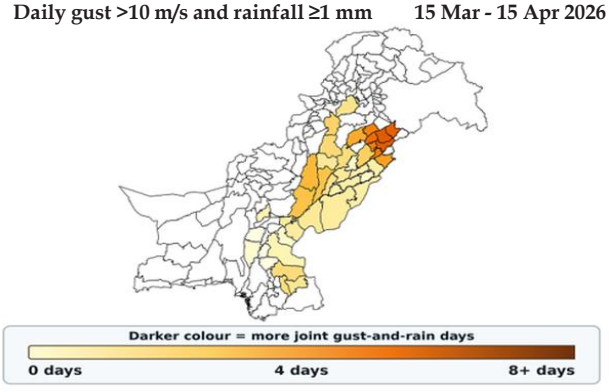
However, the *Rabi* season remained largely dry, with episodes of high temperatures during the later growth stages, followed by strong winds and rainfall around harvest. These conditions constrained the improvement in yields, as indicated by district-level analysis using ERA5-Land data produced by the European Centre for Medium-Range Weather Forecasts (**Figure 2.8a and 2.8b**).[19]

Moreover, the implementation risk associated with the interim wheat policy also materialised, as highlighted in **Box 3.3** of the State of Pakistan's Economy Half Year Report 2025-26. While the announcement of indicative price reduced uncertainty and supported planting decisions, actual procurement remained below the plan due

Days with Max Temperature >32°C **Figure 2.8a**
Top-40 wheat producing districts **20 Feb - 10 Mar 2026**



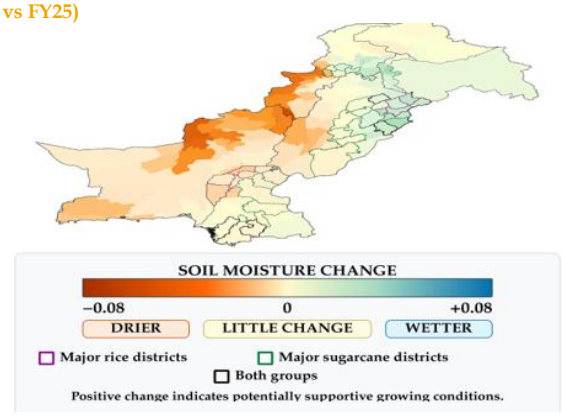
Days with Concurrent Gust and Rainfall **Figure 2.8b**
Daily gust >10 m/s and rainfall ≥1 mm **15 Mar - 15 Apr 2026**



Source: SBP staff estimates based on ERA 5 land analysis

[17] Kissan Card borrowers increased from 491,099 at end-June 2025 to 758,925 at end-June 2026, while disbursements rose from Rs 60.0 billion to Rs 110.1 billion.
[18] Punjab's High-Tech Farm Mechanization Financing Program provides interest-free financing of up to Rs 30 million for modern agricultural machinery. Source: Punjab Agriculture Department.
[19] ERA5-Land is an hourly land-surface reanalysis produced by ECMWF under the Copernicus Climate Change Service at a spatial resolution of about 9 km. The analysis covers Pakistan's 40 largest wheat-producing districts, ranked by production, and uses grid-level data within their boundaries to assess 2-metre air temperature, 10-metre wind speed and total rainfall during the crop stages.

Kharif Root-Zone Soil Moisture Change (FY26 vs FY25) **Figure 2.9**



Source: SBP staff estimates based on ERA 5 land analysis

to differing provincial arrangements and limited participation by private buyers.

Rice

The increase in rice production in FY26, despite a decline in area, was driven by improved yield (**Table 2.6**). Better post-flood soil moisture in major rice growing areas benefitted the crop. SBP staff estimates based on ERA5-Land analysis show that average root-zone soil moisture across thirteen major rice districts was 2.3 percent higher during Apr–Sep 2025, with wetter conditions recorded in most districts (**Figure 2.9**). The decline in area was due to expectations of lower prices in view of falling exports amid increased competition in the international market.[20]

Sugarcane

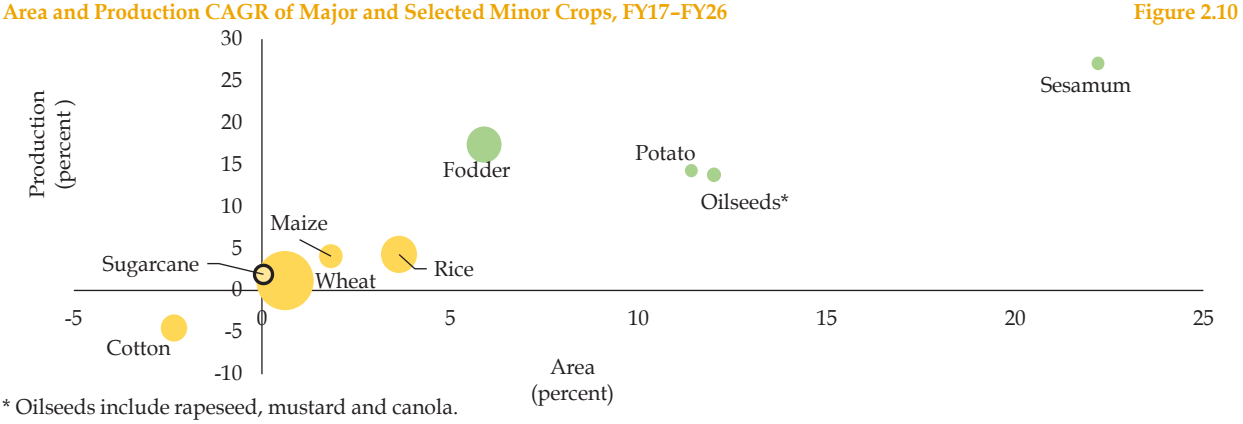
Higher sugarcane production, with a rise in both area and yield, drove the increase in important crops (**Table 2.6**). The expansion in area was mainly on the back of better returns compared to cotton and maize. The soil conditions also contributed positively as SBP staff estimates based on ERA5-Land show that average root-zone soil moisture across twenty-three major sugarcane districts was higher during Apr–Sep 2025 than last year (**Figure 2.9**).

Cotton

Cotton production fell slightly in FY26 as cultivated area declined, with farmers continuing to favour competing *Kharif* crops that offer better returns (**Table 2.6**). Encouragingly, yield improved despite weather variations, poor seed quality and severe pest attacks in South Punjab. The increase in yield reflects early sowing by farmers and improved availability of farm inputs.

As shown in **Figure 2.10**, cotton was the only major crop to record a decline in both cultivated area and production over the last decade. Rice has been an exception, which recorded a substantial increase in cultivated area. Growth in area under

Area and Production CAGR of Major and Selected Minor Crops, FY17–FY26 **Figure 2.10**



* Oilseeds include rapeseed, mustard and canola.

The size of the bubble represents cultivated area of respective crop. yellow colour = important crops; green colour = minor crops.

Source: PBS

[20] India lifted its ban on non-basmati white rice in September FY25 and removed minimum export prices and duties on major rice categories in October FY25. India's rice exports reached an estimated record 23.0 million tonnes in FY25, increasing competition for Pakistani rice and weakening growers' price expectations. Sources: Glauber and Mamun (2024), USDA FAS India: Grain and Feed Update, June 18, 2026

the remaining important crops was comparatively moderate. In contrast, selected minor crops such as sesamum, fodder, potato and oilseeds expanded at a relatively faster pace. These trends suggest that increase in acreage of other crops has come mainly at the cost of reduced area under cotton.

Maize

Maize production declined in FY26 despite an increase in area, as the floods weighed on yields (**Table 2.6**). Excessive rainfall raised river flows and inundated cropland in Punjab and Sindh.[21] Although flooding was limited to areas near rivers, the damage lowered maize yields and extended the crop's decline for the third consecutive year.

Other Crops

Other crops subsector recorded an improvement in FY26, growing by 4.3 percent (**Table 2.7**). Higher production of canola and rapeseed & mustard was driven mainly by an expansion in area under cultivation, while yields remained broadly unchanged. Similarly, mung benefitted from increased sowing area and a slight improvement in yield. In contrast, green fodder and onion recorded declines in both area and production, while mash output fell due to lower area under cultivation.

Production of potato rose sharply as farmers increased area and achieved better yields. Better prices and higher export earnings in the previous year incentivised farmers. However, increase in production and closure of the western border resulted in a surplus that led to a substantial drop in domestic prices during FY26. Government's efforts helped in opening Central Asian markets, which partially addressed the excess supply.[22]

Livestock

Growth in livestock value addition accelerated to 3.7 percent in FY26, with all major animal categories showing increase (**Table 2.8**). The increase in cattle and buffalo herds also contributed to rise in milk production. Pakistan continues to rank among the world's leading milk producers, only after India and USA. This, however, is largely attributed to the size of dairy herd and not high milk and meat yield.

Average milk yield remains very low at around 1,195 litres per lactation for cows and 1,800 litres per lactation for buffaloes.[23] This suggests that raising the productivity of existing herds through better breeding, feeding, disease control and veterinary care can help increase milk production in the country.

Other Crops **Table 2.7**

area in 000'ha.; production in 000' MT; change in percent

	FY25		FY26*		Change	
	Area	Prod.	Area	Prod.	Area	Prod.
Cottonseed	5,048	2,024	5,049	2,016	0.0	-0.4
Canola	69	104	85	128	23.3	23.2
Fodder	3,695	203,597	3,524	201,532	-4.6	-1.0
Potato	387	10,010	476	12,776	23.1	27.6
Onion	166	2,747	164	2,647	-1.4	-3.7
Rapeseed & mustard	425	521	490	603	15.4	15.8
Mung	185	131	211	151	14.0	15.2
Mash	8	6	7	6	-9.3	-5.1

* Provisional

Source: PBS

Livestock Population and Production **Table 2.8**

population in millions, production in 000' tonnes, change in percent

	FY25	FY26[P]	Change
Livestock population			
Goats	89.4	91.8	2.7
Cattle	59.7	62.0	3.8
Buffaloes	47.7	49.1	3.0
Sheep	33.1	33.5	1.2
Others*	7.8	8.0	1.7
Poultry population			
Broilers	2,061.1	2,267.2	10.0
Desi poultry	97.0	98.5	1.6
Layers	83.9	89.8	7.0
Others**	17.8	18.6	4.8
Livestock products			
Milk production	72,343	74,689	3.2
Meat production	5,967	6,314	5.8

* Includes camels, horses, mules, and asses

** Includes breeding stock, ducks, drakes and ducklings

Source: PBS

[21] USDA Foreign Agricultural Service, *World Agricultural Production*, July 2026.

[22] Press Information Department, Government of Pakistan, "Pakistan Explores Central Asian Markets to Boost Potato Exports," February 27, 2026

[23] Source: FAO, Dairy Development in Pakistan. Litres/lactation refers to the total volume of milk produced by an animal over one full lactation cycle typically around 300 days in Pakistan.

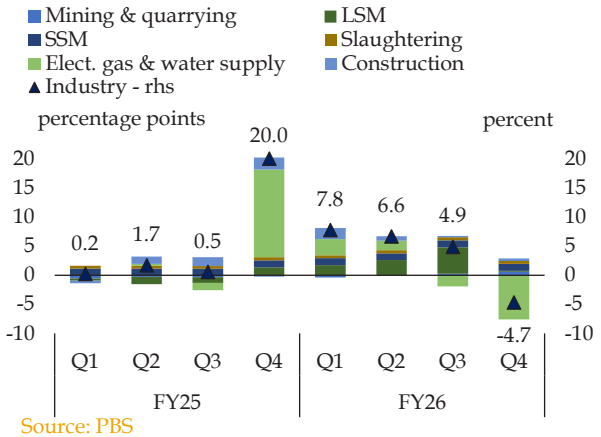
Poultry continued to support a steady increase in meat production in FY26, accounting for about 43 percent of domestic output. This reflects the impact of various government initiatives, including disease-free zones, animal traceability, modern slaughterhouses, commercial feedlots and improved cold-chain facilities.[24]

2.3 Industry

Growth in industrial output moderated from 5.5 percent in FY25 to 3.3 percent in FY26, primarily due to contraction in GVA of electricity, gas and water supply. Manufacturing remained a key driver of industrial growth, followed by construction and mining and quarrying. Specifically, LSM witnessed a sharp turnaround in FY26 after contraction in the last year (**Table 2.9**).

The improvement is attributed to easing financial conditions, improving external account, and positive business sentiments. This is evident from quarterly production trends, outperforming the previous year levels till Q3-FY26. However, the momentum weakened towards the end of FY26. In Q4-FY26, industrial output saw a contraction of 4.7 percent, primarily due to 33.2 percent decline in GVA of electricity, gas and water supply, while manufacturing and construction broadly maintained the momentum albeit at a slower pace (**Figure 2.11**). Nevertheless, monthly LSM data

Contribution to Industrial Growth **Figure 2.11**



Source: PBS

reveal a contraction in May and June 2026, indicating that the impact of Middle East conflict did begin to weigh on industrial output towards the end of the fiscal year.[25]

The contraction in value addition of electricity, gas and water supply is largely driven by reduction in power sector subsidies in a broader fiscal consolidation context.[26] Another contributing factor was the slowdown in electricity generation by WAPDA, reflecting subdued grid electricity demand amid accelerated distributed rooftop solarisation. Underlying this contraction, however, is a structural change in Pakistan's power sector, which is not yet captured by the national income accounts.

Industrial Activities **Table 2.9**

growth in percent, contribution in percentage points

	Growth in FY25R					Growth in FY26P					Contribution	
	Q1	Q2	Q3	Q4	Year	Q1	Q2	Q3	Q4	Year	FY25R	FY26P
Industry	**0.2**	**1.7**	**0.5**	**20.0**	**5.5**	**7.8**	**6.6**	**4.9**	**-4.7**	**3.3**	**5.5**	**3.3**
Mining and quarrying	-6.1	-3.3	-4.1	-2.3	-4.0	-4.5	-1.1	3.2	8.9	1.5	-0.3	0.1
Manufacturing	1.9	0.6	0.9	4.6	2.0	5.2	6.4	9.1	3.1	6.0	1.3	3.9
Large scale	-0.9	-2.6	-2.0	3.0	-0.7	3.9	5.7	9.6	0.4	5.0	-0.3	2.2
Small scale	9.0	9.0	8.9	8.8	8.9	8.6	8.6	8.9	9.5	8.9	1.2	1.2
Slaughtering	6.5	6.5	6.4	6.4	6.4	6.3	6.4	6.6	7.0	6.6	0.5	0.5
Electricity, gas and water supply	0.0	3.4	-11.3	123.0	28.9	21.2	16.0	-18.9	-33.2	-10.2	3.4	-1.5
Construction	-3.6	9.3	12.9	17.5	8.8	15.9	5.3	1.7	3.5	6.3	1.1	0.8

R: Revised, P: Provisional

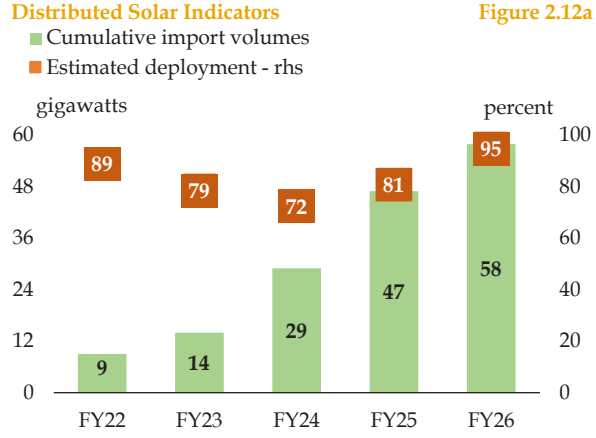
Source: PBS

[24] The National Meat Sector Transformation Strategy includes disease-free compartments, traceability systems, modern slaughterhouses, feedlots and cold-chain facilities to meet export standards and expand access to China and Gulf markets. Source: *Pakistan Economic Survey 2025–26*.

[25] Q4 outturns of electricity, gas and water supply significantly influenced full-year industrial growth in both FY25 and FY26.

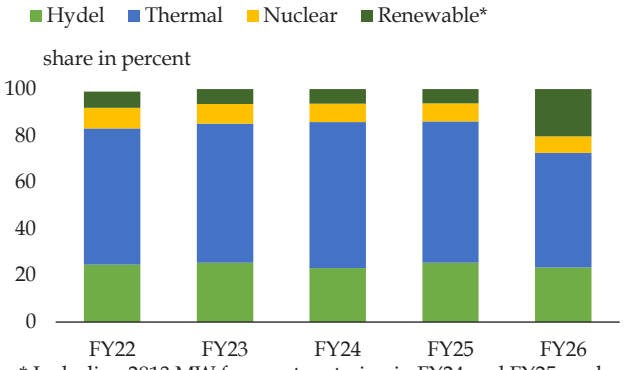
[26] Power sector subsidies declined by 34.3 percent from Rs 1,212 billion to Rs 796 billion in FY26 (Source: MoF). Since Pakistan's national income accounts include subsidies directly into sectoral GVA under the SNA 2008 framework, thus Rs 297 billion reduction compressed value addition of electricity, gas and water supply, even in the absence of any change in electricity generation.

Distributed Solar Indicators **Figure 2.12a**



Source: EMBER

Installed Capacity by Source **Figure 2.12b**



* Including 2813 MW from net metering in FY24 and FY25, and 7319 MW in FY26

Source: MoF

Steady growth in decentralised solar power generation has affected grid demand across major power consumers. The disaggregated analysis indicates that the shares of household and agriculture in electricity consumption have fallen by 2.1 and 2.5 percentage points in FY26, respectively.[27] This can be seen from rising import volumes of solar modules, which reached an all-time high of 58 gigawatts by end-June 2026 (**Figure 2.12a**). However, solar net-metered installed capacity stood at 7.3 gigawatts, revealing that a substantial share of installed solar was operating behind the meter (**Figure 2.12b**).

Moreover, lithium-ion battery imports have crossed US$ 1 billion in FY26 cumulatively, with its volumes rising at compound annual growth rate of 39 percent since FY17.[28] The trend reflects another emerging structural shift as prosumers[29] are now moving from grid displacement to grid independence, extending the hours of self-sufficiency beyond daylight. In lieu of these dynamics, introduction of the Prosumer Regulations 2026 represents a fundamental recalibration of the viability of rooftop solar for new installers.[30] The transition from net-metering to net-billing is expected to reduce the cross-subsidy burden on grid consumers by lengthening payback periods for new solar installers (**Box 4.3**).

The value addition of mining and quarrying grew by 1.5 percent in FY26, reversing the falling trend observed during the past four years. The decline in value addition by mining and quarrying since FY22 was due to falling gas production amid depleting reserves.[31] However, in FY26, the positive output is mainly driven by the gains in production of principal minerals, including crude oil, natural gas and coal. The higher coal production is supported by a rise in consumption of coal, and robust construction activity.[32] Sector-wise consumption reveals kilns as the major consumer of coal, followed by cement and power (**Figure 2.13**).

As regards crude oil and natural gas, domestic production rebounded in Q4, in the wake of a hostile geopolitical environment that disrupted

[27] In absolute terms, household and agriculture sectors consumed 39,472 GWh and 2,636 GWh during Jul-Mar FY26, down from 39,730 GWh and 4,566 GWh, respectively, in the same period last year. The impact is more pronounced in agriculture sector, whose share in total energy consumption has declined from a high of 9.2 percent in FY22 to 3.1 percent by the end of FY26. Source: MoF.

[28] Source: Renewables First, "Pakistan Electricity Review", 2026, www.renewablesfirst.org

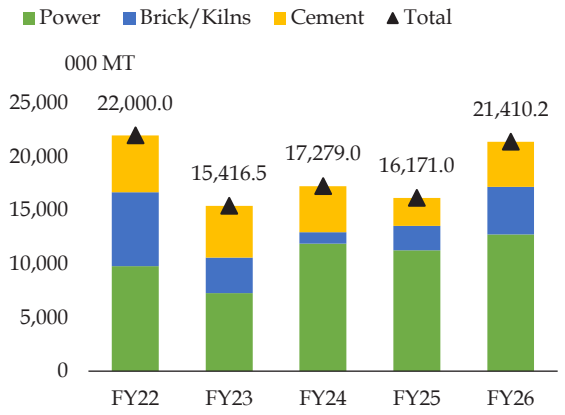
[29] The term "prosumer" refers to an electricity consumer who also generates electricity, typically through rooftop solar systems, for own use and export of surplus to grid.

[30] Prosumer Regulations 2026 replaced the one-to-one net-metering regime with a net-billing framework compensating exported electricity at a lower reference price rather than the full retail tariff. (Source: NEPRA S.R.O. 251(I)/2026 notified February 9, 2026)

[31] See for details, Chapter 2 of the State of Pakistan's Economy, Annual Report 2024-25.

[32] Limestone is Pakistan's most widely extracted non-fuel minerals and is primarily used as a key raw material in the domestic cement industry. On average, approximately 1.4 – 1.5 tonnes of limestone are used in producing a tonne of clinker. Source: U.S. Environmental Protection Agency

Sector-wise Consumption of Coal **Figure 2.13**



Source: MoF

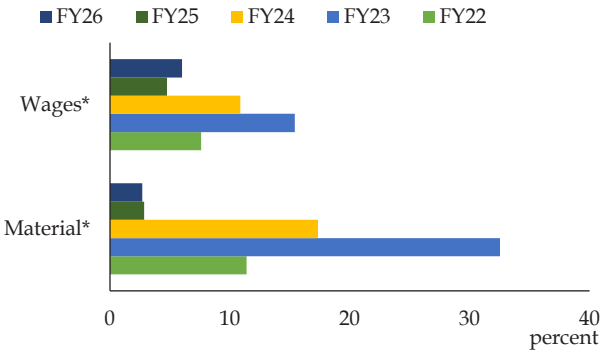
global energy supply chain.[33] Notably, the earlier fall in domestic output had been partly driven by excess LNG supply under long-term contracts, which had incentivised the use of imported gas over domestic production. However, the subsequent disruptions encouraged domestic companies to restore output from previously curtailed fields. As a result, oil and gas production rose by 22.3 and 11.7 percent YoY in Q4, respectively.

The current positive momentum in mining and quarrying should be treated as an opportunity to deepen domestic value addition in sectors where Pakistan has proven extractive capacity, particularly coal, limestone, and other industrial minerals. Rather than exporting raw materials or relying on unprocessed extraction, moving towards downstream processing and beneficiation strengthens domestic economic linkages, raises the share of value captured within the economy, and reduces exposure to commodity price swings.[34]

The momentum in construction activity continued in FY26 as well – albeit growth slightly decelerated compared to the previous year. Relatively slower growth in construction input prices and wages (**Figure 2.14a**), along with the subsidised housing scheme (Wazir-e-Azam Apna Ghar Program - Ghar Ho Tu Apna) and pickup in private sector credit, generated housing demand and contributed to overall construction activity.[35] However, a slowdown in Public Sector Development Program (PSDP) expenditure in Q4-FY26, amid evolving geopolitical tensions, weighed on the full year construction growth (**Figure 2.14b**).

The broad-based growth in manufacturing and construction more than offset the contraction in

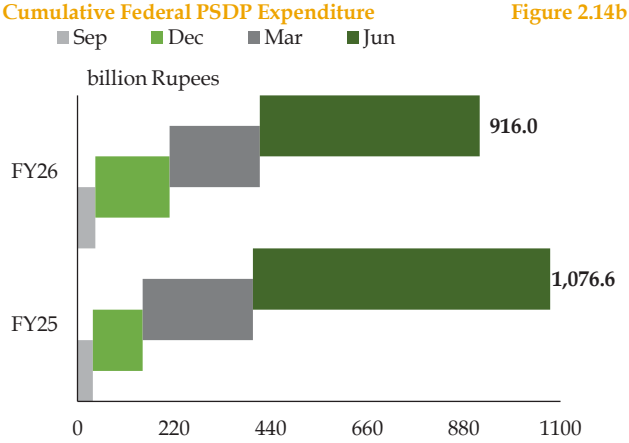
Construction Inputs - YoY Growth **Figure 2.14a**



* Material include price of cement, bricks, blocks, sand etc.; wages are of plumber, mason, painter etc.

Sources: MoPD&SI; PBS

Cumulative Federal PSDP Expenditure **Figure 2.14b**

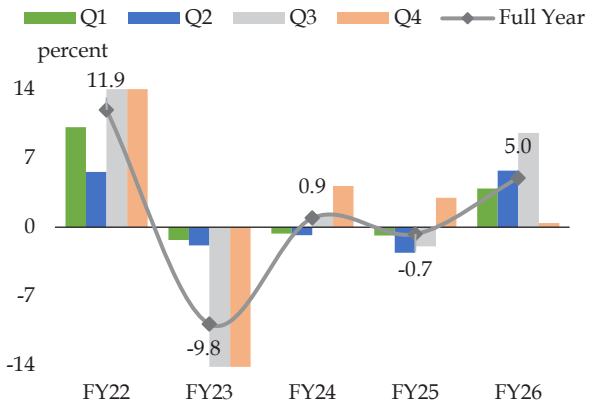


[33] Gas production is part of the 'Mining and Quarrying' segment of the industry, while its supply, including RLNG, falls under the 'Electricity, Gas and Water Supply' segment.

[34] Baur (2014) argues that mineral beneficiation is widely documented as a mechanism for strengthening the economic contribution of the extractive sector beyond the point of extraction.

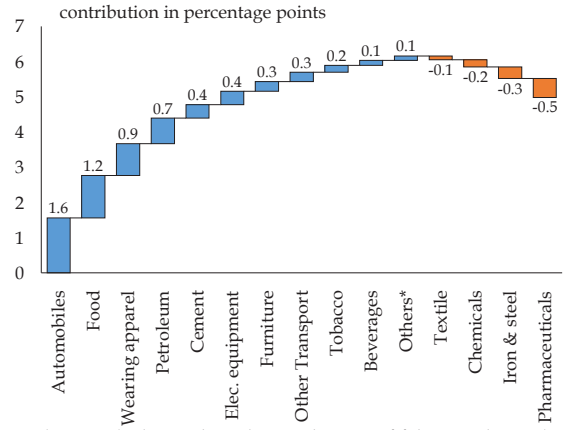
[35] The scheme offers subsidised financing at the fixed rate of 5 percent, with the markup subsidy paid by GOP. For details, see SMEFD Circular Letter No 1 of 2026 available at https://www.sbp.org.pk/smefd/circulars/2026/CL1.htm, https://www.sbp.org.pk/smefd/circulars/2026/CL2.htm.

Quarterly Trend of LSM Growth **Figure 2.15**



Source: PBS

Sectoral Performance of LSM in FY26 **Figure 2.16**



* Others include combined contribution of febricated metals, rubber, machinery, paper & board, computer, wood, leather, and other manufacturing.

Source: PBS

electricity, gas and water supply. Manufacturing growth accelerated to 6.0 percent, which contributed around 3.9 percentage points to industrial growth.[36] The major impetus came from sharp recovery in LSM output, followed by small-scale manufacturing (SSM) and slaughtering sub-sectors.

Large Scale Manufacturing[37]

LSM grew by 5.0 percent against a contraction of 0.7 percent last year. This sharp recovery was supported by a host of factors including pickup in domestic demand, better availability of raw materials and higher capacity utilisation on average.[38] Quarterly data shows that LSM recovery gained traction as the year progressed, with growth accelerating up to Q3-FY26. However, increase in oil prices and global supply disruptions due to the Middle East conflict, austerity measures taken by the government, and elevated policy uncertainty, resulted in growth decelerating sharply in Q4-FY26 (**Figure 2.15**). In this regard, **Box 2.5** highlights the effect of uncertainty on manufacturing output in Pakistan.

Nonetheless, the LSM growth was broad-based, with production expanding in 16 of the 22 groups (**Table 2.10**). The major contributors to LSM growth included *automobiles* and allied industries (*rubber*, *tyres*, and *transport equipment*), *food and beverages*, *wearing apparel*, *petroleum products*, *non-metallic minerals* (mainly *cement*), *electrical equipment* and *furniture*. Meanwhile, *pharmaceuticals*, *chemicals*, and *iron and steel* recorded decline in production (**Figure 2.16**).

Automobiles

Automobiles saw a broad-based increase in production for the second consecutive year. Relatively easier financing conditions, a series of new models launched by the existing and new entrants in the auto sector, price discounts, zero-markup instalment plans offered by assemblers, and stable vehicle prices[39] contributed to strong booking activity and higher production volumes of passenger vehicles. The transport segment, comprising commercial vehicles such as trucks and buses, also witnessed a substantial growth during the year (**Figure 2.17**). Improved macroeconomic conditions along with affordable financing supported increased sales and thus production of commercial vehicles.

In addition, the expected developments pertaining to forthcoming 2026–31 auto policy also led to higher demand, specifically towards the

[36] LSM accounts for 8.0 percent of the total GDP, 44.1 percent of the industrial GVA, and 67.5 of manufacturing sector.
[37] This section is based on monthly disaggregated data released by the PBS.
[38] Average capacity utilization, as reported in BCI diffusion index, rose by 2.6 percent in FY26.
[39] The average motor vehicle price increased by less than 1 percent in FY26. Source: PBS

Large Scale Manufacturing **Table 2.10**

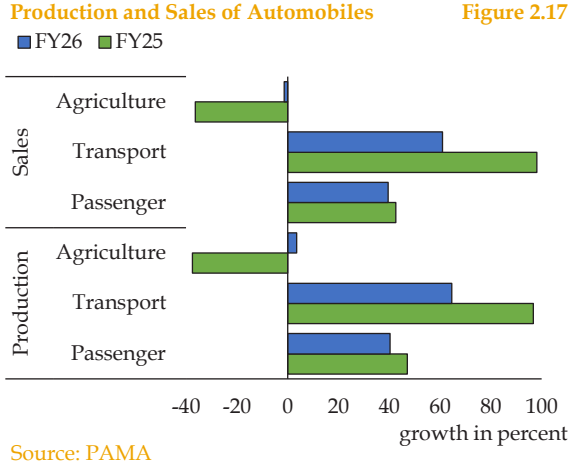
growth in percent; contribution in percentage points

Sector	Weight	Growth			Contribution		
		FY24	FY25	FY26	FY24	FY25	FY26
LSM	78.4	**0.8**	**-0.7**	**5.0**	**0.8**	**-0.7**	**5.0**
of which							
Food	10.7	1.7	-1.8	7.0	0.3	-0.3	1.2
Beverages	3.8	-3.2	1.6	3.1	-0.1	0.1	0.1
Tobacco	2.1	-23.0	7.0	12.6	-0.4	0.1	0.2
Textile	18.2	-5.7	2.5	-0.6	-1.0	0.4	-0.1
Wearing apparel	6.1	8.2	5.7	5.5	1.2	0.9	0.9
Leather products	1.2	5.6	1.0	-1.9	0.0	0.0	0.0
Wood products	0.2	11.8	1.3	-0.5	0.0	0.0	0.0
Paper & board	1.6	-0.6	0.4	0.3	0.0	0.0	0.0
Coke & petroleum	6.7	9.8	5.3	9.7	0.6	0.4	0.7
Chemicals	6.5	5.1	-3.5	-2.5	0.4	-0.3	-0.2
Pharmaceuticals	5.2	15.7	2.7	-8.9	0.8	0.2	-0.5
Rubber	0.2	-1.5	-1.3	14.2	0.0	0.0	0.0
Non-metallic mineral	5.0	-5.3	-7.9	6.5	-0.4	-0.5	0.4
Iron & steel	3.4	-4.4	-8.7	-7.8	-0.2	-0.4	-0.3
Fabricated metal	0.4	-7.8	-13.9	9.6	0.0	-0.1	0.0
Computer, electronics, optical	0.0	-12.4	2.6	2.0	0.0	0.0	0.0
Electrical equipment	2.0	-9.4	-11.8	14.3	-0.3	-0.3	0.4
Machinery and equipment	0.4	45.5	-35.5	3.0	0.2	-0.2	0.0
Automobiles	3.1	-25.0	46.2	57.8	-0.6	0.8	1.6
Other transport equipment	0.7	-4.0	36.6	42.4	0.0	0.2	0.3
Furniture	0.5	15.0	-56.3	22.7	0.4	-1.6	0.3
Other manufacturing	0.3	7.6	-16.0	16.6	0.0	-0.1	0.1

Source: PBS

end of FY26. The new policy was expected to focus more on electric vehicles, in line with the targets set under NEV Policy 2025, and increase taxes on conventional ICE vehicles.[40] This led the consumers to prepone their buying in anticipation of an increase in ICE vehicle prices. These trends were also reflected in a sustained momentum in production of automobile-allied industries such as rubber and tyres.

Production and Sales of Automobiles **Figure 2.17**



Source: PAMA

Food and Beverages

The recovery in food manufacturing was largely driven by higher sugar production, along with increased wheat and rice milling. Besides, a relatively smaller contribution came from the beverages segment, where an improved product mix, particularly in flavoured drinks, supported higher output of juices, syrups, and squashes.

Textile and Wearing Apparel

The growth in output of textile and wearing apparel remained subdued in FY26, despite stronger growth in export volume of garments.[41] The aggregate performance masked a sharp divergence as exports of ready-made garments expanded, while decline in domestic cotton

[40] This can be corroborated from the NEV policy 2025-30, which suggests introduction of carbon levy on first sale and import of petrol-powered vehicles, to generate the revenues to meet the EV adoption targets. (Source: https://pama.org.pk/wp-content/uploads/2026/06/NEV-Policy-Final-13-Aug-25.pdf)

[41] Export volumes of readymade garments grew by 5.0 percent in FY26. Source: PBS

production constrained manufacturing of low value-added textiles, cotton yarn and cloth.

Petroleum Products

The increase in production of petroleum products was mainly driven by the rising demand in overseas segment.[42] This is attributed to the enhanced furnace oil exports, besides higher shipping activity and stronger refuelling demand at Pakistani ports.[43] On the other hand, the decline in domestic consumption was broad-based, except for the transport and power sectors (**Figure 2.18**).[44]

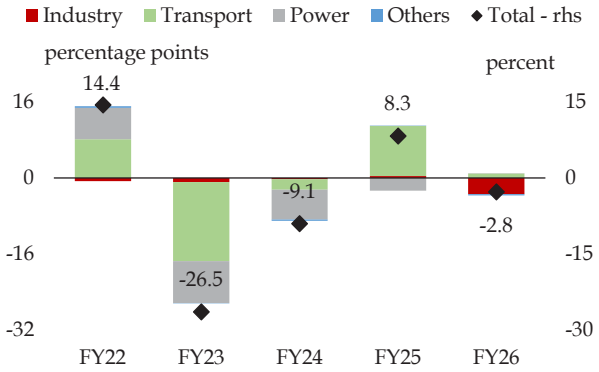
It is worth mentioning that higher domestic consumption also reflects reduced availability of smuggled products. Anecdotal evidence suggests that enhanced customs enforcement, sector-specific compliance measures and closure of the western border curtailed undocumented cross-border trade in petroleum products during the latter half of FY26.

Cement

Cement production increased in line with stronger construction activity. This was underpinned by a confluence of demand and supply factors. On the demand side, higher federal PSDP expenditure for most of the year and subsidised housing scheme helped construction activity in both the public and private sectors. This is evident from a 9.9 percent increase in domestic cement dispatches, while cement exports declined by 4.0 percent during the year (**Figure 2.19**).[45]

On the supply side, the sector has benefitted from normalised international coal prices[46] and an accelerating renewable energy transition that led

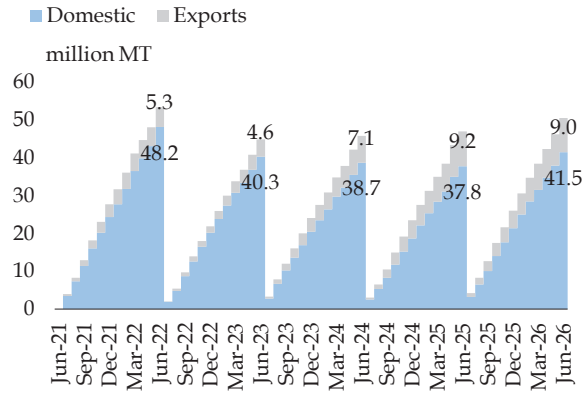
Contribution to Growth in Consumption of Petroleum Products **Figure 2.18**



* Others include household, agriculture and other govt. sectors
Source: MoF

to a decline in sector's operating costs in FY26.[47] Further, the sector is entering a phase of consolidation and capacity expansion, which may support greater production efficiency and improve firms' market presence as demand continues to recover.[48]

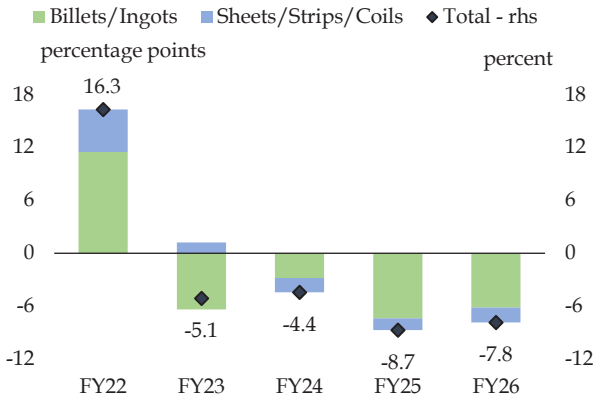
Cement Dispatches **Figure 2.19**



Source: APCMA

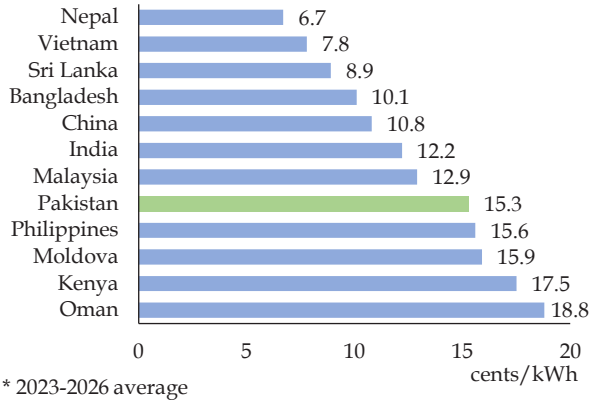
[42] This generally refers to bunker sales and other petroleum product exports, i.e. petroleum products sold for use by foreign vessels/ships at Pakistani ports and other export-related sales outside the domestic market.
[43] Arrival of ships increased from 7 in FY25 to 10 in FY26, on 30-Day rolling basis. (Source: https://portwatch.imf.org/)
[44] Consumption of major economic sectors including domestic, industry and agriculture declined owing to the switching towards cheaper alternatives like renewables and reduced reliance on furnace oil. (*Source: Pakistan Economic Survey 2025-26)*
[45] Decline in cement exports is mainly due to border closure that affected exports from northern region as southern region exports posted an increase during the period under review.
[46] Australian coal prices dropped by 3.4 percent in FY26, on top of 10.6 percent contraction in last year. Source: World Bank
[47] The cement industry is increasingly investing in solar and wind power to reduce its reliance on conventional energy sources. These investments are expected to ease production costs, particularly as energy constitutes a significant share of the sector's cost of goods sold (COGS), estimated at around 60 percent. Source: World Bank.
[48] A few leading cement manufacturers have acquired stakes in other firms, and most of the firms have announced capacity additions. Maple Leaf Cement Factory Limited has acquired majority stake in Pioneer Cement Limited via share purchase agreement, with the deal formally concluded in February 2026. Source: PSX.

Contribution to Growth in Iron and Steel Output **Figure 2.20**



Source: PBS

Electricity Rates for Businesses in Selected Countries* **Figure 2.21**



* 2023-2026 average

Source: globalpetrolprices.com

Iron and Steel

The output of iron and steel declined for the fourth consecutive year as the sector continues to face structural headwinds amid elevated energy costs. The contraction is more pronounced in billets and ingots compared to flat steel (**Figure 2.20**). The primary factor is loss of competitiveness due to high energy cost, especially higher power tariffs (**Figure 2.21**). As a result, the demand is being increasingly met from imported finished steel.[49] Amid these challenges, the capacity utilisation of this sector, specifically of long products, has gradually declined from above 50 percent in FY22 to around 30 percent in FY25.[50]

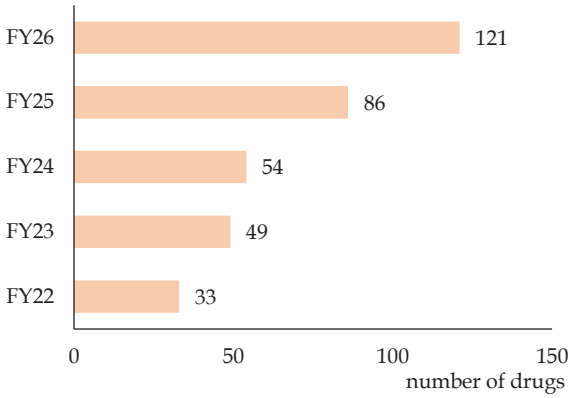
Chemicals

High energy cost also impacted output of chemicals, which declined for the second consecutive year. Increase in gas prices and reduced gas supply due to falling domestic gas production constrained production of fertilisers. Moreover, the decline in fertiliser production can also be attributed to higher availability of inventory at the start of the year due to lower offtake in the previous year.[51]

Pharmaceuticals

In contrast to an expansion last year, the output of pharmaceuticals declined in FY26 owing to several factors. These include: (a) suspension of bilateral trade with Afghanistan;[52] (b) increase in drug recalls resulting in slower drug approval process amid intensified quality assurance (**Figure 2.22**);[53] and (c) change of ownership amid exits of multinational companies that disrupted production due to reconfiguration of internal controls and supply chain.

Reported Drug Recalls **Figure 2.22**



Source: PACRA

[49] Volume of finished iron and steel imports increased by 27.4 percent, while scrap iron and steel imports increased by 8.5 percent only. Source: PBS

[50] Based on the data of 2-5 major industry players. (Source: PACRA)

[51] As per NFDC, urea stocks were at multi-year high of 1,873 thousand MT at the start of FY26.

[52] Afghanistan has been one of the top destinations of pharmaceutical exports accounting for approximately 45 percent of Pakistan's total pharmaceutical exports in FY25.

[53] Approximately 75 percent of the reported recalls are classified as High-Risk, leading to an increase in quality controls slowing down the production process. (Source: PACRA)

Other LSM Groups

Production of other LSM groups, especially furniture and electrical equipment, increased during FY26. Furniture production witnessed second-highest growth after the transport group.[54] The growth accelerated in H2-FY26 in line with the pick-up in furniture exports since January 2026. Similarly, output of electrical equipment was driven by consumer durable segment, supported by consumer finance for durables.[55]

2.4 Services

The services sector grew by 3.8 percent during FY26 **(Table 2.11)**, maintaining an upward trajectory for the third consecutive year. The growth remained broad-based as all sub-sectors showed an increase in value addition during FY26. Nonetheless, *wholesale and retail trade* (WRT), *transport and storage services* (Transport), *information & communication* (ICT), *general government services, real estate*, and *other private services* were the major contributors.

The output of WRT grew on the back of improved performance of the commodity-producing sectors, besides higher import volumes. The traction in economic activity also supported the *transport & storage* services, with increase in railways, pipe, road transport, and steady postal services & storage facilities.

The improvement in transport is also reflected by (i) substantial increase in production and sales of commercial vehicles; (ii) jump in imports of motor vehicles; (iii) higher POL sales to the transport sector, primarily road transport,[56] and (iv) increased credit for transport and storage, especially land transport, and warehousing and supporting activities.[57]

However, the decline in water and air transport somewhat moderated the overall growth of transport and storage services. The contraction in maritime and air transport was mainly due to Middle East conflict, which disrupted international transit routes, raised global energy prices as well as freight charges.

The growth in *general government services* was driven by increased expenditure on public administration, social security, health, and

Services Sector **Table 2.11**

growth in percent; contribution in percentage points

	Growth in FY25[R]					Growth in FY26[P]					Contribution	
	Q1	Q2	Q3	Q4	Year	Q1	Q2	Q3	Q4	Year	FY25[R]	FY26[P]
Services sector	**2.0**	**3.0**	**3.2**	**4.2**	**3.1**	**3.0**	**4.0**	**4.5**	**3.6**	**3.8**	**3.1**	**3.8**
Wholesale & retail trade	0.7	-0.9	-0.4	1.9	0.3	2.3	2.8	3.5	0.7	2.4	0.1	0.7
Transport & storage	2.5	3.0	2.1	4.0	2.9	2.1	4.7	2.8	3.2	3.2	0.5	0.6
Accommodation & food services	4.1	4.1	4.1	4.0	4.1	3.9	3.9	4.1	4.3	4.0	0.1	0.1
Information & communication	-1.8	10.8	10.3	8.8	7.0	-2.5	6.3	18.5	15.0	9.5	0.4	0.5
Finance & insurance activities	0.0	15.9	13.2	11.4	10.0	7.9	2.2	4.9	2.2	4.2	0.2	0.1
Real estate activities	3.8	3.8	3.8	3.7	3.8	3.6	3.6	3.7	3.9	3.7	0.4	0.4
General government	1.9	7.9	12.7	12.1	8.6	5.6	5.8	5.8	5.5	5.7	0.6	0.4
Education	3.0	2.8	3.0	3.6	3.1	4.3	4.4	4.0	4.0	4.2	0.2	0.2
Human health & social work	3.1	3.5	3.1	3.2	3.2	6.2	5.4	4.4	6.1	5.5	0.1	0.2
Other private services	3.9	4.0	3.9	3.6	3.8	3.7	4.0	4.2	4.0	4.0	0.6	0.6

R: revised, P: provisional

Source: PBS

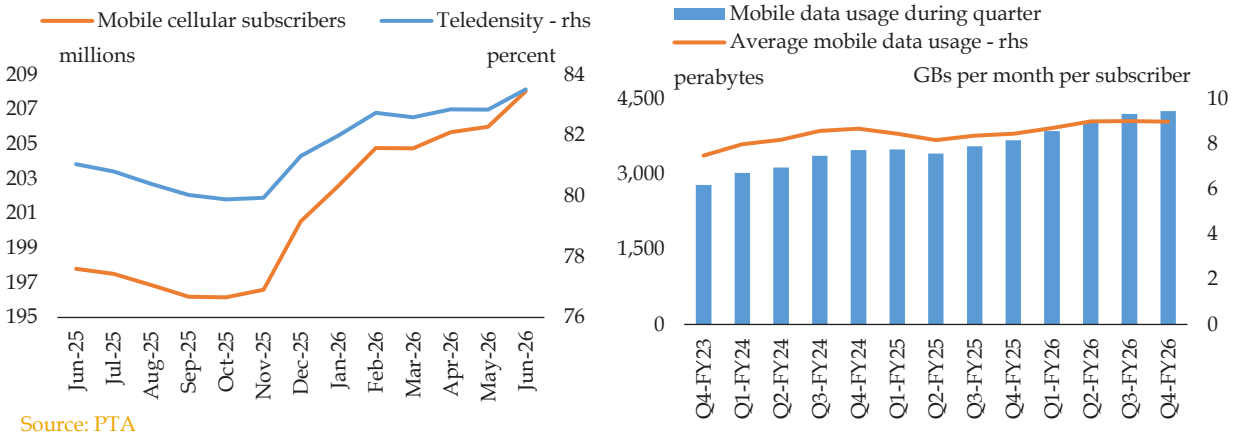
[54] Export volumes of furniture grew by 22.2 percent in FY26. Source: PBS

[55] Consumer finance for the purchase of durables grew by 4.2 percent in FY26, on top of 22.2 percent growth in FY25. Source: SBP

[56] POL sales to the transport sector increased to 15.0 million metric tons during FY26, from 14.8 million metric tons in the same period last year. Of this, sales to road transport rose to 14.5 million metric tons from 14.4 million metric tons, while sales to railways and domestic aviation declined. Source: OCAC

[57] The credit to transport and storage services surged to Rs 74.9 billion during FY26 against Rs 5.9 billion during FY25; credit to land transport and warehousing & support activities rose to Rs 20.0 billion and Rs 52.0 billion, respectively, compared to retirement of Rs 5.9 billion and increase in credit of Rs 7.8 billion, respectively during FY25. Meanwhile, the credit to Air and water transport declined. Source: SBP

Trend in Teledensity and Cellular Mobile Subscriptions **Figure 2.23**



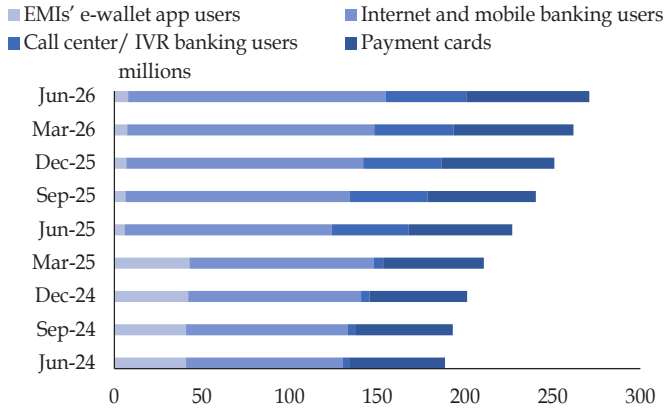
Source: PTA

education, as well as running of civil government.[58] Meanwhile, the growth in *other private services* was largely due to gains in professional, scientific, and technical activities, and support services.[59]

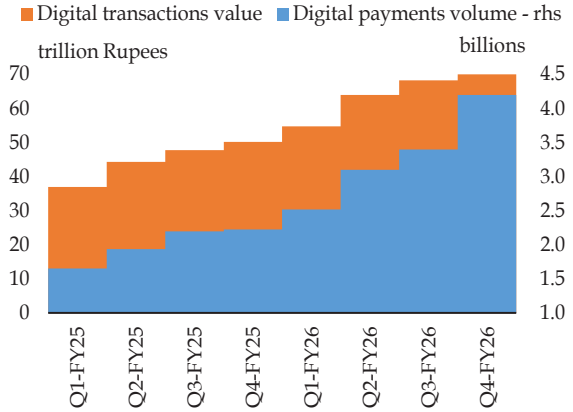
The *information & communication* services recorded accelerated growth in FY26, supported by an increase in computer programming, consultancy, and publishing services and rising IT services exports.[60] The improved performance is also corroborated by higher mobile phone imports. This can be linked to expanding digital connectivity, online services, and growing reliance on mobile technology for business, education, and entertainment. This is also evident from increasing teledensity, mobile phone subscription and mobile data usage (**Figure 2.23**),[61] as well as through increase in digital payment users and transactions (**Figure 2.24a and 2.24b**).

Growth in finance and insurance services decelerated in FY26 following a strong recovery in FY25, partly reflecting a higher deflator and base

Digital Payment Channel Users and Instruments **Figure 2.24a**



Digital Payment Volume and Value **Figure 2.24b**



Source: SBP

[58] The government spent Rs 1,033.5 billion on running of civil government in FY26, up from Rs 891.6 billion in the same period last year. Meanwhile, the budgeted allocations on health, education and social protection increased from Rs 28.2 billion, Rs 103.8 billion and Rs 608.0 billion, respectively to Rs 32.0 billion, Rs 112.7 billion and 734.2 billion, respectively. Source: MoF

[59] The professional, scientific and technical activities, architectural and engineering services grew by 3.9 percent, while administrative and support services grew by 3.4 percent during FY26. Source: PBS

[60] ICT exports increased to US$ 4.6 billion during FY26 compared to US$ 3.8 billion in FY25.

[61] Import of mobile phones increased to US$ 1.9 billion compared to US$ 1.5 billion in last year. Source: PBS

effect (**Table 2.12**).[62] Within finance and insurance services, growth in insurance, reinsurance and pension activities remained subdued, as heightened geopolitical tensions prompted insurers to withdraw standard war-risk coverage and raise premium rates, putting pressure on local insurers' underwriting margins. Moreover, the narrowing of the spread between weighted average lending and deposit rates also contributed to the deceleration in financial sector growth during FY26.[63]

Growth in *real estate activities* slightly decelerated mainly due to higher deflators compared to FY25. Apart from this, credit extended to the real estate sector experienced a modest expansion, rising from Rs 4.8 billion to Rs 5.0 billion in FY26, aligning with a pickup in construction activity. Concurrently, growth in *accommodation and food services* moderated due to higher deflator on account of higher food and energy prices.

2.5 Labour Market

Labour market depicted mixed picture during FY26. A moderate contraction was observed in industrial employment in Punjab and online job postings. Whereas newspaper job advertisements and employment sentiment index based on the SBP-IBA Business Confidence Survey (BCS) signalled improved job market condition.[64]

Industrial employment (based on data from Punjab) contracted by 1.4 percent during FY26, after growing by 0.6 percent during the same period last year (**Figure 2.25**). The decline was largely driven by textile, engineering (specifically diesel engine manufacturing), leather rubber & plastic (notably leather tanning) and food drinks & tobacco (primarily soft drinks) industries, which broadly reflected the slowdown in production of these subsectors in LSM.[65]

Finance and Insurance Services **Table 2.12**
growth in percent

	FY25	FY26
Central banking	-15.9	9.1
Other monetary intermediation	5.3	4.1
Scheduled banks	5.9	4.2
Non-scheduled banks	-27.7	-2.8
Insurance, reinsurance, and pension	85.3	0.1
Other financial services	-21.6	-11.5
Auxiliary activities	38.3	8.2

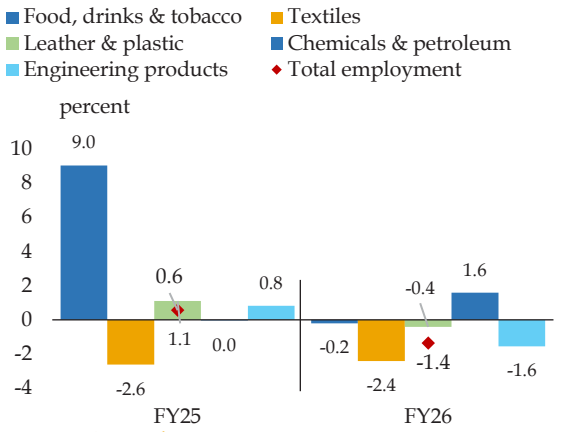
Source: PBS

However, hirings increased in chemicals & petroleum products, mainly on account of paints & varnishes, which is also in line with the higher production amid improved construction activity and automobile production. In pharma, employment growth was supported by strong profit margins despite decline in output.

The employment sentiments in business confidence surveys remained optimistic (above 50) in FY26. The optimism was driven by positive sentiments of both services and manufacturing firms. However, geopolitical tensions weighed on employer confidence, resulting in a minor moderation in sentiments during Q4-FY26.

The newspaper-based job postings picked up during FY26, broadly mirroring the recovery in

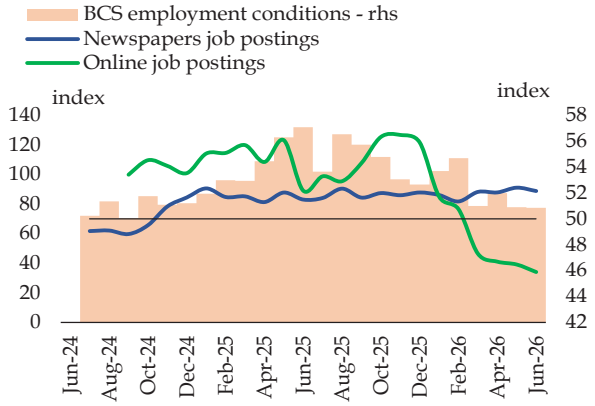
Growth in Industrial Employment - Punjab **Figure 2.25**



Source: BoS Punjab

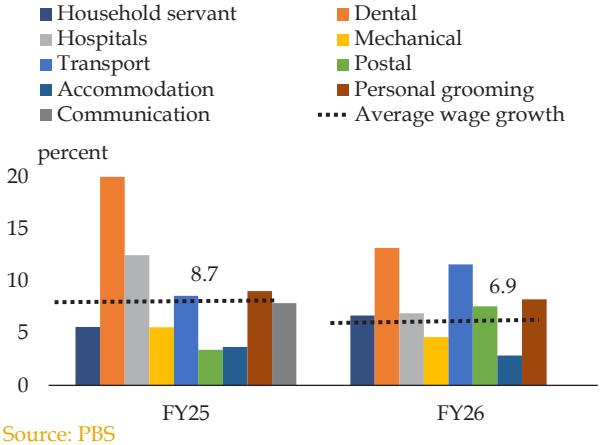
[62] A deflator is a price index used to convert nominal GVA into real GVA by adjusting for changes in prices. A higher deflator may therefore lead to lower real GVA, as it indicates a relatively faster increase in prices.
[63] The difference between weighted average lending and deposit rate (excluding zero markup and interbank) decreased from 4.2 percent at end-June 2025 to 3.8 percent at end-June 2026.
[64] SBP-IBA's monthly BCS measures sectoral business and inflation outlooks, including a 12-month past-and-future employment sentiment index. To analyse the employment sentiments, the average of past and future sentiment index is used.
[65] The textile sector maintained a steady downward employment trend, aligned with moderated high-value-added output.

Job Postings and Employment Conditions **Figure 2.26**



Sources: SBP; SBP staff calculations

Average Wage Growth in Services Sector **Figure 2.27**



Source: PBS

LSM, albeit with a lag, except for December 2025 and January 2026 (**Figure 2.26**). The increase in LSM in these months was driven by seasonal sugarcane crushing, an activity that is rarely advertised via newspapers as more than 80 percent of newspaper job postings pertain to services sector. Meanwhile, online job postings dropped, particularly in H2-FY26.

Wage Growth

The CPI based wage data shows that the growth in wages decelerated during FY26 (**Figure 2.27**). The nominal wage growth matched inflation trends in first half of the year. However, the surge in inflation in H2-FY26 outpaced wage growth, especially in Q4-FY26. Dentists fee recorded the highest increase, followed by wages of transport and personal grooming service providers. Meanwhile, household servants' wages recorded higher growth in FY26, reflecting increasing demand besides higher living expenses.

Box 2.1: Reviving Investment in Productive Sectors of Pakistan

Investment in Pakistan, as measured by Gross Fixed Capital Formation (GFCF), has been on a declining trend since the late 2000s. Total GFCF fell from an average of 15.0 percent of GDP during FY06–11 to 12.6 percent during FY22–26, primarily reflecting a decline in private investment (**Figure 2.1.1a**). More importantly, the decline is more pronounced in sectors that can potentially raise productivity, expand exports and generate technological spillovers. LSM and ICT, two such sectors, recorded the largest reduction in GFCF-to-GDP ratio, while it also declined in transport & storage services (**Figure 2.1.1b)**.

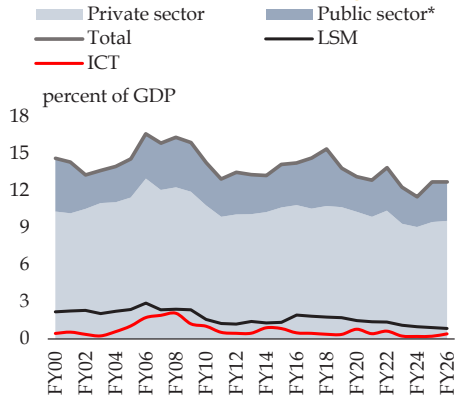
The trend is concerning because investment in manufacturing, modern tradable services and logistics brings together capital, skills and technology, supporting capital deepening, learning, and technology diffusion. These sectors involve firms to operate on a larger scale, have access to international markets, and improve product quality through external competition. The shift in investment away from such sectors affects productivity growth and weakens export diversification, besides curtailing demand for skilled labour. The resulting loss of productivity, exports and employment opportunities is reflected in Pakistan's slow structural transformation and limited employment creation in manufacturing sector (World Bank, 2022).

Factors affecting investment in productive sectors in Pakistan

- **High tariffs on inputs:** Tariffs and para-tariffs on raw materials, intermediate inputs and capital equipment raise the cost of expanding productive capacity. Specifically, a one percent increase in upstream protection is associated with a 0.63 percent decline in the revenue-based productivity of downstream firms and a 0.51 percent fall in their sales (World Bank, 2026a).[66]

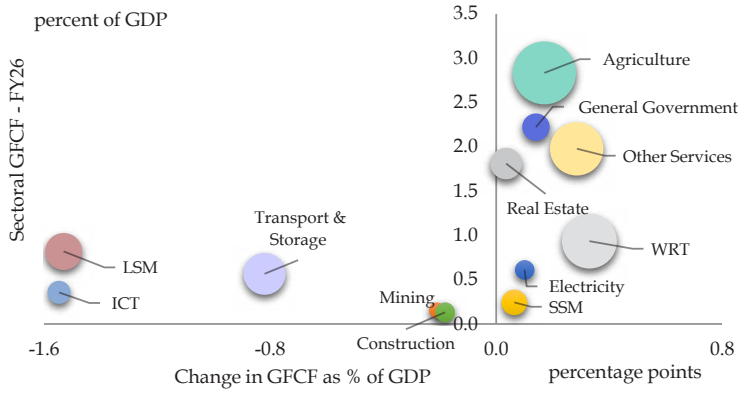
[66] Upstream protection refers to tariffs or other trade barriers on inputs and intermediate goods used by downstream firms in production.

Gross Fixed Capital Formation **Figure 2.1.1a**



* Inlcudes general government
Source: PBS

Changes in Sectoral Investment in Pakistan in the Last Two Decades **Figure 2.1.1b**



Negative values on the x-axis indicate a decline in the sector's GFCF-to-GDP ratio between FY07 and FY26. Bubble size represents the sector's share in GDP in FY26.

- **Anti-export bias:** Protection of final goods raises the relative returns from serving the domestic market compared with exporting. This weakens firms' incentives to invest in export capacity, efficiency and product quality. A study by World Bank (2026a) suggests that Pakistan's exports in 2024 were only 10.4 percent of GDP, well below regional peers such as India and Bangladesh, and roughly half of what the economy could achieve.
- **Limited long-term finance and policy uncertainty:** Credit constraints, public-sector crowding out and repeated episodes of macroeconomic instability raised financing costs and affected planning horizons. Long-term investments in machinery, development of digital systems and new production lines were particularly sensitive to these risks.
- **Informality and regulatory costs:** Complex rules and uneven enforcement increase fixed cost of capacity expansion in formal sector. Remaining small or informal then limits firms' access to finance, technology, skilled workers, and larger markets, weakening both the ability and the incentive to invest (World Bank, 2022).
- **Infrastructure and capacity gaps:** Unreliable energy, inefficient logistics, and limited support for technology adoption and worker training raise the cost and risk of upgrading. These constraints are especially binding in manufacturing and ICT, where investment depends on reliable complementary inputs (World Bank, 2026a).
- **Tax incentives favouring real estate:** Differences in tax treatment make real estate investment more profitable than manufacturing and tradable services in Pakistan (World Bank, 2022). Evidence from Khyber Pakhtunkhwa also shows that low effective property taxes encourage speculative purchases of plots (World Bank, 2024).

Policy recommendations:

Pakistan's prospects for sustained growth depend on reversing the declining trend in investment as well as improving its composition by encouraging investment in high employment generating and export-oriented sectors. The international experience, as summarised in **Table 2.1.1,** shows that government can encourage investment by addressing specific constraints such as limited long-term finance, infrastructure gaps, restricted market access, and costly inputs, while keeping firms exposed to exports, competition, and performance scrutiny. In this regard, some broader recommendations for reviving investment in Pakistan's industrial sector are summarised as follows:

- **Remove distortions before introducing new incentives:** Before offering additional incentives, Pakistan should address the existing policy distortions that discourage investment in productive sectors. For instance, simplifying the tariff structure and improving access to imported inputs should be an early priority (Nasir, 2020).[67] Meanwhile, the non-tradeable sectors, including real estate, need to be made less attractive through rationalisation of property taxes.
- **Prioritise public goods that support productive investment:** Firms are more likely to invest in export-oriented production when they have access to reliable infrastructure and workers with relevant skills. Public resources

[67] National Tariff Policy 2025–30 envisages gradual reduction in the maximum customs duty to 15 percent, streamlining the tariff structure to four slabs (0, 5, 10 and 15 percent), and phasing out Additional Customs Duties (ACDs) and Regulatory Duties (RDs) by 2030. These reforms are intended to simplify the tariff regime, lower input costs and improve export competitiveness.

A Comparison of Industrial Policy Instruments in Selected Asian Economies **Table 2.1.1**

Country and sector	Main instruments	Constraint addressed	Performance requirements	Main lesson
Bangladesh: apparel	Bonded warehouses; duty-free imported inputs; EPZs and tax holidays	Imported-input costs; export entry	Benefits linked to export performance; global-market exposure	Apparel success, but weak diversification
South Korea: heavy and chemical industries	Foreign-loan guarantees; access to foreign credit; exemptions from capital-equipment tariffs	Long-term finance; machinery costs	1973–79 programme; export-oriented regime	Lasting gains, with some initial resource misallocation
China: SEZ-led export manufacturing	SEZs and industrial parks; export-processing and duty-drawback regimes	Infrastructure and coordination; imported-input costs	Foreign and domestic investment; export-market exposure	Higher investment and productivity without crowding out domestic investors
Vietnam: export manufacturing, including electronics	SEZs and industrial zones; FDI attraction; trade integration	Investment coordination; market access	FDI and global-value-chain exposure; no common performance condition documented	GVC integration, but excessive proliferation of zones can reduce effectiveness

Sources: World Bank (2026); Industrial Policy for Development

should thus focus on these shared inputs, which can lower the cost and uncertainty, rather than relying mainly on broad tax concessions that do not necessarily lead to new productive capacity (Mahmood, et al., 2009).

- **Support technology, skills, and supplier development:** Encouraging investment in productive sectors also requires addressing the practical constraints faced by firms. Support can be directed towards upgrading machinery and technology, upskilling workers, and strengthening local supplier capabilities. Such assistance should address clearly identified constraints and be linked to actual investment and technological upgradation (Wadho & Chaudhry, 2018).
- **Simplify tax administration:** Provide a single window for businesses to register, file returns, and pay taxes. Government authorities should coordinate collection and share revenues through agreed intergovernmental arrangements, reducing compliance costs and the need to deal with multiple agencies.
- **Keep support temporary and tied to results:** Incentives should not be permanent. Pakistan's experience suggests that support measures can influence firm behaviour without necessarily generating a meaningful increase in overall exports. Any new measures aimed at reviving productive investment should therefore be time-bound and linked to measurable outcomes, such as additional investment, expansion in export capacity, or improvements in productivity (Lovo & Varela, 2025).

**The contribution of Saad Ali is acknowledged in writing this box.*

References

i. World Bank Group (2022). From Swimming in Sand to High and Sustainable Growth: A Roadmap to Reduce Distortions in the Allocation of Resources and Talent in the Pakistani Economy. Pakistan Economic Memorandum; World Bank. https://hdl.handle.net/10986/38133
ii. World Bank. (2026). From Inward to Outward: Pakistan's Shift Towards Export-led Growth. https://documents1.worldbank.org/curated/en/099072126014044090/pdf/P507205-e58d7158-2f1b-41fa-b12b-db665fa9fbc8.pdf
iii. Fernandes, A. M. and Reed, T. (2026). Industrial Policy for Development: Approaches in the 21st Century - Overview. Policy Research Reports Washington, D.C.: World Bank Group. http://documents.worldbank.org/curated/en/099111503312622762
iv. Nasir, J. (2020). The Tariff Tripod of Pakistan: Protection, Export Promotion, and Revenue Generation. *The Pakistan Development Review,* 59(3), 517–551.
v. Mahmood, T., Din, M. U., and Ghani, E. (2009). An Analysis of Technology Adoption by Export-oriented Manufacturers in Pakistan. *The Pakistan Development Review,* 48(4II), 939–948.
vi. Wadho, W., & Chaudhry, A. (2018). Innovation and Firm Performance in Developing Countries: The Case of Pakistani Textile and Apparel Manufacturers. *Research Policy,* 47(7), 1283–1294.
vii. World Bank (2022). Pakistan Development Update: Inflation and the Poor. https://thedocs.worldbank.org/en/doc/51427702c05371f59848a74a2d66ba87-0310062022/original/PDU-October-2022-Report-Web.pdf

viii. World Bank (2024). Land Sector Review in Khyber Pakhtunkhwa. https://documents1.worldbank.org/curated/en/099092724150516148/pdf/P18041711c4d2d02f1ba221df8a7e01ff44.pdf

ix. Lovo, S., & Varela, G. J. (2025). Industrial Policy under Constraints: Evidence from Pakistan's Export Subsidy Schemes. Policy Research Working Paper No. 11136, Washington, D.C.: World Bank Group.

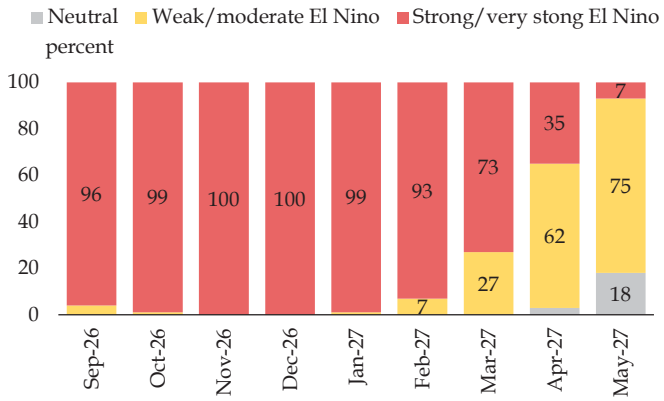
Box 2.2: El Niño Risks to Pakistan's Agriculture and the Case for Preparedness

Pakistan entered FY27 with agriculture exposed to a fresh round of weather risks from El Niño, underscoring the need for early preparation.[68] El Niño tends to bring hotter conditions, uneven rainfall and prolonged dry spells which raises risks to crop output and food security. Because it can be monitored in advance, it gives farmers and authorities time to prepare before its effects are felt. The warm phase of the El Niño-Southern Oscillation (ENSO) is associated with changes in atmospheric circulation that can alter rainfall patterns, increasing the risk of drought in some areas and heavy rainfall or flooding in others. It is important to note that the effect on Pakistan would depend on local weather conditions, availability of irrigation water, and the timing of these changes relative to critical crop-development stages.

Ensemble forecasts of the National Oceanic and Atmospheric Administration (NOAA) [69] point to below-normal seasonal rainfall and above-normal temperatures across parts of Pakistan during FY27. The probability of a strong or very strong El Niño remains above 90 percent from September 2026 to February 2027, before declining to 73 percent in March and 7 percent by May 2027, as weak or moderate conditions become more likely (**Figure 2.2.1a**). The temperature–rainfall stress index indicates greater exposure to drought-like conditions in Sindh, southern Punjab and parts of Balochistan (**Figure 2.2.1b**), suggesting risks to water availability and agricultural production. It does not imply that rainfall will remain weak throughout the period, as intense monsoon spells can still occur. The temperature-rainfall stress index should therefore be taken as a measure of overall seasonal heat and moisture stress, rather than the absence of rainfall. Unfavourable growing conditions may still emerge when rainfall is concentrated in short spells or followed by prolonged hot and dry periods.

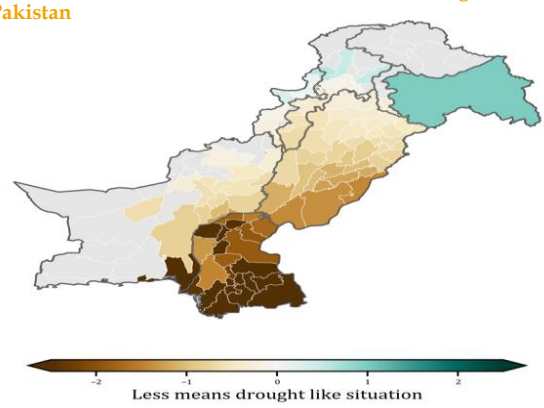
Impact on crop yields: Historical evidence indicates that El Niño has not affected all crops uniformly. Across six strong El Niño episodes, average yield anomalies were negative for maize, cotton and the wheat, at 3.4 percent, 2.0 percent, and 1.1 percent below their five-year centred trends, respectively (**Figure 2.2.2**). Yield of rice and sugarcane remained slightly above trend. El Niño therefore should be viewed as a risk as the eventual impact also depends on irrigation, input availability, and local weather conditions.

El Nino Strength Probabilities — Figure 2.2.1a



Source: NOAA

Temperature–Rainfall Stress Index across Pakistan — Figure 2.2.1b

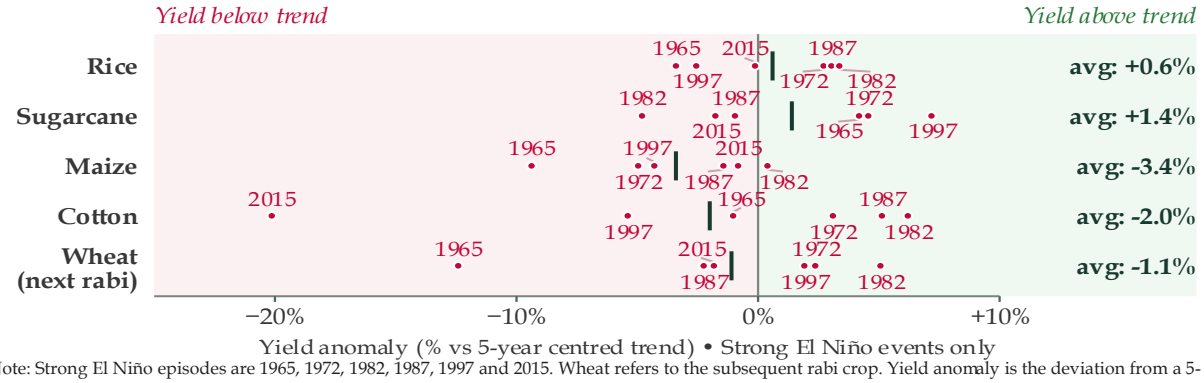


Source: SBP staff calculations based on NOAA data

[68] According to the World Meteorological Organization (WMO), El Niño is a phenomenon characterised by unusually warm ocean surface temperatures in the central and eastern equatorial Pacific.

[69] NOAA ensemble forecasts combine multiple simulations of future climate conditions, generated from different model runs and initial conditions. Combining these forecasts helps capture uncertainty and provides a robust indication of expected seasonal temperature and rainfall patterns than relying on a single model run.

El Niño Years vs Pakistan Crop Yields (5-year Centered Trend) **Figure 2.2.2**



Note: Strong El Niño episodes are 1965, 1972, 1982, 1987, 1997 and 2015. Wheat refers to the subsequent rabi crop. Yield anomaly is the deviation from a 5-year centered trend. The averages are calculated across six strong El Niño episodes (n = 6). The short vertical marker shows the crop-wise average.
Sources: Pakistan Economic Survey; SBP staff calculations.

The data from Pakistan and crop climate studies indicate that El Niño impacts agriculture primarily through the disturbance of rainfall pattern, increase in temperature and prolonged soil-moisture stress. During El Niño-like conditions, cotton and maize are likely to experience the highest yield losses, followed by wheat and rice, while sugarcane is relatively less affected (**Table 2.2.1**). Cotton and maize are especially vulnerable to combined heat and water stress, whereas rice depends more on availability of irrigation water. For wheat, the impact tends to appear with a lag through lower reservoir storage, weaker soil moisture at sowing and higher temperatures during grain filling.[70]

Estimated Crop-yield Losses under El Niño-like Conditions **Table 2.2.1**

percent

Crop	Estimated impact on yield
Rice	−3 to −10 percent
Sugarcane	Zero to −8 percent
Cotton	−8 to −20 percent
Maize	−7 to −18 percent
Wheat	−3 to −11 percent

Note: Estimates refer to the combined effect of around 1°C additional temperature and a significant soil-moisture deficit relative to normal conditions.
Source: SBP staff calculations based on studies listed in the references

Implications for food security: Lower agricultural production may result in food insecurity through reduced food availability, rising prices, and weaker rural incomes. Lower wheat, rice, and maize output would directly affect staple food supply and prices, while losses in cotton and sugarcane could reduce farm earnings and agricultural employment. This impact on crops may then spill over to other sectors of the economy. These risks can aggravate food insecurity given that already 11 million people are food-insecure in Pakistan.[71] Furthermore, the average household's spending on food and non-alcoholic beverages is approximately 36.7 percent of the total spending, which renders households, particularly those with low incomes, highly sensitive to food-price increases.[72]

Case for preparedness: Given these risks, early preparedness becomes necessary to prevent weather shocks from translating into major production and food-security losses. Vietnam went through a strong El Niño in 2019-20 and successfully managed it. Its experience shows that timely monitoring, changes in planting schedules, reduced exposure in high-risk areas and protection of freshwater resources can contain crop damage **(Table 2.2.2)**. In Philippines, ahead of the 2023-24 El Niño, agriculture-related support was provided early to the agriculture dependant farm households exposed to droughts.[73] Existing social protection systems were used to provide cash assistance, farming tools, and water-management support, preventing losses from escalating. More recently, in May

[70] Saleem et al. (2022) associate yield losses across important crops with major drought episodes in Pakistan, with hydrological drought having more persistent effects. Ali et al. (2022) report significant effects of extreme temperature and rainfall on cotton and wheat in southern Punjab, while Iizumi et al. (2014) show that El Niño impacts vary across crops and regions.
[71] Around 11.0 million people in Pakistan, 22 percent of the population faced acute food insecurity at IPC Phase 3 or above during the 2025 peak, including 1.7 million in emergency, according to the Global Report on Food Crises 2026 by FAO and WFP.
[72] Pakistan Bureau of Statistics, *Household Integrated Economic Survey 2024–25*.
[73] Food and Agriculture Organization of the United Nations (FAO), The Philippines: Impact of Anticipatory Action - Safeguarding Farmers from Agricultural Drought through Government Systems, 2026. Forecasts of agricultural drought in Isabela Province in late 2023 were used to provide early assistance to more than 4,000 people through cash, tools and water-management support.

Early Actions that Helped Vietnam Limit Crop Losses in 2019–20 **Table 2.2.2**

① Warn early	→	② Plant earlier	→	③ Reduce exposure	→	④ Protect freshwater	→	⑤ Contain losses
Water and salinity risks were monitored before the 2019–20 dry season, allowing local plans to be activated early.	→	Winter–spring rice was sown 10–20 days earlier; about 1.51 million ha had been planted.	→	About 50,000 ha shifted away from high-risk rice production, while roughly 100,000 ha was delayed or left uncultivated.	→	Five irrigation projects came online 6–13 months early, directly protecting 83,000 ha and supporting another 300,000 ha.	→	Rice damage was limited to 29,700 ha, only 7.3 percent of what was damaged in 2015–16.

Source: Vietnam Ministry of Agriculture and Rural Development

2026, Lao People's Democratic Republic launched Southeast Asia's first sovereign anticipatory drought insurance pilot. Under the scheme, financing to farmers is released when a drought index crosses a predefined threshold, allowing government-led measures to act before drought impacts become severe.[74]

El Niño normally returns within a span of seven years, so Pakistan needs to build preparedness for it into its regular agricultural planning. This means using early forecasts to signal water management, improve seed and input availability, financing, and targeted help for farmers at risk. Doing so can reduce crop losses, protect farm incomes, and ease pressure on food security. This would make it easier to act before the next episode causes major losses, while reducing the need for costly relief after the damage is done.

**The contribution of Ijlal Ahmed Haqqani and Saad Ali is acknowledged in writing this box.*

References:

i. Gupta, S., Datt, G., & Gupta, S. (2026). Climate Change and Crop Yields in India. Monash Economics Working Paper No. 04/26, Monash University
ii. Zhao, C., et al. (2017). Temperature Increase Reduces Global Yields of Major Crops in Four Independent Estimates. *Proceedings of the National Academy of Sciences*, 114(35), 9326–9331.
iii. Ali, S., Liu, Y., Ishaq, M., Shah, T., Abdullah, Ilyas, A., & Din, I.U. (2017). Climate Change and Its Impact on the Yield of Major Food Crops: Evidence from Pakistan. *Foods*, 6(6), 39.
iv. Siyal, A.L., Mahesar, T.G., Sufyan, F., Siyal, F.K., Jatt, T., Mangi, F.H., Burdi, I.H., & Hossain, A. (2021). Climate Change: Impacts on the Production of Cotton in Pakistan. *European Journal of Agriculture and Food Sciences*, 3(3), 97–100.
v. Jaiswal, R., Mall, R.K., Patel, S., Singh, N., Mendiratta, N., & Gupta, A. (2023). Indian Sugarcane under Warming Climate: A Simulation Study. *European Journal of Agronomy*, 144, 126760.
vi. Gupta, S., Bhandari, L., Jakhu, R., & Sharma, M. (2022). Climate Change, Weather Anomalies, and Agriculture: Impact on Output of Major Crops in India. CSEP Working Paper No. 46, Centre for Social and Economic Progress, New Delhi
vii. Lesk, C., Rowhani, P., & Ramankutty, N. (2016). Influence of Extreme Weather Disasters on Global Crop Production. *Nature*, 529, 84–87.

Box 2.3: Integrating Next Generation of Solar Energy Strategies (Agrivoltaics, Ecovoltaics, and Floatovoltaics) into Pakistan's Agricultural Landscape[75]

Pakistan is rapidly moving towards solarisation. As Pakistan expands solar energy, large ground-mounted solar farms can compete with agricultural land. The next generation solar energy developments including Agrivoltaics,

[74] SEADRIF and FAO Launch Southeast Asia's First Anticipatory Drought Insurance Pilot in Lao People's Democratic Republic, May 28, 2026. Financing is triggered when the Combined Drought Index crosses a defined threshold. Source: FAO and Southeast Asia Disaster Risk Insurance Facility (SEADRIF),

[75] First conceptualised by Goetzberger and Zastrow in 1981, agrivoltaics combines solar energy generation with agriculture on the same land. Some definitions also include activities with ecosystem benefits, such as pollinator habitats. Ecovoltaics integrates solar development with biodiversity, ecological sustainability, and local socioeconomic benefits. Floatovoltaics, or floating solar, refers to solar systems installed on water bodies such as lakes, reservoirs, ponds, and canals.

Smart Ways to Utilise Area Under Solar Panels **Table 2.3.1**

○ Shelter for livestock	○ Tool & equipment storage
○ Gardening & shade-tolerant cash crops	○ Compost decomposition
○ Firewood storage	○ Solar-drip irrigation
○ Ecological grazing	

ecovoltaics, and floatovoltaics offer ways to optimise land and water use, helping balance renewable energy generation with food security and environmental sustainability.[76] This box aims to discuss these emerging strategies and analyse how Pakistan can adopt them.

Agrivoltaics and ecovoltaics combine renewable energy generation with ecological and agricultural benefits by improving soil health, conserving water, and creating cooler microclimates that enhance solar panel efficiency, while supporting shade-tolerant crops (**Table 2.3.1**).[77] The shaded area also offers shelter and grazing for livestock, supports natural vegetation management through rotational grazing, and creates favourable conditions for compost decomposition near gardens and livestock areas.[78] Optimising solar array designs to direct rainfall, reduce evaporation, and support ecosystem restoration, may help increase agricultural productivity, particularly in water-scarce regions. They also provide farmers with decentralised electricity for irrigation and opportunities to earn income through net metering and crop sale. Ecovoltaic projects can be paired with aquifer recharge initiatives, where managed flooding or infiltration under solar arrays helps replenish groundwater supplies, directly addressing water scarcity in drought-prone areas (Fernandez-Bou, A. S. et al, 2024). Similarly, floating photovoltaic (FPV) systems (floatovoltaics) generate clean energy while significantly reducing water evaporation and algae growth.[79]

Implementation considerations:
Agrivoltaics, ecovoltaics and FPV offer significant land-use optimisation and co-benefits for renewable energy, but their deployment faces some challenges. In Pakistan, agrivoltaics is currently a niche solution best suited for shade-tolerant varieties rather than mainstream staple crops, while integrating livestock like sheep requires formalising livestock markets and training herders to navigate high-voltage infrastructure. Furthermore, utility-scale adoption is constrained by high initial capital costs and custom engineering needs, such as elevated panels and wind-stress modifications (**Table 2.3.2**).[80] Despite initial costs, Pakistan's strong solar potential—with 4 to 6 peak sun hours daily across many parts—ensures an impressive return on investment for agrivoltaics within six years (Abdullah et al., 2026). This financial viability is further reinforced by rapidly declining costs; for example, floating photovoltaics (FPV) costs fell from US$1.50 – US$2.50/Wp (2012–2017) to $0.65–$1.10/Wp (2025–2026), driven by mass production of HDPE pontoon floats and marine-grade aluminium racking.[81] Another concern in FPV is their engineering and environmental challenges, such as corrosion risks, material degradation, and potential impacts on aquatic ecosystems, which continue to be studied.

Important Considerations for Implementing Agrivoltaics, Ecovoltaics and Floatovoltaics **Table 2.3.2**

Agrivoltaics and Ecovoltaics	Floatovoltaics
• Crop selection	• Environmental & equipment impact
• Environmental & equipment impact	• Solar racking & structural design
• Solar racking & structural design	○ Mooring and anchoring
○ Panel height	○ Material durability
○ Spacing & angle of panels	• Location benefits
• Location	

[76] Pakistan is second-largest importer of solar panels, trailing only the Netherlands (which functions largely as a European re-export shipping hub). Source: The Economist
[77] Vegetation under panels creates a cooler microclimate primarily through evapotranspiration, where plants release water vapor that absorbs ambient heat. Cooler panels operate more efficiently — output drops 0.3-0.5 percent for every degree above 25°C. (Hinton, n.d.)
[78] Compost decomposition is the natural, controlled breakdown of organic waste (food scraps, yard trimmings, etc.) by bacteria and fungi, which can be used as a natural fertiliser.
[79] The FPV generate clean electricity while reducing water evaporation by 70 percent and algae growth by 50 percent (Neumann, 2026).
[80] A 1-acre agrivoltaics system with a 230 kW capacity requires a higher initial investment than traditional solar—costing around US$ 75,000 (Rs 20.9 million) according to DeltaEnergy—due to the specialised labour, high-efficiency 580W+ bifacial panels, industrial inverters, and elevated 8–10 foot galvanised steel mounting needed to accommodate farming (Abdullah et al., 2026)
[81] Wp stands for watt-peak. It is the maximum power a solar panel can produce under ideal, standardised test conditions.

Global practices and trends:
Many countries have adopted agrivoltaics and floatovoltaics in diverse agricultural and aquatic settings (Abdullah et al., 2026). Germany is a pioneer in the field of agrivoltaics, leading early research and large-scale testing and creating a blueprint for global adoption. Japan adopted it due to land scarcity, developing "solar sharing" system by installing solar panels over rice paddies.[82] In the US, the solar panels are installed over fruits, vegetables, and herbs, which powered around three hundred homes. France conducted the first scientific field experiment on agrivoltaics on wheat and lettuce.[83] China has successfully applied it on aquaculture farms.[84] Moreover, according to Neumann (2026), global FPV capacity has reached 5 gigawatt in 2025, with major projects including China's 320-megawatt Dezhou and India's 600 megawatt Omkareshwar projects.

Pakistan can also adopt these technologies by starting on a small scale by growing vegetables (leafy green, root vegetables, etc); berries (strawberries, raspberries, and blackberries); herbs (basil, mint, and cilantro); mushrooms (oyster, shiitake, etc.), flowers and some climate specific crops that can transform solar arrays into highly productive, revenue-generating agricultural hubs.

Top crops for Agrivoltaics/Ecovoltaics farming and their benefits
Crop selection under agrivoltaic and ecovoltaics systems should reflect the degree of shade, water availability, and local climate. Shade-tolerant vegetables and herbs may benefit from lower heat exposure and moisture loss, while fodder crops can support livestock and maintain soil cover. Mushrooms may be grown in suitably cool and shaded settings, whereas flowering plants can support pollination and biodiversity. High-value crops such as saffron, tea and coffee are location-specific and should be considered only where agro-climatic conditions are suitable.

Challenges and policy priorities
Successfully scaling agrivoltaics, ecovoltaics and FPV requires supportive land-use policies, developer interest, community engagement, localised execution, and creating awareness. This can be done by incentivising financing access, especially for small and disadvantaged farmers; streamlining project approvals, launching pilot projects, providing technical assistance to farmers, and promoting ecovoltaics as a standard for sustainable solar development through public-private partnerships. To overcome high upfront capital costs for smallholders, financing can be incentivised by leveraging existing frameworks like the SBP green financing schemes and subsidised agricultural loans.

**The contribution of Almas Karim is acknowledged in writing this box.*

References:
i. Manitius, N. (2024). Dual-use solar: What it is and How it can Help Ease Tensions Between Clean Energy Deployment and Land Use. Available at https://www.catf.us/2024/01/dual-use-solar-help-ease-tensions-between-clean-energy-deployment-land-use/
ii. Fernandez-Bou, A. S., Rodriguez-Flores, J. M., Cuppari, R. I., & Yang, V. (2024). Agrivoltaics and Ecovoltaics: How Solar Power can Deliver Water Savings, Farm Success, and A Healthier Environment. Available at https://energyindemand.com/2024/08/02/how-solar-power-can-deliver-water-savings-farm-success-and-a-healthier-environment/
iii. SolarPunk. (2025). Best Crops for Agrivoltaics: Growing food & Harvesting Solar Energy. SolarPunk Blog, February 5, 2025 available at https://www.solarpunkhq.com/en/blog/best-crops
iv. Mehta, K., Jain, R., & Zörner, W. (2025). Agrivoltaics Around the World: Potential, Technology, Crops, and Policies to Address the Energy–Agriculture Nexus for Sustainable and Climate-Resilient Land Use. *Energies*, 18(24), 6417.
v. Neumann, R. (2026). Floating Solar Farms 2026: Clean Energy Benefits & Global Projects. SurgePV, May 25, 2026 available at https://www.surgepv.com/blog/floating-solar-farms-clean-energy

[82] The panels were estimated to have a 20-year lifespan while generating 44,000 kWh of electricity annually.
[83] According to Dupraz et al. (2011), both wheat and lettuce grew successfully under the panels. The total output was 35 percent more than using land separately for farming or solar alone.
[84] In Shandong province, the integration of solar panels boosted shrimp and sea cucumber yields by 50 percent while generating enough electricity to power 113,000 homes.

vi. Hinton, M. (n.d.). What Can You Grow Under Solar Panels? Depth of Light Ltd. available at https://www.depthoflight.co.uk/blog/what-can-you-grow-under-solar-panels/
vii. Abdullah, F., Rana, H. A., & Fatima, T. (2026). Is Agrivoltaics the Solution to Pakistan's Troubles? Paradigm Shift, May 6, 2026 available at https://www.paradigmshift.com.pk/agrivoltaics/
viii. Dupraz, C., Marrou, H., Talbot, G., Dufour, L., Nogier, A., & Ferard, Y. (2011). Combining Solar Photovoltaic Panels and Food Crops for Optimising Land Use: Towards New Agrivoltaic Schemes. *Renewable Energy*, 36(10), 2725–2732.

Box 2.4: Zarkhez-e: Developing an Integrated Agriculture Ecosystem

The Context: The agriculture sector in Pakistan makes a significant contribution to the economy. It employs nearly one-third (33 percent) of the rural population, contributes over 23.4 percent to GDP and has strong backward and forward linkages with the manufacturing sector (MoF, 2026). Yet, despite its economic importance, the sector remains underdeveloped, with growth constrained by recurring shocks and persistent structural weaknesses.

The distribution of agricultural land, particularly owing to inheritance, has made farmlands smaller, with the average farm size declining from 6.4 acres in 2010 to 5.1 acres in 2024, while the number of farms increased from 8.26 million to 11.70 million during the same period (PBS, 2026). Owners of the small farms are caught in the vicious cycle of low productivity, low income and less capacity to invest in modern production techniques, making them vulnerable to economic shocks as well as natural calamities. These challenges are compounded by a lack of technical know-how, limited access to better quality agricultural inputs, post-harvest inefficiencies and weak market linkages.

The Status: Low and uncertain farm incomes, weak collateral position, and limited capacity to absorb shocks also restrict farmers' access to formal finance. Agriculture accounts for less than 10 percent of total private sector credit with less than one third of the farm owners having access to formal finance. Smallholders account for 93 percent of the existing borrowers of financial institutions, yet their average share in annual disbursements is only about 40 percent and their share in outstanding financing stands at 60 percent (PBS, 2026).

Moreover, despite the extensive branch network of commercial banks, nearly 68 percent of small borrowers are served by microfinance banks, microfinance institutions, and specialised banks, highlighting the need for stronger mainstream banking engagement in agricultural finance. Farmers are typically reluctant to go to formal financial institutions as they find limited access points, i.e. branches serving agriculture finance, cumbersome documentation, high collateral demand and stringent repayment schedules. On the other hand, financial institutions, particularly commercial banks, have less appetite for agriculture financing due to weak collateral, low recovery rates, vulnerability to economic/climate shocks and inadequate legal enforcement.

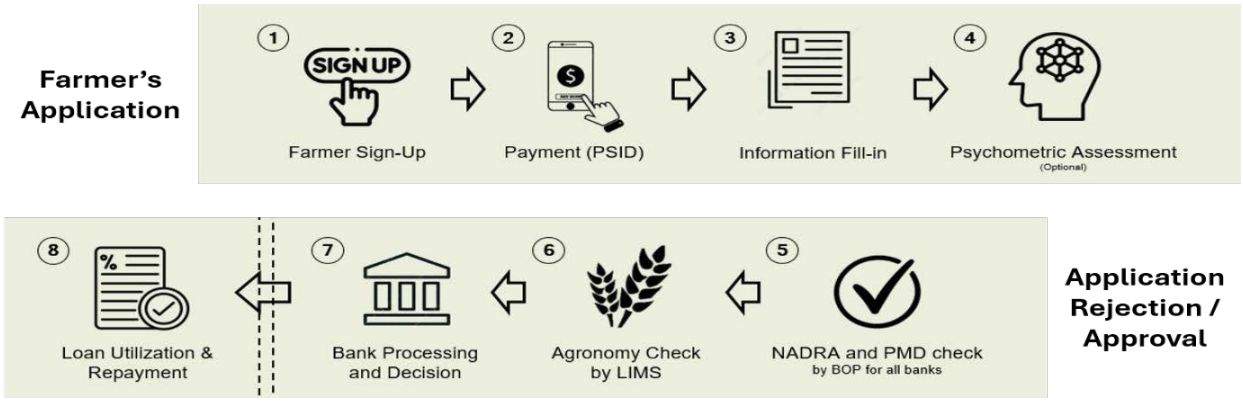
The Solution: Recognising these challenges, the Government of Pakistan (GoP) and SBP, in collaboration with the Pakistan Banks Association, launched Zarkhez-e in October 2025 as a comprehensive digital platform for agricultural financing that intends to address many of the challenges mentioned above. The Zarkhez-e is an end-to-end digital solution for collateral-free financing of small farmers.

In its first phase, the platform offers collateral-free financing of up to Rs 1 million to small farmers for production purposes only.[85] The GoP provides a risk coverage scheme to banks of 10 percent on first-loss basis, as well as an incentive of Rs 10,000 per incremental borrower during the year.[86] The 10 percent first-loss coverage is explicitly stated in the scheme and Zarkhez-e term sheet. To de-risk bank exposure, ensure access to finance for genuine farmers, and facilitate the purchase of inputs and repayments, the portal has a strong but efficient technology-based verification process and is limited to in-kind purchases. Farmers are also provided with agri-tech advisory services. Specifically, the platform streamlines the lending journey through digital applications, integrated identity verification through NADRA and PMD, agronomy verification through Land Information and Management System (LIMS),

[85] Eligible borrowers include landowners and tenants with landholding of up to 12.5 acres in Punjab and Khyber Pakhtunkhwa, 16 acres in Sindh, and 32 acres in Balochistan. The applicants must be resident Pakistani farmers, aged 21–60 years, possess a valid CNIC as per NADRA records, and have a mobile SIM registered in the name of the borrowing farmer.
[86] Further details are available at the SBP website for the Risk Coverage Scheme: https://www.sbp.org.pk/acd/2025/C2.htm and the Zarkhez-e Circular: https://www.sbp.org.pk/acd/2025/CL1.htm.

Financing Process and Digital Lending Journey under Zarkhez-e

Figure 2.4.1



Source: SBP

standardised scoring models, defined turnaround times, and a multi-bank routing mechanism (**Figure 2.4.1**). The official documentation confirms NADRA/PMD checks, LIMS assessment, online processing, and structured digital utilisation of financing. It further ensures productive utilisation of financing by channelling loans through an approved agri-input vendor network, thereby creating a closed-loop mechanism that minimises misuse and strengthens impact.

Zarkhez-e is available to all eligible farmers across Pakistan, including borrowers in Gilgit-Baltistan (GB) and Azad Jammu & Kashmir (AJK). As of September 2026, it has reached over 85 percent of districts, with around 60,000 farmers registered, more than 36,500 applications submitted, and a roughly 60:40 tenant-to-owner mix, while over 17,000 loans amounting to Rs7.5 billion have been approved.

In the second stage, which is currently in the development phase, Zarkhez-e will be developed into a broader ecosystem, expanding financing options to include the livestock sector and collateralised financing, integrating input and produce marketplaces to facilitate online purchases of inputs and sale of output, and deepening partnerships with technology providers and other market players and organisations. The next phase will place greater emphasis on capacity building of farmers and field-level stakeholders to make it a sustainable platform. The aim is to evolve Zarkhez-e from a digital lending platform into a comprehensive enabler of agricultural finance, markets, advisory services, knowledge, and rural inclusion.

**The box is contributed by Agriculture Credit and Financial Inclusion Department (ACFID) of SBP.*

References:

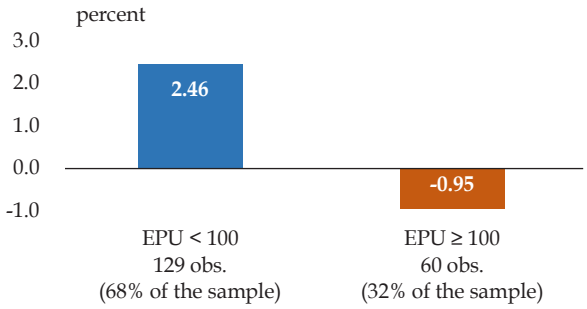
i. Ministry of Finance. (2026). Pakistan Economic Survey 2025–26: Agriculture. Government of Pakistan.
ii. Pakistan Bureau of Statistics. (2026). Agriculture Census 2024. Government of Pakistan.

Box 2.5: Economic Policy Uncertainty and Manufacturing Activity in Pakistan

Economic policy uncertainty has remained elevated in the last decade owing to successive domestic policy shocks, including abrupt changes in energy tariffs and import compression measures. These have coincided with the global commodity price spike of 2021–22 and, more recently, with heightened geopolitical risk stemming from the Middle East conflict (Tunio 2022). Together, these have suppressed business sentiments, delayed capital expenditure, and weighed on industrial and economic activity **(Figure 2.5.1**). This box investigates the impact of economic policy uncertainty on manufacturing output in Pakistan.

Economic theory and empirical literature identify several channels through which uncertainty affects manufacturing output (summarised in **Table 2.5.1)**. Based on the variables discussed in the cited literature, we test long-run relationship between economic policy uncertainty (EPU) and LSM using Johansen cointegration test. For this purpose, we have used monthly data from July 2015 to June 2026. Both the trace statistics and the maximum

Average LSM Growth by EPU Regime **Figure 2.5.1**



Note: The EPU threshold of 100 is not statistically derived but is treated as an economically meaningful benchmark, which is consistent with the international EPU literature, where values above 100 typically correspond to periods of policy stress.
Sources: Haver; PBS

Uncertainty and Manufacturing Activity **Table 2.5.1**

Transmission Channel	Evidence/ Remarks
Investment postponement	Under uncertainty, firms opt to wait before committing to irreversible capital expenditure, depressing capacity additions.
Working capital compression	Banks tighten credit standards and firms slow down their production activities when the outlook is uncertain.
Input-cost pressures and exchange rate pass-through	Manufacturing sector is typically import-intensive in energy and raw materials. In this context, exchange rate depreciation translates into higher input costs and discourages output expansion.
Oil price shocks	Oil constitutes a primary input for major manufacturing sectors. The surge in oil prices following the outbreak of Middle East conflict has inflated the import bill and increased manufacturing cost.
Expectations channel	Inflation expectations remain unanchored in the wake of high uncertainty, resulting in deferred hiring and production plans.

Sources: Baker, Bloom, and Davis, 2016; Bloom, 2009

eigenvalue test confirmed the presence of one cointegrating vector, leading to the estimation of a Vector Error Correction Model (VECM). **Table 2.5.2** presents the long run results, which indicate that a one percent increase in economic policy uncertainty reduces LSM output by approximately 0.1 percent, with the effect materialising after one month of the shock.[87]

This is in line with the economic rationale that firms require some time to adjust production processes. Moreover, accumulated inventories may also delay the impact as firms keep producing until they run out of raw material inventories or supply. Further, VECM results assert that uncertainty does dampen production in the short-run as only about 25 percent of the disequilibrium is corrected within the first period.[88]

Long-run Results **Table 2.5.2**

Long-run equation (Dependent variable Log(lsm)			
Variable	**Coefficient**	**T-statistic**	**Significance**
Log(epu(-1))	-0.1	-2.9	Significant
Log (er(-1))	-0.06	-5.3	Significant
Pr(-1)	0.005	1.1	Insignificant
Constant	-4.2		
VECM results (Dependent Variable D(LLSM)			
ECM	-0.25	-2.9	Significant
D(llsm(-1))	-0.1	-1.1	Insignificant
D(llsm(-2))	-0.22	-2.2	Significant
D(lepu(-1))	-0.04	-2.1	Significant
D(lepu(-2))	-0.05	-2.1	Significant
D(ler(-1))	0.01	-4.9	Significant
D(ler(-2)	-0.04	-2.2	Significant
D(pr(-1))	0.02	2.4	Significant
D(pr (-2)	-0.01	-0.1	Insignificant

Source: SBP staff estimates

The findings point to two specific policy priorities. *First*, and most directly, policies that reduce economic policy uncertainty, including transparent, rules-based frameworks for fiscal and regulatory decisions, and clear communication during episodes of elevated uncertainty, are expected to have a positive effect on LSM output. *Second*, the significant role of the exchange rate in both the long-run and short-run equations highlights the importance of maintaining orderly foreign exchange market conditions and avoiding excessive fluctuation, given its implications for input costs and export competitiveness.

Beyond these model-specific implications, structural measures are needed to improve manufacturing resilience. These include reducing reliance on imported energy and intermediate inputs through energy diversification, domestic supply-chain development, and efficiency-enhancing investment, which would lower production costs and reduce exposure to adverse terms-of-trade shocks. This, together with the policy priorities discussed above, can improve the predictability of the business environment and support firm-level planning and investment.

[87] 11 seasonal dummies were added to capture seasonality, AIC is used to choose lags in VAR, LM test confirms there is no autocorrelation.
[88] A 25 percent error correction term shows that convergence of LSM towards equilibrium is moderate.

* *The contribution of Ravi Kumar and Abdul Basit is acknowledged in writing this box.*

References

iii. Bloom, N. (2009). The Impact of Uncertainty Shocks. *Econometrica*, 77(3), 623–685.
iv. Tunio, M.W. (2022). Economic Policy Uncertainty and Industrial Activity: An Evidence from Pakistan. MPRA Paper No. 113544
v. Dbouk, W., Moussawi-Haidar, L., & Jaber, M. Y. (2020). The Effect of Economic Uncertainty on Inventory and Working Capital for Manufacturing Firms. International Journal of Production Economics, 230, 107888.
vi. Mitra, G., Gupta, V., & Gupta, G. (2025). Economic Policy Uncertainty and Firm Performance: An Empirical Investigation of Indian Firms. Journal of Indian Business Research, 17(3), 193–220.
vii. Mumtaz, H., & Ruch, F. U. (2025). Policy Uncertainty and Aggregate Fluctuations: Evidence from Emerging and Developed Economies. The World Bank Economic Review, 40(3), pp 543-564
viii. Nusair, S. A. (2025). Economic Policy Uncertainty and Industrial Output in the G7 Countries: An asymmetric Analysis. Economic Change and Restructuring, 58(5), 1–40.
ix. Zhu, S., & Yu, G. (2022). The Impact of Economic Policy Uncertainty on Industrial Output: The Regulatory Role of Technological Progress. *Sustainability*, 14(16), 10