



2

Economic Growth

Real GDP growth decelerated in H1-FY25, with contraction in industry and subdued growth in agriculture. The decline in industry is majorly contributed by construction, followed by mining & quarrying and large scale manufacturing. The slower agriculture growth is explained by decline in the output of important Kharif crops due to reduced area under cultivation and lower crop yields. Notwithstanding the slower growth in commodity producing sectors, the services sector grew moderately supported by general government, information & communication, and other private services. Meanwhile, labor market indicators showed an improvement in industrial employment and business sentiments about new hiring in line with improved performance of some of the large industries.



2 Economic Growth

2.1 GDP Growth

Economic growth decelerated in the first half of FY25. The deceleration was led by contraction in industry, while growth in agriculture also slowed considerably compared to last year. The growth in services sector, on the other hand, edged up (**Table 2.1**). Reduction in area under important crops, lower crop yields, lagged impact of tight monetary policy stance, elevated energy costs, and continued fiscal consolidation measures – scaling down of subsidies, restrained development spending and new revenue mobilization measures – weighed on the growth outcomes.

In agriculture, the area under cultivation of important *Kharif* crops decreased that can be attributed to lower output prices in the preceding year, besides uncertainty regarding the support prices in H1-FY25. The initial information about wheat crop, the important *Rabi* crop, also points to lower harvest. Nonetheless, an uptick in value addition by livestock and other crops more than offset the decline in production of important crops, supporting the overall agriculture sector to post a moderate growth.

Within industry, the manufacturing sector grew modestly on the back of small scale manufacturing (SSM) and slaughtering, while large scale manufacturing (LSM) showed a marginal decline – dragged down by a sharp contraction in the production of few industries with relatively lower weight in the LSM. Encouragingly, some of the large industries including textile, automobiles and pharmaceuticals recovered amid easing financial conditions and slight increase in domestic demand (**Figure 2.1**), improved availability of imported raw materials and increased exports. The electricity, water supply and gas also posted an increase in value addition after a considerable decline last year.

The lower contraction in industry somewhat supported an uptick in services sector growth. The growth in services sector was also broad-based with all sub-sectors posting an increase, except for wholesale & retail trade. Substantial increase in banks' lending towards the end of Q2-FY25, higher government spending on general government services and rising ICT-related activity are other major factors supporting services sector growth.

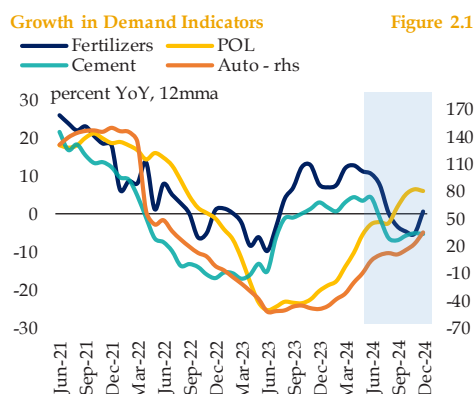
GDP Growth
percent

Table 2.1

	FY24						FY25			Contribution	
	Q1	Q2	H1*	Q3	Q4	H2*	Q1	Q2	H1*	H1-FY24	H1-FY25
GDP	2.5	1.8	2.1	2.7	3.3	3.0	1.3	1.7	1.5	2.1	1.5
Agriculture	8.2	5.8	7.0	3.8	7.1	5.4	0.7	1.1	0.9	1.6	0.2
Important crops	29.9	14.6	20.6	1.7	27.0	12.5	-11.2	-7.7	-9.1	1.0	-0.5
Industry	-4.8	-1.8	-3.3	3.3	-3.1	0.2	-0.7	-0.2	-0.4	-0.6	-0.1
Large scale	-0.6	-0.8	-0.7	1.6	4.2	2.8	-0.8	-2.9	-1.9	-0.1	-0.2
Services	2.5	1.3	1.9	2.0	3.8	2.9	2.2	2.6	2.4	1.1	1.4

* H1 GVA = Q1 GVA + Q2 GVA; H2 GVA = Q3 GVA + Q4 GVA

Source: PBS



Sources: PBS, APCMA, OCAC and PAMA

The available labor market data portrayed a somewhat positive picture in line with the growth in major LSM sub-sectors. This is also reflected by improved business sentiments about job creation for the current and the coming six months.

The deceleration in real GDP in H1-FY25, despite improvement in the overall macroeconomic environment – falling inflation and interest rates, stability in external account and improved business confidence – reflects the structural constraints on industrialization and

productivity. This necessitates reforms, especially aimed at reviving investment, enhancing productivity, stemming brain drain, and addressing climate change challenges through adoption of climate-resistant crop varieties and efficient irrigation techniques.

2.2 Agriculture

The deceleration in agriculture growth in H1-FY25 was mainly due to a significant decline in the production of important crops, as most of other sub-sectors contributed positively (Table 2.2). In particular, the growth in livestock accelerated, which can be attributed to base effect and lower consumption of dry and green fodder.¹ Furthermore, the output of other crops recovered after registering contraction in the last two years. Fishing witnessed a modest growth, while forestry maintained the declining trend.

The important crops registered a substantial decline due to fall in the production of cotton, maize, rice, and

Agriculture Growth

percent, contribution in percentage points

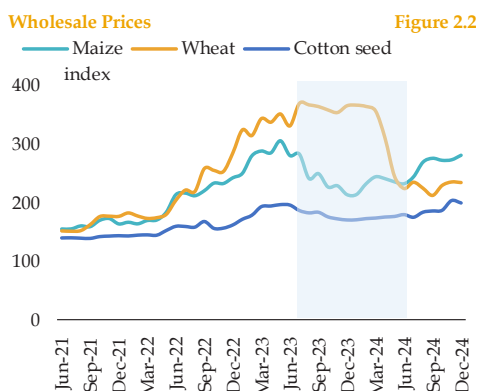
Table 2.2

	FY24						FY25			Contribution	
	Q1	Q2	H1*	Q3	Q4	H2*	Q1	Q2	H1*	H1-FY24	H1-FY25
Agriculture	8.2	5.8	7.0	3.8	7.1	5.4	0.7	1.1	0.9	7.0	0.9
Crops	16.1	10.1	12.7	2.3	13.5	7.5	-6.6	-5.4	-5.9	4.6	-2.3
Important crops	29.9	14.6	20.6	1.7	27.0	12.5	-11.2	-7.6	-9.1	4.4	-2.2
Other crops	-2.1	-1.1	-1.6	-0.6	-1.7	-1.1	0.4	0.7	0.6	-0.2	0.1
Cotton ginning	34.1	61.4	47.2	61.0	35.3	47.3	-1.4	-19.1	-10.7	0.4	-0.1
Livestock	4.7	3.0	3.9	4.9	4.8	4.8	4.7	6.5	5.5	2.3	3.2
Forestry	5.0	-0.7	2.1	-3.5	-4.0	-3.8	-2.1	-0.6	-1.4	0.0	0.0
Fishing	0.7	0.8	0.8	0.8	0.9	0.9	0.8	0.8	0.8	0.0	0.0

* H1 GVA = Q1 GVA + Q2 GVA; H2 GVA = Q3 GVA + Q4 GVA

Source: PBS

¹ The intermediate consumption of dry and green fodder is linked to the production of major crops, while livestock heads grow at a fixed rate (based on intergeneration census of 2006 and 1996). Source: PBS



Source: PBS

sugarcane. The decline in production of important crops is attributed to both reduced areas under cultivation and lower yields, except for sugarcane where the downturn was primarily due to lower yields. Cotton ginning also fell sharply in line with the lower cotton production.

The reduction in area under cultivation can be linked to lower crop prices in FY24, higher input costs, and uncertainty regarding announcement of Minimum Support Price (MSP) (**Figure 2.2**). Initial estimates also indicate a decline in area under cultivation of wheat. The decline in

yields of important *Kharif* crops can be explained by lower use of inputs (fertilizer offtake, availability of certified seeds, and pesticides) and unfavorable climate conditions.

An important development during the period was sharp rise in import of agriculture machinery, such as components for tractors, dairy machinery, poultry machinery parts, and manure spreaders.² However, domestic tractor sales declined in H1-FY25.

Inputs

Seed

Availability of certified seeds in Pakistan has consistently fallen short of its requirements. *Kharif* FY25 was no different as seed shortages were widespread across major crops, with paddy/rice being the only exception (**Table 2.3**). Compared to the previous year, the availability of certified seed vis-a-vis area under cultivation fell for all major crops, except for wheat, where it remained almost stagnant. This underscores the ongoing challenges in ensuring sufficient supply of certified seeds.

Climatic Conditions

The weather conditions were also erratic during H1-FY25, with uneven rainfall and high temperatures. These climatic conditions led to late sowing of *Kharif* crops, adversely impacting the yields, particularly of cotton.³

Certified Seeds **Table 2.3**

	FY24		FY25	
	Availability (MMT)	% of Req.	Availability (MMT)	% of Req.
Cotton	25.4	51	16.7	27
Paddy	57.1	125	68.3	114
Maize	32.2	97	29.4	79
Wheat*	529.1	48	569.8	48

*FY25 figures are provisional

Sources: FCA Working Papers

² Source: PBS

³ Sources: MoF and USDA

Water

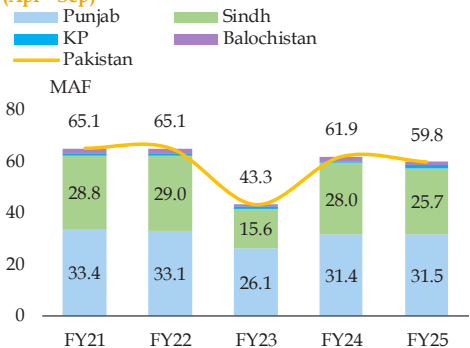
Irrigation water withdrawals remained lower in FY25 compared to the previous year (**Figure 2.3**). The Indus River System Authority (IRSA) released water as per the decided shares, however, lower utilization by provinces during August – September 2024 was mainly due to heavy rainfall in August (**Figure 2.4a**).⁴

However, the rainfall remained erratic during *Kharif* FY25. The season commenced with a record wet April, the wettest since 1961, followed by below normal rainfall from May to July 2024. August saw heavy rains, which was followed by another period of below normal rainfall in September 2024.⁵

Temperature

Average temperatures were above normal in most of the months during H1-FY25 (**Figure 2.4b**). This is broadly consistent

Irrigation Water Releases during Kharif (Apr - Sep) Figure 2.3

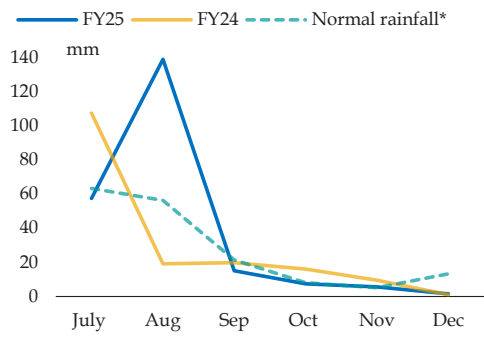


Source: IRSA

with the increase in global temperatures in 2024 which surpassed the threshold of 1.5°C mentioned in the Paris Agreement on climate change.⁶

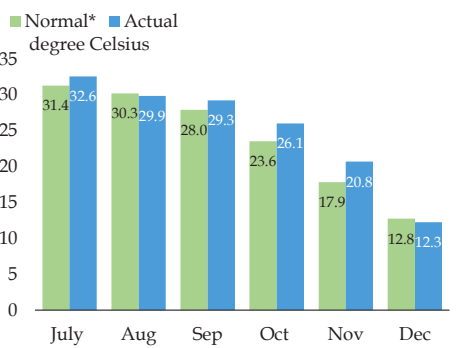
The climatic conditions profoundly impact agricultural productivity. Although, each crop responds differently to the rainfall and temperature variabilities, these climatic uncertainties pose challenges for farmers, specifically in terms of crop

Rainfall Figure 2.4a



*long-term average of respective months is for 1961-2010
Source: PMD

Temperature - FY25 Figure 2.4b



*normal period of respective months is for 1961-1990

⁴ Source: Press Release, October 2024. IRSA.
⁵ Source: PMD
⁶ Source: Copernicus Programme, Europe

sowing and harvesting decisions. In addition, growing water scarcity also poses a threat to productivity and thus food security.

One of the ways to address challenges posed by climate change and water scarcity is vertical farming as it minimizes the water usage, is resilient to climate variabilities, and can be undertaken at a small scale and in urban settings (**Box 2.1**).

Fertilizer

During *Kharif* FY25, the overall fertilizer offtake was significantly lower compared to the same period last year (**Figure 2.5**). The decline in fertilizer offtake can be linked to a host of factors including higher prices, late sowing of *Kharif* crops due to climate change,⁷ and lower farmers'

income due to fall in crop prices in the preceding year.

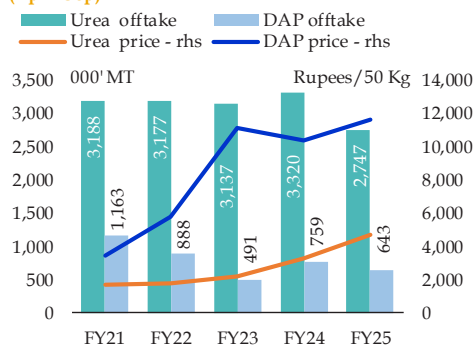
While urea prices maintained the rising trend during the season, DAP prices also rose after a decline in last year. Hike in gas prices effective from February 2024 contributed to the increase in urea prices. Furthermore, urea cartels have allegedly inflated prices over the past few years.⁸ On the international front, urea prices declined by 3.3 percent, while DAP prices increased by 4.3 percent in *Kharif* FY25 compared to the same period last year.⁹

Agriculture Credit

Disbursement of agriculture credit increased by 14.5 percent in H1-FY25 over the corresponding period of last year (**Table 2.4**). Majority of the disbursements consisted of production loans for the farm sector, followed by livestock/dairy in the non-farm sector. Loans for purchase of tractors, on the other hand, declined considerably, which could be linked to higher sales last year as well as an increase in GST.¹⁰

In its effort to promote agriculture credit, the SBP encouraged and facilitated commercial banks in formulating agriculture credit expansion plans, which replaced the past practice of setting indicative targets. These plans envisaged a

Fertilizer Offtake and Prices during *Kharif* (Apr - Sep) Figure 2.5



Sources: NFDC and PBS

⁷ Source: Monthly Economic Update & Outlook, September 2024, MoF.

⁸ CCP has issued show cause notices to Fertilizer Manufacturers of Pakistan Advisory Council (FMPAC) and six leading fertilizer companies for allegedly fixing urea prices. Source: Press Release, CCP, April, 2024 (<https://cc.gov.pk/home/viewpressreleases/457>).

⁹ Source: World Bank.

¹⁰ A 10 percent sales tax was levied in the budget FY25, which was further increased to 14 percent in October 2024. Source: S.R.O. 1643 (1) 2024, Revenue Division, Ministry of Finance and Revenue.

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Agriculture Credit Disbursement in H1
amount in billion Rupees

Table 2.4

	FY23	FY24	FY25
Farm sector	438.9	604.7	708.4
Production	420.8	543.6	623.8
Development	18.1	61.1	84.6
Tractor	2.3	27.8	9.1
Non-farm sector	403.50	501.16	558.3
Livestock/Dairy	228.2	270.5	322.8
Poultry	141.0	173.5	173.7
Others	34.4	57.1	61.7
Total	842.4	1,105.8	1,266.7

Source: SBP

disbursement of Rs 2,572 billion in FY25.¹¹ As of December 2024, around 49.2 percent of these planned disbursements have been achieved.

In order to increase efficiency by reducing the processing time for agricultural loans, the SBP allowed digital survey reports as a substitute to Khasra Girdawri – a revenue department document that provides land and crop details.¹² In digital survey reports, satellite imaging and geo-fencing technology is used to verify the agricultural activity. This initiative effectively opens the door for agri-tech partnerships representing a key step

towards the digital transformation and modernization of agriculture sector in Pakistan.

In addition, the Punjab government's Kissan Card initiative also contributed to the increase in agriculture credit.¹³ Under this scheme, approximately Rs 31.5 billion has been disbursed till December 2024. Similarly, the Livestock Card Scheme was also introduced in another initiative, however, there was no disbursement during H1-FY25.¹⁴

Outputs

Cotton

Cotton production plummeted due to reduced area under cultivation and lower yields in FY25 compared to the last year (**Table 2.5**). Lower area under cultivation can primarily be explained by decline in market prices of cotton (phutti) below the announced MSP of Rs 8,500/40Kg in FY24 due to lack of procurement; and, better returns on competing crops – sesame and rice. Furthermore, Punjab government's

Major Kharif (Apr-Sep) Crops

Table 2.5

production in million tons; area in million ha; yield in kg/ha.

	Production			Area			Yield			Change FY25		
	FY23	FY24	FY25	FY23	FY24	FY25	FY23	FY24	FY25	Prod.	Area	Yield
Cotton*	4.9	10.2	7.1	2.1	2.4	2.0	389.5	717.1	600.9	-30.7	-17.3	-16.2
Rice	7.3	9.9	9.7	3.0	3.6	3.6	2,460.3	2,710.6	2,677.5	-1.4	-0.2	-1.2
Sugarcane	88.0	87.6	85.6	1.3	1.2	1.2	66,711.0	74,254.5	71,730.2	-2.3	1.1	-3.4
Maize	11.0	9.7	8.2	1.7	1.6	1.5	6,389.0	5,932.2	5,560.84	-15.4	-9.7	-6.3

*production in million bales

Sources: PBS and FCA Working Paper

¹¹ Source: SBP

¹² Source: SBP circular (ACFID Circular Letter No. 02 of 2024), November 14, 2024
<https://www.sbp.org.pk/acd/2024/CL2.htm>

¹³ In Kissan Card, small farmers with land-holding of up to 12.5 acres are provided with interest-free input loans from sowing to harvest.

¹⁴ Source: Government of Punjab (<https://punjab.gov.pk/node/6350>).

Area Under Cultivation of Cotton

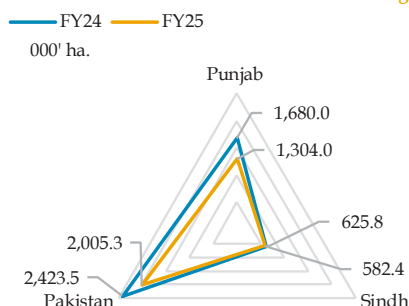


Figure 2.6

Source: FCA Working Paper

decision to not procure wheat in FY24 made farmers skeptical about MSP for cotton, which also impacted farmers' cultivation decisions. Accordingly, the decline in area was more pronounced in Punjab (Figure 2.6).

Moreover, the cotton yields were adversely affected by lower availability of certified seeds and climate change. Frequent heatwaves early in the season led to late harvests in some areas, while untimely rains affected the growth of plants and flowering.¹⁵ In South Punjab, the major cotton belt, severe pest infestations exacerbated the situation that further affected the yields.

Rice

Rice production declined, primarily due to lower yields compared to last year (Table

2.5). The substantial decline in area under cultivation in Sindh was largely offset by an increase in Punjab.¹⁶ The increased cultivation in Punjab could be due to possible substitution of cotton with rice. Moreover, Pakistan retained its export markets, even after India lifted the export ban, mainly aided by competitive prices (Chapter 5).

Sugarcane

Contrary to other important *Kharif* crops, the area under cultivation of sugarcane registered a slight increase (Table 2.5). This increase was mainly due to shift from maize and cotton.¹⁷ However, the gains from the increase in area were more than offset by lower yields compared to last year as yields in FY24 had benefitted from post diluvial soil enrichment. Nevertheless, the yields in FY25 still surpassed the average during past five years (FY20-FY24).¹⁸

Maize

Production of maize declined for the second consecutive year in FY25 mainly due to reduced area under cultivation (Table 2.5). This may be attributed to lower prices in the preceding year. Further, province-wise data indicates that the cultivation declined in Punjab, but increased in Sindh, which could be due to its substitution with cotton.

¹⁵ Source: USDA, Cotton and Products Update, November 2024.

¹⁶Area under cultivation of rice in Punjab increased by 4.2 percent, while Sindh declined by 13.7 percent. Source: FCA Working Paper.

¹⁷ Sugarcane crop is more profitable compared to maize and cotton in Pakistan. Source: USDA, Sugar Semi-annual, September 2024.

¹⁸The average (FY20-24) yield is 68,936 kg/ha. Source: PBS

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Wheat

area in million ha; production in million MT; change in percent

Table 2.6

	Area		Production		Change FY25	
	FY24	FY25 ^T	FY24	FY25 ^T	Area	Prod.
Punjab	7.1	6.7	24.2	21.2	-5.6	-12.7
Sindh	1.4	1.3	4.4	4.0	-9.4	-8.3
KPK	0.8	0.8	1.5	1.6	2.0	7.1
Balochistan	0.5	0.6	1.5	1.2	4.6	-21.9
Pakistan	9.7	9.3	31.6	27.9	-5.0	-11.6

T: Targeted

Sources: FCA Working Paper (Rabi Season) 2024-25 & PBS

Wheat

The government has revised down the wheat production target at 27.9 MMT for Rabi FY25, lower than last year's production of 31.6 MMT (Table 2.6).¹⁹ First estimates of area under cultivation of wheat shows a decline of 6.8 percent in FY25 compared to last year.²⁰

At the start of sowing season, input conditions were somewhat satisfactory

with reasonable soil moisture due to above normal monsoon rains this year.

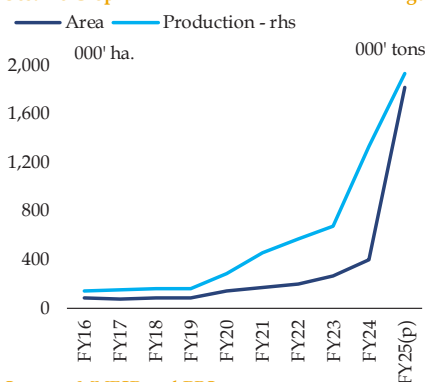
Furthermore, the overall nutrient offtake increased by 19.2 percent (DAP: 19.5 percent and Urea: 18.0 percent) from Oct-Dec 2024 compared to the same period last year, which may be attributed to interest-free loans for inputs via Kissan Card in Punjab. However, rainfall was below normal in Oct-Dec 2024 and soil temperature was above normal, particularly in rain-fed areas of Punjab.²¹

Other Crops

Other crops registered a modest growth in H1-FY25, after showing decline in the last two years. Especially, the cultivation of sesame seed has gained popularity in the last few years due to export opportunities, especially to China. Accordingly, FY25 recorded a substantial rise in area under sesame (Figure 2.7).²²

Sesame Crop

Figure 2.7



Sources: MNFSR and PBS

Production of *Kharif* pulses showed a mixed trend as the production of mung declined, while mash increased (Table 2.7). The production plan for other *Rabi* crops for FY25 shows increase in production targets, except for potato (Table 2.8).

Kharif Pulses

Table 2.7

area in thousand ha.; production in thousand tons

	Area		Production		Change	
	FY24	FY25	FY24	FY25	Area	Prod.
Mung	201.0	184.9	153.3	115.6	-8.0	-24.6
Mash	7.0	7.5	5.6	5.8	6.6	3.3

Source: FCA Working Paper

¹⁹ Initially, wheat production target was set at 33.6MMT for FY25 crop. Source: FCA, Working Paper.

²⁰ Source: PBS

²¹ Source: PMD

²² Considerable cotton area was shifted to sesame and rice in Punjab. Source: USDA, Cotton and Products Update, August 2024.

Other Crops – Rabi Production Plan

Table 2.8

area in thousand ha.; production in thousand tons; change in percent

	Area		Production		Change	
	FY24	FY25 ^r	FY24	FY25 ^r	Area	Prod.
Gram	797.1	881.0	209.1	419.4	10.5	100.6
Lentil	6.2	14.0	4.7	8.9	126.5	89.0
Potato	329.5	268.1	8,296.9	6,829.4	-18.6	-17.7
Onion	142.7	157.0	2,304.6	2,554.8	10.0	10.9
Tomato	50.4	47.0	601.4	658.7	-6.7	9.5
Canola	45.0	85.0	63.9	120.0	88.9	87.7
Sunflower	63.0	82.8	98.3	150.0	31.4	52.6
Mustard	363.0	466.0	388.9	432.9	28.4	11.3

Source: FCA Working Paper

2.3 Industry

Industry recorded a lower contraction of 0.4 percent in H1-FY25 compared to 3.3 percent in the same period last year. The contraction was mainly led by a notable decline in value addition of construction and mining & quarrying sectors (Table 2.9). The substantial decline in construction activity can be linked to restrained development spending, elevated prices of construction material, and prevailing uncertainty in real estate market. This is also reflected in lackluster performance of construction-allied industries, especially cement and steel. The decline in value

Industry Growth

growth percent; contribution in percentage points

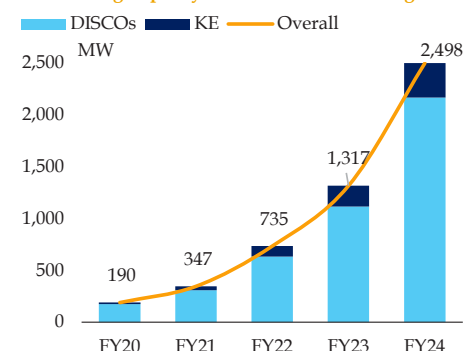
	Q1	FY24						FY25			Contribution	
		Q2	H1*	Q3	Q4	H2*		Q1	Q2	H1*	H1-FY24	H1-FY25
Industry	-4.8	-1.8	-3.3	3.3	-3.1	0.2		-0.7	-0.2	-0.4	-3.3	-0.4
Mining & quarrying	5.9	-3.5	1.0	-6.4	-11.8	-9.1		-8.1	-3.3	-5.7	0.1	-0.5
Manufacturing	1.9	1.7	1.8	3.4	5.5	4.4		2.2	0.5	1.3	1.1	0.9
Large scale	-0.6	-0.8	-0.7	1.6	4.2	2.8		-0.8	-2.9	-1.9	-0.3	-0.9
Small scale	9.0	8.9	9.0	9.0	9.3	9.2		9.7	9.2	9.5	1.0	1.2
Slaughtering	6.4	6.4	6.4	6.6	7.0	6.8		7.5	7.3	7.4	0.4	0.6
Electricity, gas and water supply	-38.2	-18.9	-31.0	24.6	-31.2	-11.2		1.4	7.7	4.1	-4.7	0.5
Construction	7.0	-3.2	1.5	-5.8	-1.1	-3.6		-11.7	-7.1	-9.3	0.2	-1.3

* H1 GVA = Q1 GVA + Q2 GVA; H2 GVA = Q3 GVA + Q4 GVA

Source: PBS²³

Net-metering Capacity

Figure 2.8



Source: NEPRA

addition of mining & quarrying was led by lower production of gas, crude oil, and coal.²³

The value addition by electricity, gas and water supply recovered in H1-FY25 against a large decline in the corresponding period of last year, which is also corroborated by high frequency data pertaining to electricity generation. Moreover, there is a substantial increase in solar power generation by domestic and industrial consumers, as indicated by trends in net-metering capacity (Figure 2.8). The manufacturing sector grew by 1.3

Table 2.9

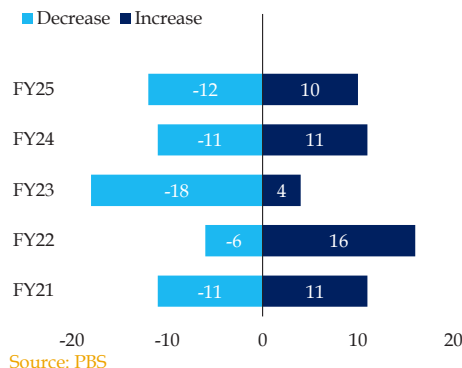
²³ The production of gas, crude oil, and coal declined by 6.2, 11.4 and 6.3 percent, respectively. Source: PBS

percent in H1-FY25, slightly lower than 1.8 percent in the corresponding period of last year. The moderate growth in manufacturing sector was mainly supported by SSM and slaughtering, while LSM output recorded a contraction.

Large-Scale Manufacturing (LSM)²⁴

LSM output declined by 1.9 percent in H1-FY25, compared to a decline of 1.0 percent in H1-FY24. Out of the 22 LSM groups, 12 showed decline in output (**Figure 2.9**). The groups showing decline cumulatively dragged the LSM growth by 5.0 percentage points, while the groups showing growth contributed only 3.1 percentage points.

Number of LSM Groups Showing Increase and Decrease in Production in H1 **Figure 2.9**



Among the sectors showing decline, the major drag came from furniture industry. Furniture alone pulled the LSM growth

Large Scale Manufacturing in H1

Table 2.10

LSM Sectors	Weight	Growth		Contribution	
		FY24	FY25	FY24	FY25
LSM	78.4	-1.0	-1.9	-1.0	-1.9
of which					
Food	10.7	4.9	-1.0	0.7	-0.2
Beverages	3.8	0.1	0.5	0.0	0.0
Tobacco	2.1	-36.7	19.2	-0.7	0.2
Textile	18.2	-11.0	2.1	-2.1	0.4
Wearing apparel	6.1	-0.8	9.5	-0.1	1.4
Leather products	1.2	3.4	0.6	0.0	0.0
Wood products	0.2	9.2	-2.1	0.0	0.0
Paper & board	1.6	-5.0	2.3	-0.1	0.1
Coke & petroleum	6.7	8.4	-0.3	0.5	0.0
Chemicals	6.5	4.2	-2.0	0.3	-0.2
Pharmaceuticals	5.2	31.9	1.8	1.4	0.1
Rubber	0.2	0.6	-1.2	0.0	0.0
Non-metallic mineral	5.0	1.8	-13.3	0.1	-0.9
Iron & steel	3.4	-1.4	-12.0	-0.1	-0.6
Fabricated metal	0.4	-2.2	-21.8	0.0	-0.1
Computer, electronics, optical	0.0	-21.1	0.8	0.0	0.0
Electrical equipment	2.0	-10.9	-19.0	-0.4	-0.6
Machinery and equipment	0.4	70.7	-27.9	0.2	-0.1
Automobiles	3.1	-52.9	50.2	-1.7	0.8
Other transport equipment	0.7	-14.5	30.6	-0.1	0.1
Furniture	0.5	31.1	-61.1	0.9	-2.3
Other manufacturing	0.3	-3.4	-10.7	0.0	0.0

Source: PBS

²⁴ This section is based on monthly disaggregated data released by the PBS.

Textiles and Wearing Apparel Production in H1

Table 2.11

	Unit	Weight	Production				Growth (percent)	
			FY22	FY23	FY24	FY25	FY24	FY25
Yarn	000' MT	8.9	1,728.8	1,483.4	1,213.7	1,320.1	-18.2	8.8
Cloth	M. Sq M	7.3	525.3	487.5	435.0	438.4	-10.8	0.8
Jute goods	000' MT	0.3	28.4	30.0	20.0	16.1	-33.4	-19.6
Terry towels & bath robes	000' MT	0.6	112.7	93.4	106.4	112.3	13.9	5.5
Woolen & carpet yarn	000' MT	0.1	4.2	8.3	11.7	10.6	40.6	-9.4
Woolen & worsted cloth	000' Sq M	0.1	721.0	860.0	726.0	486.0	-15.6	-33.1
Woolen blankets	000' Nos	0.9	46.0	20.7	23.7	18.9	14.4	-20.3
Wearing apparel	M Dozen	6.1	21.7	36.5	36.2	39.6	-0.8	9.5

Source: PBS

down by 2.3 percentage points, almost offsetting the positive contribution of three large industries – textile, wearing apparel and automobiles – showing recovery in output during H1-FY25 (Table 2.10).²⁵

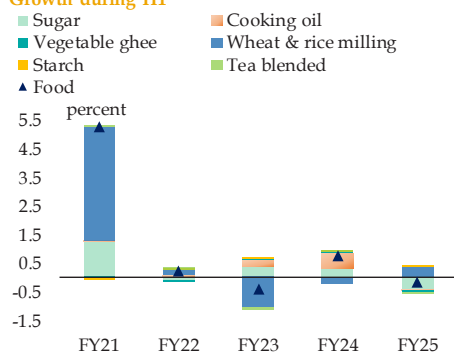
Textile and Wearing Apparel

Textile posted 2.1 percent increase in production during H1-FY25, against decline of 11.0 percent in H1-FY24 and 13.1 percent in H1-FY23 (Table 2.11). Better

input availability aided by imports, declining cost of borrowing and an encouraging growth in exports helped this recovery. Within the textiles, yarn and cloth, the two major segments, mainly led the growth in H1-FY25.

Production of wearing apparel rebounded strongly during H1-FY25, largely supported by substantial increase in export of readymade garments amid disruptions in Bangladesh.

Contribution of Food Production in LSM Growth during H1 Figure 2.10



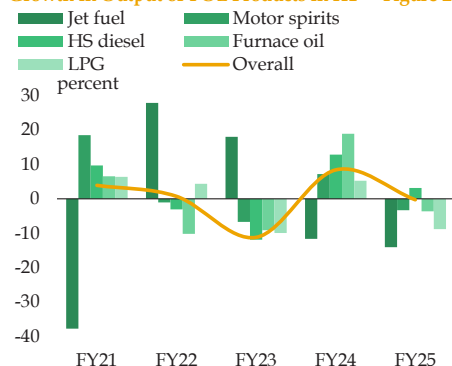
Source: PBS

Food

Output of food group saw a slight contraction in H1-FY25, with decline in production of sugar, cooking oil, vegetable oil, and tea. The decline in sugar is mainly explained by lower sugarcane crop this year and possibility of shift in use of sugarcane in other products. On the other hand, wheat and rice milling rebounded after recording decline in the comparable periods of the past two years (Figure 2.10). Higher rice exports and decrease in prices of wheat and rice during H1-FY25, helped

²⁵ The production of furniture, carrying a weight of 0.5 percent in LSM has witnessed sharp variations, having large impact on overall LSM growth during the last few years. For example, in H1-FY25, furniture output declined by 61.1 percent, excluding which the overall LSM turns positive 0.4 percent. Similarly, in H1-FY24, furniture output had increased by 31 percent, and when excluded, the overall LSM turns further negative from -1.0 percent to -1.9 percent.

Growth in Output of POL Products in H1 Figure 2.11



Source: PBS

the growth momentum in wheat and rice milling. Similarly, the production of beverages increased by 0.5 percent in H1-FY25, compared to a marginal growth in the preceding year.

POL Products

The production of POL products contracted in H1-FY25, despite growth in its sales volumes (Figure 2.11). This was mainly because of increased import (quantum) of POL products, coupled with a temporary shutdown of one of the largest oil refineries for maintenance during Oct-Nov 2024.²⁶

Pharmaceuticals

Production of pharmaceuticals increased by 1.8 percent during H1-FY25, compared to 31.9 percent in the same period last year (Figure 2.12). Deregulation of drug prices and increase in exports, especially to

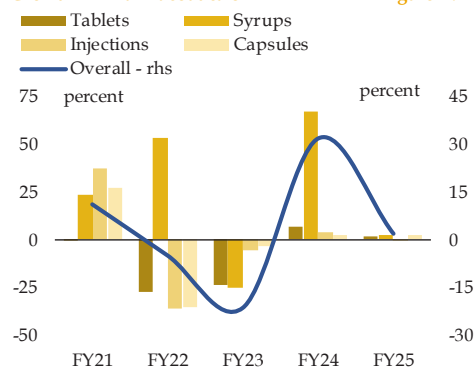
African countries, remained the main driving factors.

Automobiles

Automobile production rebounded strongly in H1-FY25, after a sharp contraction in the comparable period of last year. The industry has benefited from surge in domestic sales amid low interest rates and discounts offered by automobile companies; stability in exchange rate; and improved availability of imported inputs.

The growth in automobile was also broad-based with all categories, except tractors, showing increase in production. Higher sales and production, especially of small-engine passenger cars, also reflect the impact of rising trend in ride-hailing services, as well as consumer preference due to price differential (Figure 2.13). On the other hand, the decline in production of tractors can be linked to an increase in

Growth in Pharmaceuticals in H1 Figure 2.12

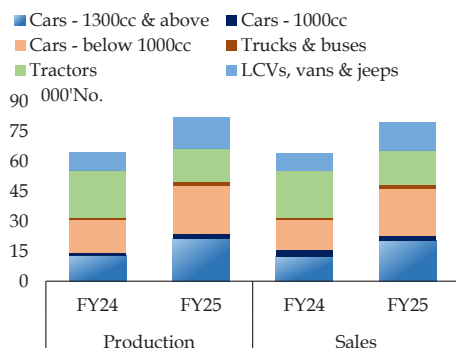


Source: PBS

²⁶ This largest refinery – PARCO – has a refining capacity of 120,000 bpd, and a cross country pipeline network of over 2000 km.

Sale and Production of Automobiles in H1

Figure 2.13



Source: PAMA

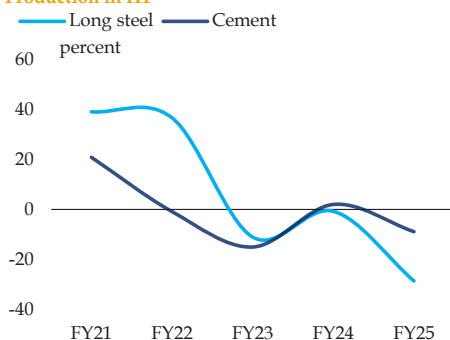
sales tax and slowdown in agriculture production.

Construction-allied Industries

The production of construction-allied industries maintained the downward trend in line with weak construction activity. Cement production declined in H1-FY25, after a slight recovery witnessed last year. Similarly, production of steel plummeted, with long steel recording decline in production for the third consecutive year

Growth in Steel and Cement Production in H1

Figure 2.14



Source: PBS

(Figure 2.14). While the production of flat steel also declined; the decline was somewhat lower compared to last year. This reflects increase in demand from automobiles, machinery, and tool manufacturing.

The decline in long steel can mainly be attributed to sluggish construction activity, both in the public and private sectors. The contraction is also corroborated by a corresponding decline in the import of steel related raw materials.

Other Industries

The production of other large industries, especially chemicals, and electronics, declined in H1-FY25. The decline in chemicals was mainly due to the other chemicals (caustic soda, soaps, detergents, paints, etc.), while growth in production of fertilizers increased albeit at a slower pace. The decline in production of other chemicals reflects sluggish domestic demand from downstream industries such as, plastic and packaging, real estate, and households. Similarly, manufacturing of electronics, except for fans and air conditioners, recorded a substantial decline.

2.4 Services

The services sector grew at a slightly higher pace of 2.4 percent in H1-FY25, compared to 1.9 percent last year. The growth was also broad-based with all, but one sub-sector – wholesale & retail trade, showing increase in value addition (Table 2.12). Nonetheless, the major contribution came from general government,

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Services Growth

growth in percent; contribution in percentage points

Table 2.12

	FY24						FY25			Contribution	
	Q1	Q2	H1*	Q3	Q4	H2*	Q1	Q2	H1*	H1-FY24	H1-FY25
Services	2.5	1.3	1.9	2.0	3.8	2.9	2.2	2.6	2.4	1.9	2.4
Wholesale & retail trade	3.2	2.4	2.8	2.8	4.9	3.8	0.4	-1.1	-0.4	0.9	-0.1
Transport & storage	4.4	1.6	3.0	1.8	0.7	1.2	0.2	1.1	0.7	0.5	0.1
Accommodation & food services	4.0	4.0	4.0	4.1	4.3	4.2	4.6	4.5	4.5	0.1	0.1
Information & communication	6.6	-1.2	2.5	-2.2	11.2	4.4	5.1	8.4	6.8	0.1	0.3
Finance & insurance activities	-12.9	-16.1	-14.5	-5.3	-2.7	-4.0	-0.3	10.2	4.8	-0.4	0.1
Real estate activities (od)	3.6	3.6	3.6	3.8	3.9	3.9	4.2	4.1	4.2	0.4	0.4
General government	-10.0	-10.6	-10.3	-7.7	-0.3	-4.1	4.4	9.1	6.7	-0.8	0.5
Education	8.8	9.1	9.0	9.6	9.8	9.7	4.8	4.8	4.8	0.4	0.2
Human health & social work	6.3	5.8	6.0	6.2	6.3	6.3	6.7	6.6	6.6	0.2	0.2
Other private services	3.9	3.9	3.9	3.3	3.4	3.4	3.3	3.1	3.2	0.6	0.5

* H1 GVA = Q1 GVA + Q2 GVA; H2 GVA = Q3 GVA + Q4 GVA

Source: PBS

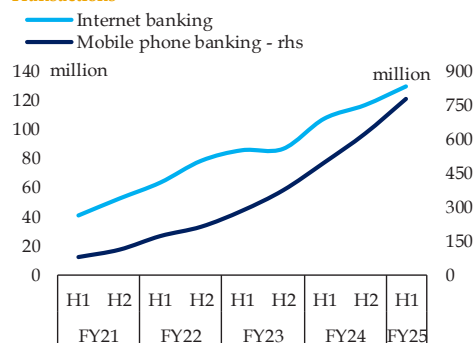
information & communication and other private services.

Despite continued fiscal consolidation, the value addition by general government services grew sharply, against contraction in last year. The growth was largely on account of lower deflator amid falling inflation. Information & communication services expanded by 6.8 percent in the backdrop of rising ICT exports and increased mobile cellular and broadband subscribers.²⁷ Furthermore, the continued growth momentum in internet and mobile banking transactions also reflects the growing use of ICT services (Figure 2.15).

Transport & storage sector registered a growth of 0.7 percent in H1-FY25, primarily driven by the transport component. This is also corroborated by a notable increase in the sale of buses and trucks (see Section 2.3) and POL products to the transport sector.²⁸

Finance & insurance services rebounded after consistent decline in the last eight quarters, benefiting mainly from a pickup in financing activities due to easing financial conditions, recovering production of key large industries and banks' efforts to reach ADR-related threshold. Especially, the value addition by scheduled banks turned positive, backed by increased

Volume of Internet and Mobile Banking Transactions Figure 2.15



Source: SBP

²⁷ Pakistan's IT exports reached a record USD 348 million in Dec FY-25, highest ever for a month, bringing H1-FY25 exports to USD 1,864 million, a 28% increase from same period last year. Source: PBS

²⁸ POL sales to the transport and storage sector grew by 9.5 percent. Source: OCAC

Key Statistics of Banking Sector**Table 2.13**

assets, deposits, and advances in trillion Rupees;
ROE and ROA in percent

	FY24				FY25	
	Q1	Q2	Q3	Q4	Q1	Q2
Total assets	43.2	46.4	46.5	51.7	52.1	53.7
Deposits	27.5	29.1	29.6	32.5	32.8	31.8
Advances	11.7	12.2	11.6	12.1	11.9	15.8
ROE after tax	26.9	27.1	24.1	20.4	22.5	21.5
ROA after tax	1.5	1.6	1.4	1.2	1.3	1.3

*ROE and ROA are based on YTD profit on calendar year basis

Source: SBP

financial intermediation amid declining interest rates (**Table 2.13**).

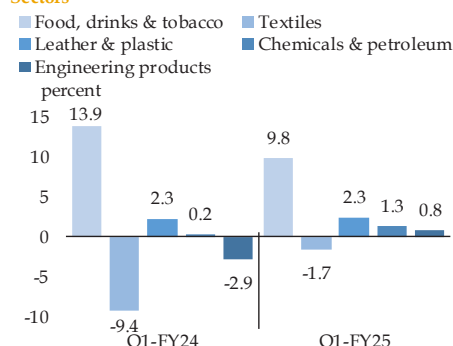
2.5 Labor Market²⁹

Labor market indicators hint at increase in employment during H1-FY25. This is particularly reflected by Punjab industrial employment data and the SBP Business Confidence Survey (BCS).

Employment in Punjab rose marginally by 1.2 percent during Jul-Sep FY25, after showing a contraction in the corresponding period of last year. This growth was supported by higher job creation in food, drinks & tobacco as indicated by their improved performance in LSM (**Figure 2.16**).

The engineering products also recorded increase in employment, against decline in last year. Furthermore, the textile sector, consistent with improved production activity, showed less deterioration in job losses.

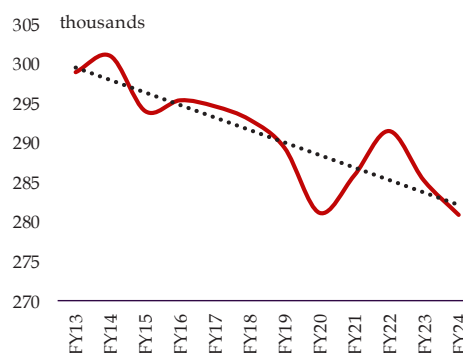
Although employment in Punjab showed an uptick in Q1-FY25, it has been on a

Punjab: Employment Growth in Major Sectors**Figure 2.16**

Source: BOS, Punjab

declining trend since the past decade (**Figure 2.17**), reflecting weak labor demand. From labor market perspective, this is contributing to increased brain drain from the country, which has a negative bearing on both labor and total factor productivity, and thus prospects of future economic growth (**Box 2.2**).

The overall business confidence in job creation, though still pessimistic, showed an improvement in H1-FY25 compared to

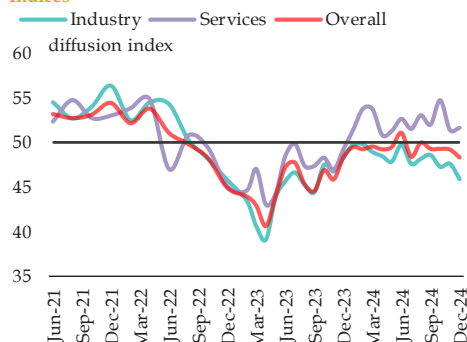
Punjab Industrial Employment Levels**Figure 2.17**

Source: BOS, Punjab

²⁹ The employment data discussed in this section pertains to LSM employment data of the Punjab for Jul-Sep FY25.

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Business Confidence Survey: Employment Indices Figure 2.18



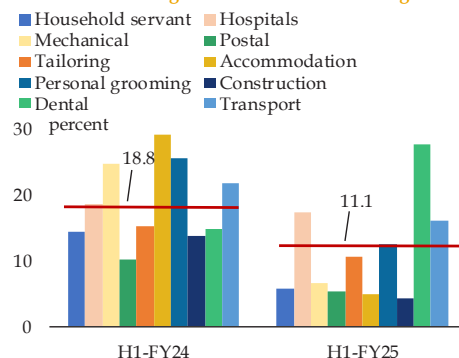
Source: SBP

last year (**Figure 2.18**). Employment sentiments in services continue to remain above 50, while sentiments for industrial sector remained below the optimistic mark, but showed improvement compared to the same period last year.

Wages

The CPI data shows that while wages continued to rise in H1-FY25, the overall growth moderated (**Figure 2.19**). Several services, including personal grooming, mechanical services, and accommodation services, recorded a substantial deceleration in wage growth. Similarly, wages for household servants, postal workers, and construction workers also exhibited a slowdown. Against this, medical-related services experienced a notable growth in remuneration during the

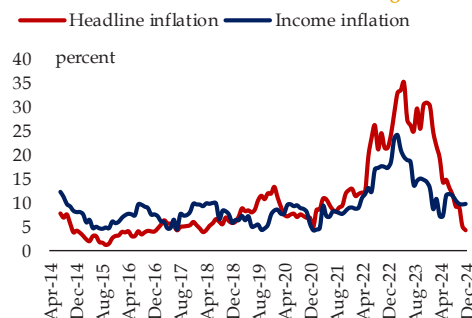
Services Sector Wages Growth Figure 2.19



Source: PBS

period under review. The steady growth in wages combined with a sharp decline in inflation helped real wages to recover in H1-FY25, after remaining suppressed in last few years (**Figure 2.20**).

Urban Headline and Income Inflation Figure 2.20



Note: The income inflation data refers to the wages data of services discussed above.

Source: PBS

Box 2.1: Vertical Farming – Modernizing Food Production in Response to Climate Change*

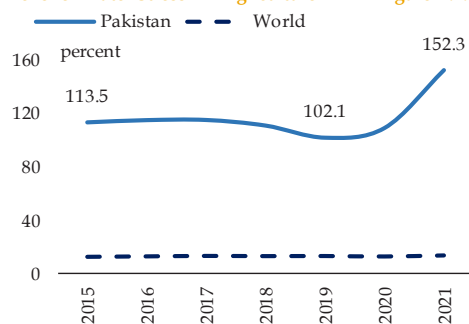
Climate change has become more severe over the past few years, with recurring heatwaves, flooding, and unpredictable rainfall patterns. As extreme weather events have become frequent, the agriculture sector has become more vulnerable.

In Pakistan, around sixty-percent of the population depends on predictable rain-fed agriculture. However, rising global temperatures and shifting weather patterns have disturbed this predictability (Syed, 2022). The water stress situation in Pakistan is alarming, with water stress levels above 100 percent (**Figure 2.1.1**). This suggests that more freshwater is being withdrawn than provided by the renewable resources. Furthermore, the population growth and the associated urbanization has increased the CO₂ emissions in several countries, thereby accelerating the climate change (Anwar, 2020). Pakistan is no exception with its population density increasing at much faster rate (**Figure 2.1.2**). The demographic shifts suggest that plant based food requirement in developing countries may need to be doubled by 2050 (FAO, n.d).

In order to rationalize water usage, one solution is to revolutionize agricultural production in urban areas via Vertical Farming (VF); a practice of growing crops in a vertically stacked layers or inclined surfaces under a controlled environment year-round. Small fruiting crops such as tomatoes, leafy greens, herbs, microgreens, peppers, and strawberries are currently more suitable for this type of farming.

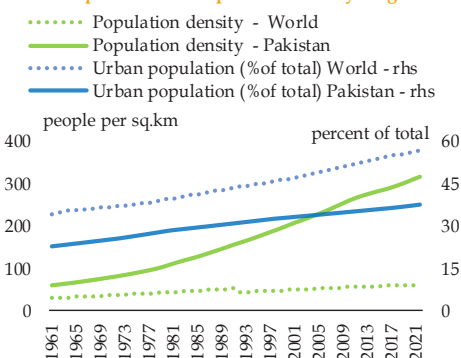
VF is no longer a futuristic concept. Several countries such as USA, Japan, Netherland, Singapore, France, Canada, and Sweden have embarked on the VF projects. For instance, US cities like New York, Chicago, and Milwaukee are becoming pioneers in vertical farming by utilizing urban warehouses, abandoned buildings, and high-rises (Kalantari et al., 2018). Some examples of vertical farms are outlined in **Table 2.1.1**

VF has certain advantages with the foremost being resilience to climate change as plants are grown indoors under controlled/ideal conditions of water, temperature, humidity, lightning, and nutrients specific to each crop (Kalantari et al., 2018). In addition, it minimizes the use of land, rationalizes water usage, eliminates pesticides usage, reduces carbon footprint associated with transportation by bringing food closer to urban centers, and maximizes yields (Akintuyi, 2024). There are certain methods to grow plants in VF such as:

Level of Water Stress* in Agriculture**Figure 2.1.1**

*fresh water withdrawal as percentage of available freshwater

Source: FAO

Urban Population and Population Density**Figure 2.1.2**

Source: WB

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Vertical Farms

Table 2.1.1

Name	Location	Height	Products	Details	Website
Vertical Harvest	USA	3-story building	tomatoes, strawberries, lettuce, and microgreens	distributes to over eighty groceries and restaurants in 3 states	https://verticalharvestfarms.com/locations/jackson/
Sky Greens	Singapore	3-story building/9m	leafy green vegetables	intensifies land use and can get 10 times more yield compared to conventional farming harnessing the natural sunlight	https://www.skygreens.com/
Growy	Netherland, Berlin, Kuwait, Singapore	NA	microgreens, leafy greens and herbs	supplies to retailer and food service, chefs, and local communities	https://www.growy.nl/
Spread	Japan	NA	leafy greens and strawberries	supplies to over 5,000 grocery stores	https://spread.co.jp/en/

1. **Aeroponic:** Plant roots are suspended in air with nutrient rich water misted on them in regular intervals, minimizing the water usage. However, the setup is highly sophisticated, requires the right expertise, and is sensitive to power outages, as water needs to be constantly sprayed.
2. **Hydroponic:** Roots are planted in a nutrient rich water solution matched exactly to the requirements of that specific plant. This method incurs a higher nutrient cost compared to the other two methods.
3. **Aquaponic:** In this method, aqua culture is integrated with hydroponics. Fish tanks provide nutrient rich water to the plants and plants in turn filter the water for fish creating a symbiotic relationship. However, the startup period is longer than other methods and requires broader knowledge.

Pakistan can also benefit from VF especially in urban settings. However, high initial cost and significant energy demand emerges as major barriers to widespread adoption. In addition, specialized knowledge, precise monitoring and control, and limited crop varieties are some other challenges. The capital cost, however, varies depending on the system installed. For instance, hydroponic glass system on one acre with a life of 15-30 years has an estimated cost of Rs 40 million (PBC, 2024). Therefore, most of the VF setups in Pakistan are hybrid greenhouse structures reliant on sunlight for photosynthesis. One such example is the successful venture of National Foods under its SustainAgro initiative through which they cultivate tomatoes in hydroponic greenhouse systems (PBC, 2024).

To address these challenges, renewable energy sources, particularly solar, could be utilized. Furthermore, vertical farms have the potential to generate their own energy by utilizing bio-waste produced during the farming process, creating a closed-loop system (Erekath, 2024). To overcome high entry costs, crowdfunding platforms and partnerships with agritech firms could provide seed investment. Moreover, repurposing the existing urban spaces, such as rooftops and warehouses, can reduce the land acquisition costs. Finally, investing in energy efficient technologies, including LEDs and solar panels, can reduce operational expenses in the long-run, making VF more financially viable.

* The contribution of Romaisa Batool is acknowledged in writing this box

References

- i. Akintuyi, O. B. (2024). Vertical farming in urban environments: a review of architectural integration and food security. *Open Access Research Journal of Biology and Pharmacy*, 10(2), 114-126.
- ii. Al-Kodmany, K. (2018). The vertical farm: A review of developments and implications for the vertical city. *Buildings*, 8(2), 24.
- iii. Anwar, A., Younis, M., & Ullah, I. (2020). Impact of urbanization and economic growth on CO2 emission: a case of far east Asian countries. *International Journal of Environmental Research and Public Health*, 17(7), 2531.
- iv. Erekath, S., Seidlitz, H., Schreiner, M., & Dreyer, C. (2024). Food for future: Exploring cutting-edge technology and practices in vertical farm. *Sustainable Cities and Society*, 105357.

- v. FAO (n.d.), *Food Needs and Population*. Retrieved January 28, 2025, from www.fao.org/4/x0262e/x0262e23.htm
- vi. Kalantari, F., Tahir, O. M., Joni, R. A., & Fatemi, E. (2018). Opportunities and challenges in sustainability of vertical farming: A review. *Journal of Landscape Ecology*, 11(1), 35-60.
- vii. Pakistan Business Council. (2024). *Opportunities and challenges in Pakistan's vertical farming landscape (Policy brief.)*
- viii. United Nations (n.d.), *Global Issues, Population*. Retrieved January 28, 2025, from www.un.org/en/global-issues/population
- ix. Syed, A., Raza, T., Bhatti, T. T., & Eash, N. S. (2022). Climate Impacts on the agricultural sector of Pakistan: Risks and solutions. *Environmental Challenges*, 6, 100433

Box 2.2: Exploring Brain Drain and its Impact on Pakistan's Economy*

Brain drain³⁰ has varied impact on the source country's economy. On one hand, it helps generate remittances, and facilitates innovation, exports, and FDI in source economy through diaspora linkages.³¹ On the other hand, it can negatively impact productivity in source countries by reducing skilled human capital and their capacity for innovation and technology adoption (Marchiori et al., 2013), increases capital flight, impacts the quality of source country's institutions and delivery of key services, such as government services, and education (Ahsan, 2024). These risks are particularly pronounced in lower middle income countries (LMICs) like Pakistan where the state of economic growth, human capital, and institutional quality is already weak (Schiff and Wang, 2008; Haq, 2006).

In Pakistan, the data on brain drain is rather patchy. Data compiled by the Bureau of Emigration and Overseas Employment (BEOE) mainly captures unskilled and low-skilled labor migration, as highly skilled workers migrate to advanced economies (North America, UK, EU, Canada, Australia) through schemes that do not require BEOE registration.³² Skilled and semi-skilled³³ categories include mostly blue collar workers such as carpenters, electricians, and mechanics, whose emigration is not typically classified as brain drain, thus barely capturing migration of highly educated/skilled workers. This data limitation has been a major challenge to analyses of brain drain in Pakistan. Notwithstanding this challenge, a host of indicators, surveys, and anecdotal evidence points to growing brain drain in Pakistan.

First, BEOE data itself has recently begun to show a significant rise in the migration of professionals. Over the past three years, emigration levels have risen above the past decade's average (**Figure 2.2.1a and 2.2.1b**). Second, sectoral level assessments also point in the same direction. For instance, the government-owned Pakistan Engineering Council (PEC) recognises brain drain as a major challenge, leading to its launch of the PEC gateway to export engineering services and help minimise brain drain.³⁴ Similarly, recent research on brain drain in the medical profession suggests that about 40 percent of the nearly 33,000 doctors produced in Pakistan in a year settle overseas.³⁵ Third, migration data of host economies also shows an increasing trend towards brain drain from Pakistan to major AEs (**Figure 2.2.2a and b**). Fourth, a recent national level survey by PIDE shows that 37 percent of Pakistan's population would

³⁰ The migration of highly educated, or highly skilled typically white collar workers from one country to another

³¹ 16 of the Fortune 500 CEOs are of Indian origin. PwC's 28th Annual Global CEO Survey ranks India among the top five investment destinations for CEOs, highlighting the importance of diaspora linkages.

³² As per BEOE data, of the 13.8 million Pakistanis that have migrated abroad since 1970s, the majority were unskilled workers (42.9 percent), skilled workers (42 percent), and semi-skilled workers (9.3 percent). The minority of migrants include highly trained professionals (3.8 percent) and highly specialized staff (2.1 percent).

³³ *Glossary on Skills and Labour Migration*, ILO. Available at: <https://www.ilo.org/resource/glossary-skills-and-labour-migration>.

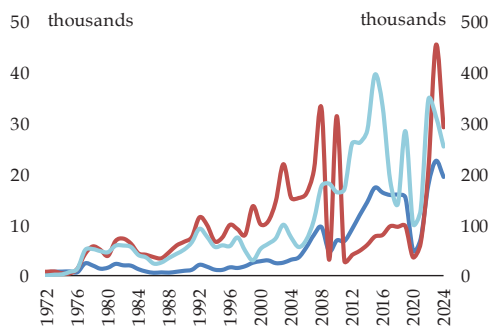
³⁴ <https://www.pec.org.pk/wp-content/uploads/2023/08/PEC-3rd-NEWS-LETTER.pdf>;

³⁵ <https://pmc.ncbi.nlm.nih.gov/articles/PMC10025733/>

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Migration Trends

— Highly qualified — Highly skilled
— Skilled -rhs

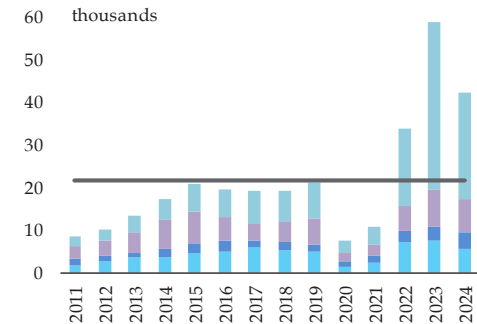


Source: BEOE

Figure 2.2.1a

Profession-Wise Emigration

— Accountant — Doctor — Engineer
— Manager — Average



Source: BEOE

Figure 2.2.1b

migrate if given the chance, with higher interest among urban residents (40 percent) and young males (62 percent). The desire to leave also rises with the education level.³⁶

Major factors driving brain drain

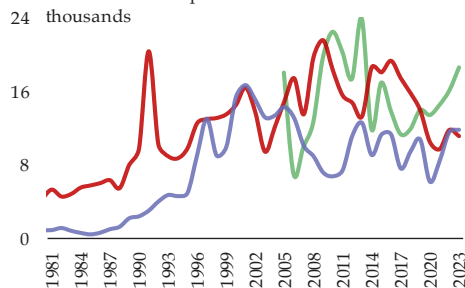
The migration of skilled professionals is influenced by a combination of economic, social, and political factors. These drivers comprise both "push" factors from the home country and "pull" factors from the destination countries.

On the pull or demand side, there is a growing demand for skilled labor force in AEs with aging population. The World Migration Report 2024 highlights major relocation to high-income countries like the US, UK, and Canada from South Asian nations in labor demanding sectors such as healthcare, technology, and engineering.³⁷ These nations attract skilled workers by offering better living standards, higher pay, better career growth options, and easier immigration policies.

Migration from Pakistan to Key AEs

Figure 2.2.2a

— Applications for British citizenship*
— Admissions of permanent residents in USA
— Admissions of permanent residents in Canada

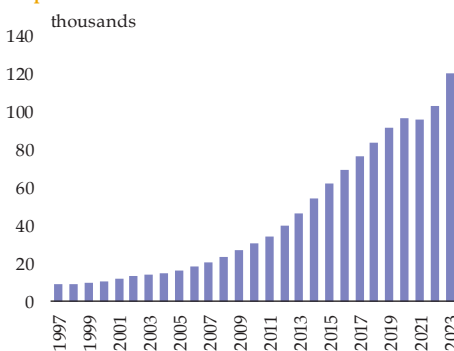


* The data is available from 2005

Sources: UDHS, UK Home Office and IRCC

Estimated Pakistan-born Resident Population in Australia

Figure 2.2.2b



Source: ABS

³⁶ PIDE Basic Survey 2022, note number 4 2022; Desire to leave or stay in Pakistan

³⁷ World Migration Report 2024. United Nations, International Organization for Migration.

On the push or supply side, there are variety of factors at play. In terms of economic factors, two of the biggest reasons are low wages and fewer employment or entrepreneurship opportunities. Salaries in Pakistan have remained stagnant as rising inflation has most of the time eroded the increases in salaries and wages. According to the Global Wage Report 2024-25, 17 percent to 28 percent of workers in LMICs like Pakistan are categorized as “low-paid”.³⁸ Compounding this issue is the country’s low ability to retain talent. The Global Talent Competitiveness Index 2023 ranks Pakistan 105th in the “Retain Pillar” and 119th in “Access to Growth opportunities,” highlighting insufficient career opportunities and institutional failures to retain skilled professionals, who instead pursue better opportunities overseas.³⁹ PIDE’s survey also

suggests that a desire for more income and equal all-around opportunities is a major driver behind brain drain, whereas one in three medical students intend to migrate abroad after graduation due to lack of opportunities in Pakistan (Nadir et al., 2023). The fact that Pakistan has one of the highest unemployed population with an advanced level of education also points in the same direction (**Figure 2.2.3**).

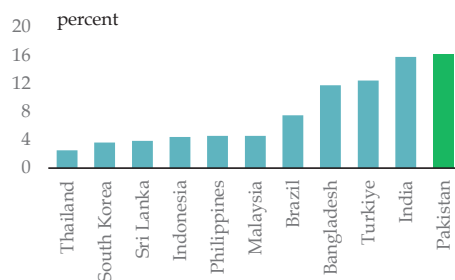
There are also social and political factors. Pakistan ranks low on indices that track the social and political stability, which implies concerns over governance and security. For instance, the country has consistently ranked around 30 amongst the most fragile states in the Fragile State Index. Similarly, its Global Peace Index rank is near the bottom (140 out of 163), which highlights persistent security concerns. Considering that brain drain increases with political instability,⁴⁰ these rankings reflect the persistence of social and political factors driving brain drain from the country. On a related note, PIDE’s survey shows that many of those who want to migrate from Pakistan want to do so to gain more respect, reflecting the domestic state of social fabric.

Does brain drain pose a challenge to Pakistan’s economy?

While brain drain has contributed positively to remittance inflows, which have risen notably over the last 15 years, its impact on long-term productivity raises concerns and need policymakers’ attention (**Figure 2.2.4**).

First with point-based immigration system in place in most AEs alongside unique visa opportunities, such as digital nomad visas,⁴¹ some of the best young professionals leave the country. This creates a challenge to countries like Pakistan because of the limited availability of professionals in both the government and the private sector (Haque, 2006). It is important to note that given the relatively short supply of skills, even minimal migration can have consequences for both institutional capacity, and private sector’s competitiveness (Haque, 2006). In light of this notion, the fact that Pakistan has one of the

Unemployment with Advanced Level Education **Figure 2.2.3**



*Percent of labor force with advanced level (at least bachelor's degree) education who are unemployed.

Source: WB

³⁸ *Global Wage Report 2024-2025*, International Labour Organization.

³⁹ *The Global Talent Competitiveness Index 2023*, INSEAD Business School.

⁴⁰ Docquier, F., Lohest, O., & Marfouk, A. (2007). Brain drain in developing countries. *The World Bank Economic Review*, 21(2), 193-218.

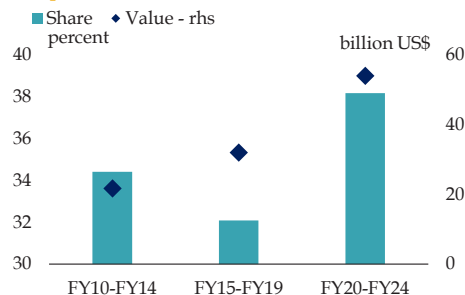
⁴¹ Other examples include, Britain’s High Potential Visa that attracts graduates from top universities, and various investor visa by a host of economies.

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lowest percentage of graduates among the population aged 25 and above,⁴² suggests that brain drain can impact both current and future productivity.

Second, both research and anecdotal evidence suggests that low-skilled workers are more likely to migrate alone, and remit a significant part of their income to support their families in Pakistan. In contrast, highly educated and skilled migrants move with their immediate families, and remit a lesser percentage of their income to Pakistan. They are also more likely to come from relatively affluent families, and move permanently eventually taking away their savings to the host economy (Ahsan, 2024). It is important to note here that immigration policies of several AEs are aimed to attract capital into the country, which also has a negative impact on source economies like Pakistan that already have low investment as percent of GDP.

Remittance Inflow from Brain Drain Hotspots* **Figure 2.2.4**



*include USA, UK, EU, Australia and Canada

Source: SBP

How to address brain drain?

The first point that policymakers need to consider is that brain drain is normal; it is simply people responding to incentives in host economies and to disincentives in the domestic economy. In light of this, Pakistan needs to improve various economic and social/political factors discussed above. Second, the country needs to invest heavily in primary, secondary and tertiary education, in line with government's economic transformation and implementation agenda⁴³, to create a bigger pool of human capital to the degree that brain drain instead results in higher remittances, FDI and knowledge transfers through diaspora linkages. Last, there is a need to create linkages between Pakistani diaspora abroad and domestic firms and institutions to benefit from the brain gain and brain circulation.⁴⁴ This would entail taking steps beyond attracting inflows for investments in real estate or household consumption. The expertise of Pakistani professionals, in fields as diverse as IT and healthcare, who have gained advanced technical skills and global exposure while working in AEs, can be channeled through various diaspora integration programs to drive innovation and strengthen industrial growth.

* The contribution of Junaid Kamal and Saad Ali is acknowledged in writing this box

References

- i. Schiff, M., & Wang, Y. (2008). Brain Drain and Productivity Growth: Are Small States Different? Source: World Bank
- ii. Marchiori, L., Shen, I-L., & Docquier, F. (2010). Brain Drain in Globalization: A General Equilibrium Analysis from the Sending Countries' Perspective.
- iii. Ahsan, H. (2024). Brain Drain in Pakistan: Analyzing Trend, Causes and Consequences. Source: PIDE
- iv. Haque, N. U. (2006). Brain drain or human capital flight (No. 11). Source: PIDE
- v. Nadir, F., Sardar, H., & Ahmad, H. (2023). Perceptions of medical students regarding brain drain and its effects on Pakistan's socio-medical conditions: A cross-sectional study. Source: Pakistan Journal of Medical Sciences Online

⁴² Source: World Bank

⁴³ The Economic Transformation Agenda outlines timelines for aligning HR development with global labor demand, promoting skilled emigration, investment, and diaspora engagement to boost national development. Source: MoPDSI

⁴⁴ "Brain gain" refers to the gain of human capital from trained individuals entering a country (Ozden and Schiff, 2005; Stark et al. 1997); "brain circulation" is somewhat extended definition of brain gain with an emphasis on human capital circulating across nations in the global market, benefiting both the sending and receiving nations (Saxenian 2002, 2005).