State Bank of Pakistan

Half Year Report

2024-25

The State of Pakistan's Economy

The State of Pakistan's Economy 2024-25

April 28, 2025

State Bank of Pakistan

The State of Pakistan's Economy

Half Year Report
For the year 2024-25
of the Board of Directors of the State Bank of Pakistan

The analyses presented in this report were prepared on data outturns for half year of fiscal year 2025 (July 2024 - December 2024). These were finalized in mid-April 2025, using data and developments as of then.

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LETTER OF TRANSMITTAL

State Bank of Pakistan
Karachi.
April 28, 2025

Dear Mr. Chairman,

In terms of Section 39(2) of the State Bank of Pakistan Act, 1956, the Half Year Report of the Board of Directors of State Bank of Pakistan on the State of Economy for the year 2024-25 is hereby enclosed for submission to the Majlis-e-Shoora (Parliament).

With warm regards,

Yours sincerely,

(Jameel Ahmad)
Governor
Chairperson, Board of Directors

Syed Yousaf Raza Gilani
Chairman
Senate of Pakistan
Islamabad

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April 28, 2025

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Yours sincerely,

(Jameel Ahmad)
Governor
Chairperson, Board of Directors

Sardar Ayaz Sadiq
Speaker
National Assembly of Pakistan
Islamabad

LETTER OF TRANSMITTAL

State Bank of Pakistan
Karachi.
April 28, 2025

Dear Finance Minister,

In terms of Section 39(2) of the State Bank of Pakistan Act, 1956, the Half Year Report of the Board of Directors of State Bank of Pakistan on the State of Economy for the year 2024-25 is hereby submitted.

With warm regards,

Yours sincerely,

(Jameel Ahmad)
Governor
Chairperson, Board of Directors

Mr. Muhammad Aurangzeb
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Islamabad

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Economic Review

1 Economic Review

1.1 Overview

Pakistan's macroeconomic conditions improved further in H1-FY25 (**Table 1.1**). The headline inflation maintained downward trajectory, falling to a multi-year low in March 2025. The current account posted a surplus, supporting build-up in FX reserves and stability in foreign exchange market. The fiscal deficit was contained to the lowest level in two decades, with primary balance posting a record surplus.

These outcomes were supported by calibrated monetary policy stance, continued fiscal consolidation, and a relatively benign global economic environment. In addition, the approval of IMF's Extended Fund Facility (EFF) also helped reduce economic uncertainty and improve overall business confidence alongside upgradation of Pakistan's credit rating by international agencies.

Nonetheless, the real GDP growth moderated on account of contraction in the main commodity producing sectors – important crops and large scale manufacturing (LSM). This was mainly owing to an uncertain agriculture policy environment, and the lingering impact of stabilization measures that kept the domestic demand in check.

In agriculture, there was a broad-based decline in the production of *Kharif* crops driven by decrease in both area under-cultivation and crop yields. Uncertainty surrounding the announcement of support prices and lower crop prices of last year led to a fall in area under cultivation (**Figure 1.1a**). Moreover, yields declined across all important crops as the favorable effect of post-flood soil enrichment, that boosted yields last year, subsided in the ongoing year (**Figure 1.1b**). The impact of these factors was compounded by erratic weather conditions amid climate change, and lower use of certified seeds and other inputs.

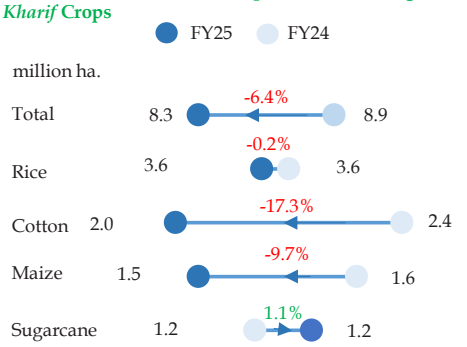
The industry recorded a contraction, albeit lower than last year amid improving macroeconomic conditions — a trend that is also reflected in rising import volumes (**Figure 1.2**). The contraction in H1-FY25 was led by a notable decline in construction and mining & quarrying activities. The latter was largely due to fall in the production of crude oil and gas

Selected Economic Indicators **Table 1.1**

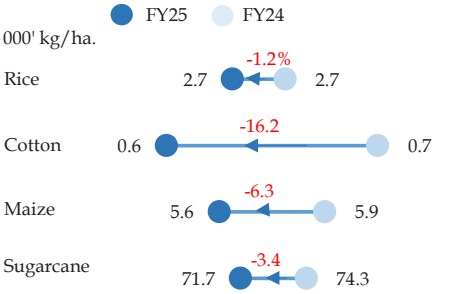
	FY24		FY25		
	H1	H2	Q1	Q2	H1
Growth rate (percent)					
Real GDP [a]	2.1	3.0	1.3	1.7	1.5
Agriculture sector	7.0	5.4	0.7	1.1	0.9
Services sector	1.9	2.9	2.2	2.6	2.4
Industrial sector	-3.3	0.2	-0.7	-0.2	-0.4
LSM	-0.7	2.8	-0.8	-2.9	-1.9
National CPI [a]	28.8	18.7	9.2	5.3	7.2
Private sector credit [b]	5.7	0.4	-1.4	24.0	22.3
Money supply (M2) [b]	4.5	11.0	-0.8	0.1	-0.7
Exports [b]	6.6	15.9	6.5	8.4	7.5
Imports [b]	-14.6	21.0	15.9	4.3	9.9
Exchange rate app (+)/dep(-) [b]	1.5	1.3	0.2	-0.3	-0.1
FBR tax revenue [c]	30.3	29.4	25.5	26.1	25.9
Policy rate* [b]	22.0	20.5	17.5	13.0	13.0
billion US$					
Remittances [b]	13.4	16.8	8.8	9.1	17.8
FDI in Pakistan [b]	1.1	1.2	0.8	0.5	1.3
FX loans (net) [b]	3.4	-0.1	-0.8	-0.2	-1.1
Current account balance [b]	-1.6	-0.5	-0.4	1.6	1.2
SBP's liquid FX reserves* [b]	8.2	9.4	10.7	11.7	11.7
percent of GDP					
Fiscal balance [c]	-2.3	-4.5	1.5	-2.8	-1.2
Primary balance [c]	1.7	-0.8	2.6	0.3	2.9

*end-period
Sources: [a] PBS; [b] SBP; and [c] MoF

Area Under Cultivation of Important *Kharif* Crops **Figure 1.1a**



Yield of Important *Kharif* Crops **Figure 1.1b**



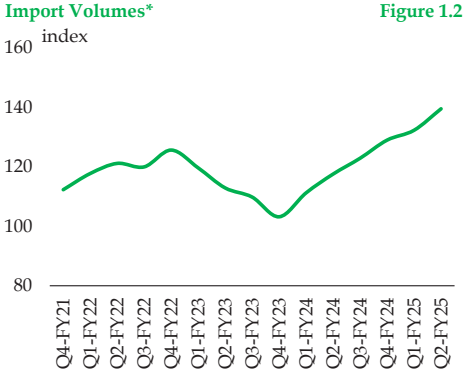
Sources: PBS and FCA Working Paper

amid weak exploration activity, while restrained development spending and higher construction material prices affected the former. The LSM also declined by 1.9 percent during Jul-Feb FY25, mainly due to a sharp fall in the production of furniture (a low-weight sub-sector), which offset the impact of recovery in some major sectors — textiles, automobile, pharmaceuticals and POL.

The slight up-tick in services sector growth was largely supported by general government, information & communication; and other private services (**Figure 1.3**). This, along with lower contraction in industry, was also reflected in a marginal increase in employment and employment sentiments. Moreover, real wages started to recover recently from persistent decline in last few years.

While economic growth remained somewhat tepid, the headline inflation maintained downward trajectory, falling below the lower bound of the medium term target range of 5 – 7 percent from November 2024 onwards, reaching a multi-

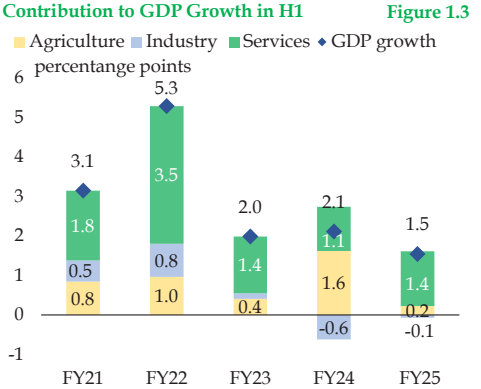
Import Volumes* **Figure 1.2**



*four quarters moving average

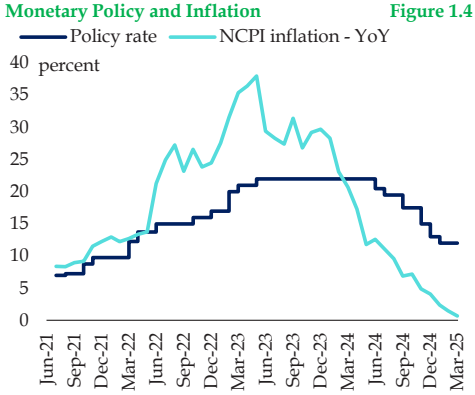
Source: PBS

Contribution to GDP Growth in H1 **Figure 1.3**



Source: PBS

Monetary Policy and Inflation **Figure 1.4**

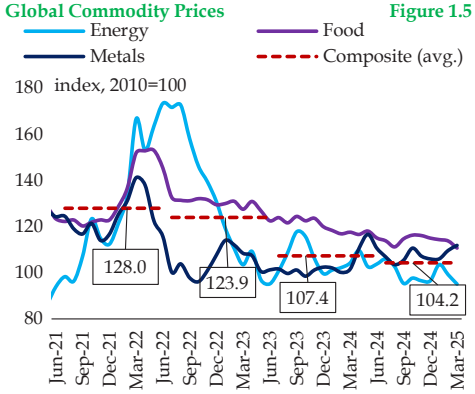


Sources: SBP and PBS

decade low of 0.7 percent in March 2025. A combination of improved supply of key food items, downward adjustments in energy prices, spare production capacity in the economy owing to still sluggish domestic demand, and benign global commodity prices underpinned this steep disinflation. The core inflation, though still elevated, has gradually fallen to single digit since October 2024.

As inflationary pressures receded, the SBP successively reduced the policy rate by 1000 basis points between June 2024 and February 2025 (**Figure 1.4**). This trend was in line with easing monetary policy in the advanced as well as emerging economies, as inflation approached close to the target ranges. The global inflation outturns were supported by the lagged impact of tighter monetary policies and softening commodity prices due to improved supply of energy and food items following ease in geo-political tensions (**Figure 1.5**). However, global demand remained resilient, led by strong activity in the advanced economies.

Global Commodity Prices **Figure 1.5**

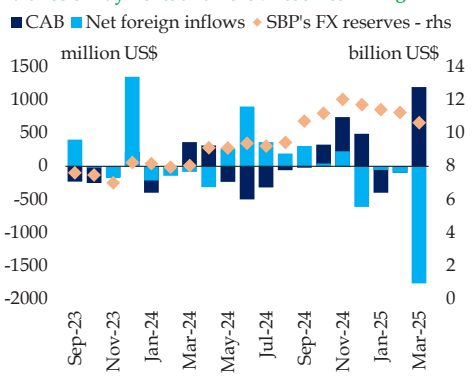


Source: WB

These favorable global trends, along with the measures to promote IT exports and encourage remittances through official channels, supported improvement in Pakistan's balance of payments position. The resulting steady momentum in exports and robust workers' remittances not only outweighed the volume-driven increase in imports, but also helped to comfortably finance higher repatriation of profits and dividends. These developments collectively resulted in a surplus in the current account balance and stability in exchange rate, enabling the SBP to build external buffers through FX purchases. While other official loan inflows fell short of commitments, disbursement of the first tranche under the IMF's EFF also contributed to the build-up in SBP's FX reserves (**Figure 1.6**).

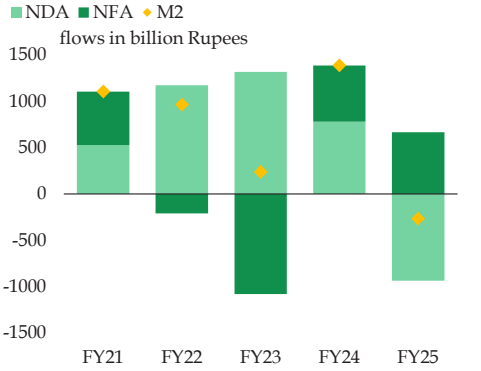
On a positive note, private inflows, particularly FDI, somewhat recovered particularly in power, financial business, and oil & gas sectors. Foreign portfolio investment experienced net outflows, mainly from equity and debt markets,

Balance of Payments and Forex Reserves **Figure 1.6**



Source: SBP

Monetary Aggregates in H1 **Figure 1.7**



Source: SBP

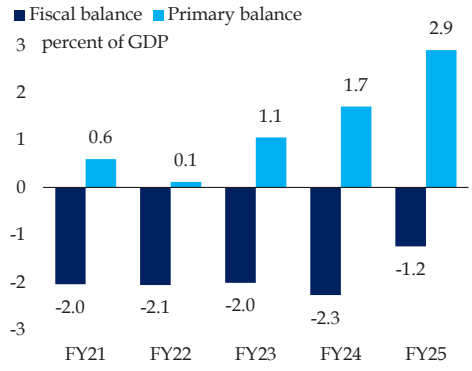
while Naya Pakistan Certificates attracted inflows incentivized by relatively higher returns.

The improvement in external account drove an expansion in the net foreign assets of the SBP. However, a substantial contraction in net domestic assets, mainly because of large net retirement in budgetary borrowings, led to a contraction in broad money (M2) in H1-FY25 (**Figure 1.7**). This was despite a sizeable increase in credit to non-government sector on account of easing financial conditions and a slight uptick in economic activity, as well as banks' efforts to avoid advances-to-deposit related tax.

Government made substantial retirements to the scheduled banks in line with continued fiscal consolidation. The improved fiscal position, largely driven by hefty SBP profits and reduction in non-interest expenditures as percent of GDP, also enabled the government to conduct buyback auctions of T-bills to improve maturity profile and reduce the roll-over risk (**Box 4.3**). On the revenue side, although FBR tax collection improved, it still fell short of the target for H1-FY25 amid falling interest rates and inflation, and stable exchange rate. Accordingly, the government contained its non-interest spending (in percent of GDP), especially development expenditures and subsidies, to achieve the envisaged fiscal consolidation in H1-FY25 (**Figure 1.8**).

These trends highlight the need for structural reforms to broaden the tax base that would not only support investment and development needs of the economy, but would also help reduce burden on existing taxpayers such as salaried individuals, corporates and other documented sectors. Further the focus should also be on rationalizing excessive reliance on indirect taxes, which are regressive in nature. In the absence of reforms, the burden of fiscal consolidation will continue to fall on development spending, compromising the growth potential of the economy, which is beset with a host of structural challenges.

Fiscal Indicators in H1 **Figure 1.8**



Source: MoF

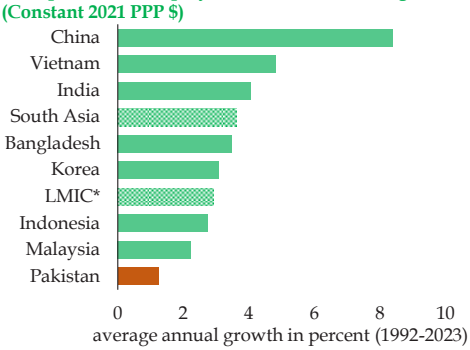
One of the prominent challenges long undermining the sustainability of growth is low and falling productivity that has adversely affected the country's economic competitiveness. This is particularly evidenced from Pakistan's lowest GDP per worker among the peer countries (**Figure 1.9**). The country's weak productivity growth has contributed to frequent balance of payments crises with the economy stuck in recurring boom-bust cycles. This necessitates thinking beyond tax amnesties, tax incentives, subsidies, and foreign debt funded growth spurts, and instead focus on addressing the macroeconomic and structural constraints to productivity growth.

In recognition of its importance, **Chapter 6** of this Report takes a detailed review of the trends in aggregate and sectoral productivity in Pakistan, along with the state of various macroeconomic and structural drivers of productivity growth in the country. The review finds that Pakistan's performance across most drivers of productivity—investments, financial inclusion, trade integration, fiscal management, education and health, research & development, institutions, innovation, and infrastructure—has been notably weak compared to peer countries or has worsened over the last few decades.

Other chapters of the Report also discuss challenges constraining productivity in Pakistan's economy. In Chapter 2, **Box 2.1** sheds light on the prospects of exploring vertical farming both to address climate change concerns as well as to help improve agriculture productivity. The chapter also explores the implications of brain drain for Pakistan's economy **(Box 2.2)**.

Similarly, in Chapter 3, **Box 3.1** discusses trends in currency in circulation in Pakistan and various measures required to enhance financial inclusion, increase documentation of the economy, and reduce the size of informal economy. These steps, in turn, can help increase access to credit and thus promote productivity growth. In Chapter 4, **Box 4.1** takes a look at government's efforts to rationalize expenditures through pension reforms to create fiscal space for productivity-

GDP per Person Employed (Constant 2021 PPP $) **Figure 1.9**



*Lower Middle Income Countries

Source: WB

enhancing spending. Lastly, Chapter 5 talks about the need to diversify the country's exports and to that end, it explores the potential of aquaculture exports in **Box 5.1**. The chapter also sheds light on specific challenges to attracting FDI in Pakistan (**Box 5.2**).

1.2 Economic Outlook

The macroeconomic outcomes and developments have significantly improved the overall outlook for FY25 compared to the beginning of the year (**Table 1.2**). While growth slowed in H1-FY25 compared to the same period last year, the latest data on high-frequency indicators suggest that momentum in economic activity is gaining traction. Specifically, purchasing managers' index, which is a leading indicator of manufacturing activity, rose to 53.0 in February 2025, the highest since August 2022. Similarly, sales of automobiles, cement, and POL products have picked up in recent months, and exports of high value added textiles is maintaining a rising trend. The ease in financial conditions and lower global energy prices are other favorable factors expected to gradually support industrial and services sectors. The agriculture sector, however, continues to show subdued growth with the latest estimates indicating lower wheat production.

In view of these developments, the real GDP growth projection remains unchanged in the range of 2.5 – 3.5 percent for FY25. Risks to growth projection are, nonetheless, tilted on the downside. While lower international oil prices can provide an upside, additional fiscal consolidation and less than expected wheat harvest may weigh down on growth.

Macroeconomic Targets and SBP Projections for FY25 **Table 1.2**

	Target	SBP Projections
	Growth rate (percent)	
Real GDP [a]	3.6	2.5 – 3.5
CPI (average)*	5.0 – 7.0	5.5 - 7.5
	billion US$	
Remittances [a]	30.3	37.0 – 38.0
Exports (fob) [a]	32.3	31.5 – 32.5
Imports (fob) [a]	57.3	58.0 – 59.0
	percent of GDP	
Fiscal deficit [b]	5.9	5.5 – 6.5
Current a/c balance [a]	-0.9	-0.5 – 0.5

*Medium term target

Sources: [a] Annual Plan 2024-25, [b] Federal Budget 2024-25,

Considering the improvement in fiscal accounts in H1-FY25 was majorly enabled by hefty SBP profit transfer and contained subsidy disbursements, the projection for fiscal deficit remains unchanged in the range of 5.5 - 6.5 percent for FY25. Moreover, any further shortfall in tax revenue remains a major upside risk.

The fiscal consolidation, tight monetary policy stance, ample stock of key food staples, and benign trends in global commodity prices are expected to keep overall inflationary pressures subdued for the remainder of FY25. Reflecting the steep disinflationary trend and recent movements in food and energy prices in domestic as well as in international markets, the projection of average inflation for FY25 has been considerably revised downward to 5.5 – 7.5 percent, from the earlier projection of 11.5 – 13.5 percent.

These projections incorporate the expected increase in inflation in the last few months of FY25 due to fading high base effect.

While inflation is expected to stabilize around the lower bound of the revised projection range in FY25, there are several risks to medium-term outlook. These include global trade disruptions and related commodity price volatility in light of the reciprocal tariffs, the timing and magnitude of adjustments in administered energy prices, new revenue measures, and pressures on local currency due to movements in international currencies and weak financial inflows.

With higher than earlier projected growth in workers' remittances, lower commodity prices, and continuing momentum in exports, the current account balance for FY25 is projected in the range of -0.5 to 0.5 percent of GDP. This is expected to provide cushion against lower financial inflows and help strengthen external buffers. However, given that import volumes are rising in line with activity in some large industries, any shock to global commodity prices could pose an upside risk.

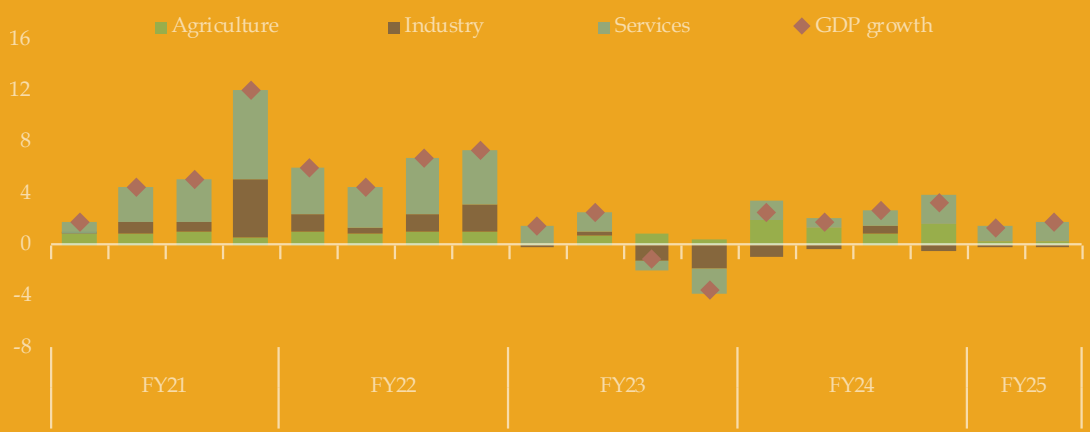
The macroeconomic outlook is contingent on how the global economic and political environment shapes up. In this context, there are three prominent risks. First, the recent shift towards more protectionist trade policies has already begun to take effect. These tariffs are impacting geo-political contenders and key trading partners. Rising tariffs could disrupt trade and economic activity, having implications for EMDEs' exports and remittances, and international commodity prices. Second, the possible spillovers of ongoing geo-political conflicts to global economy, in general and commodity prices, in particular. Third is concerning the resurgence of inflation globally due to tariffs and potential supply-chain constraints, and their implications for global financial conditions, which may adversely impact emerging economies.

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.

Contribution to Real GDP Growth
(percentage points)



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 **Table 2.1**

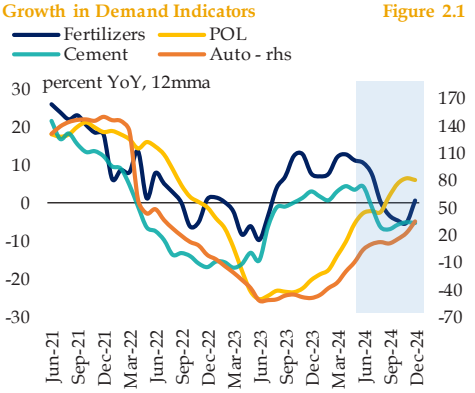
percent

	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

Growth in Demand Indicators **Figure 2.1**



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 **Table 2.2**

percent, contribution in percentage points

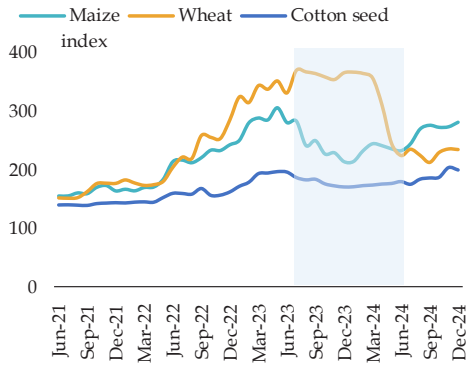
	FY24						FY25			Contribution	
	Q1	Q2	H1*	Q3	Q4	H2*	Q1	Q2	H1*	H1-FY24	H1-FY25
Agriculture	**8.2**	**5.8**	**7.0**	**3.8**	**7.1**	**5.4**	**0.7**	**1.1**	**0.9**	**7.0**	**0.9**
Crops	16.1	10.1	12.7	2.3	13.5	7.5	-6.6	-5.4	-5.9	4.6	-2.3
Important crops	29.9	14.6	20.6	1.7	27.0	12.5	-11.2	-7.6	-9.1	4.4	-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

Wholesale Prices **Figure 2.2**



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.

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

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]

[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]

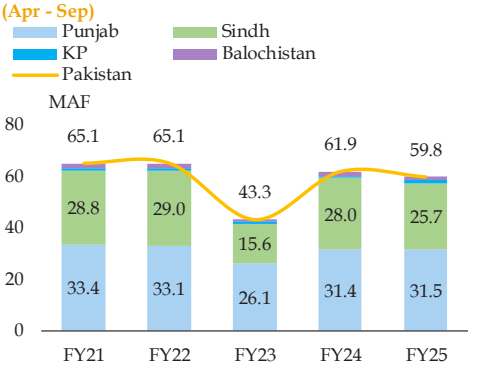
However, the rainfall remained erratic during *Kharif* FY25. The season commenced with a record wet April, the wettest since 1961, followed by below normal rainfall from May to July 2024. August saw heavy rains, which was followed by another period of below normal rainfall in September 2024.[5]

Temperature

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

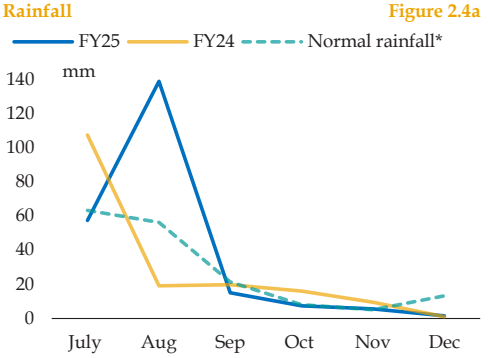
The climatic conditions profoundly impact agricultural productivity. Although, each crop responds differently to the rainfall and temperature variabilities, these climatic uncertainties pose challenges for farmers, specifically in terms of crop

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



Source: IRSA

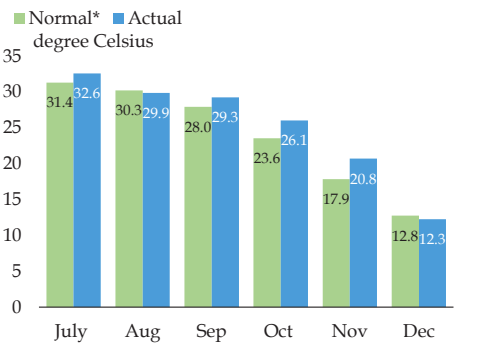
Rainfall **Figure 2.4a**



*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

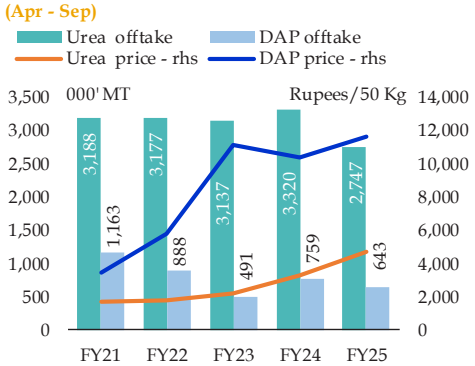
sowing and harvesting decisions. In addition, growing water scarcity also poses a threat to productivity and thus food security.

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.

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



Sources: NFDC and PBS

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

[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.

Agriculture Credit Disbursement in H1 **Table 2.4**

amount in billion Rupees

	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

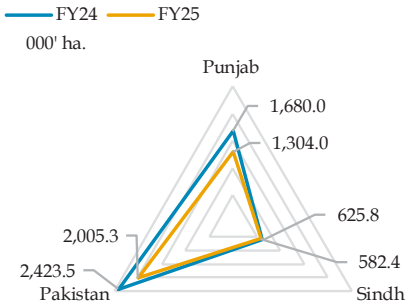
[11] Source: SBP

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

Wheat **Table 2.6**

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

	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

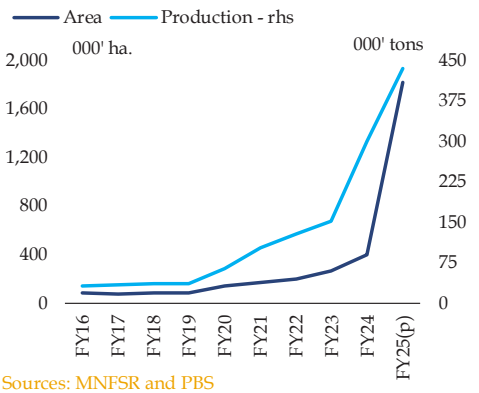
Sources: FCA Working Paper (*Rabi* Season) 2024-25 & PBS

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]

Sesame Crop **Figure 2.7**



Sources: MNFSR and PBS

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]

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.

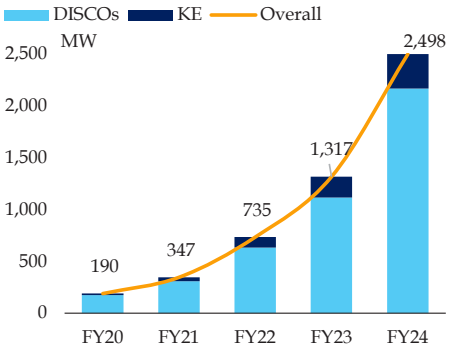
Other Crops – *Rabi* Production Plan **Table 2.8**

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

	Area		Production		Change	
	FY24	FY25T	FY24	FY25T	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

Net-metering Capacity **Figure 2.8**



Source: NEPRA

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 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

Industry Growth **Table 2.9**

growth percent; contribution in percentage points

	FY24						FY25			Contribution	
	Q1	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: PBS`

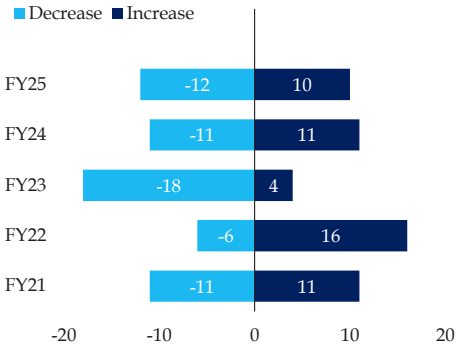
[23] The production of gas, crude oil, and coal declined by 6.2, 11.4 and 6.3 percent, respectively. Source: PBS

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**



Source: PBS

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

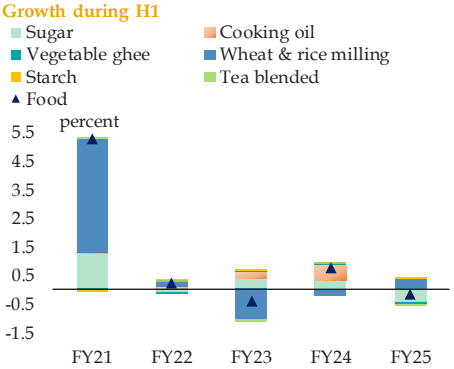
down by 2.3 percentage points, almost offsetting the positive contribution of three large industries – textile, wearing apparel and automobiles – showing recovery in output during H1-FY25 (**Table 2.10).**[25]

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**



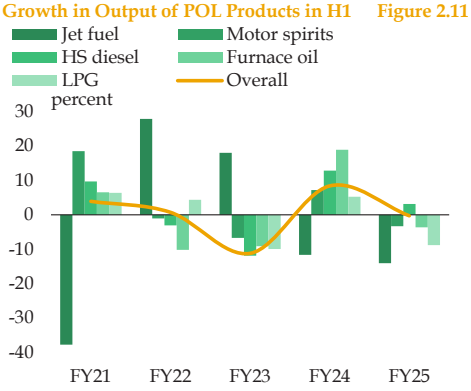
Source: PBS

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

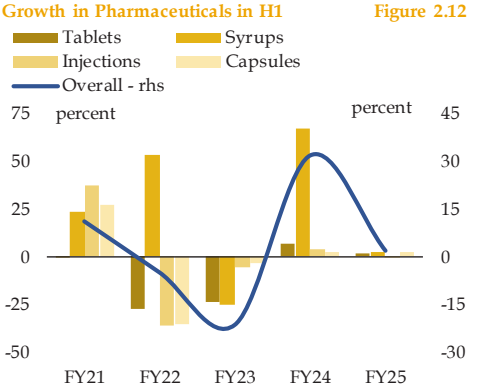
Production of pharmaceuticals increased by 1.8 percent during H1-FY25, compared to 31.9 percent in the same period last year (**Figure 2.12**). Deregulation of drug prices and increase in exports, especially to African countries, remained the main driving factors.

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

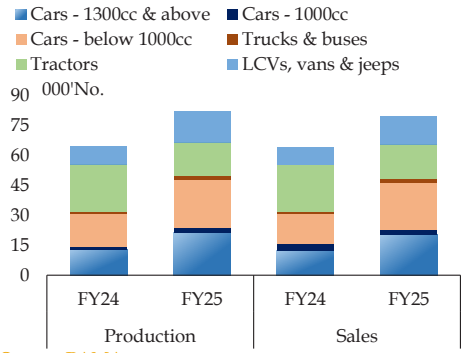
Growth in Pharmaceuticals in H1 **Figure 2.12**



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



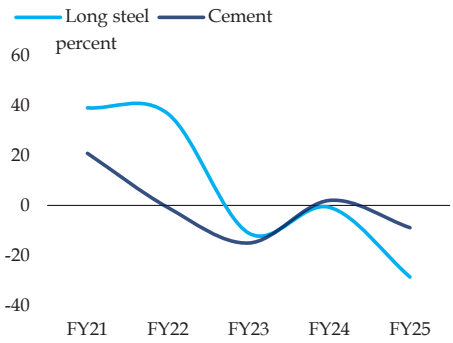
Source: PAMA

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,

Services Growth Table 2.12

growth in percent; contribution in percentage points

	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

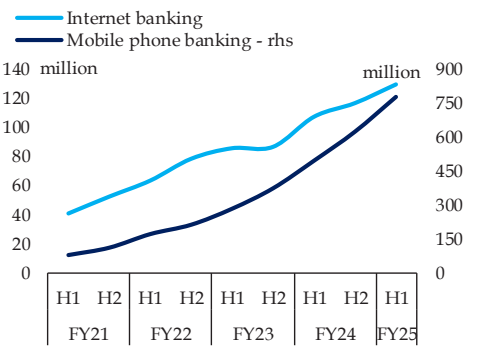
information & communication and other private services.

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 Market[29]

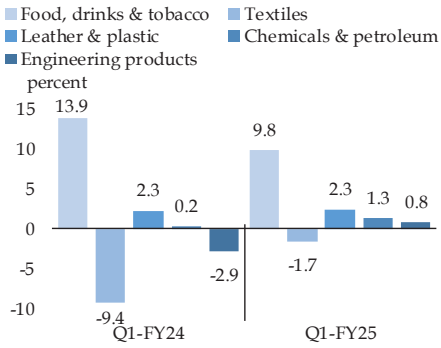
Labor market indicators hint at increase in employment during H1-FY25. This is particularly reflected by Punjab industrial employment data and the SBP Business Confidence Survey (BCS).

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**

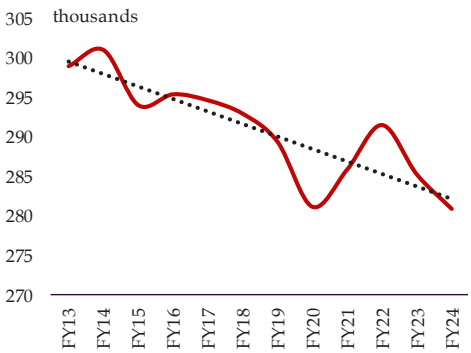


Source: BOS, Punjab

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

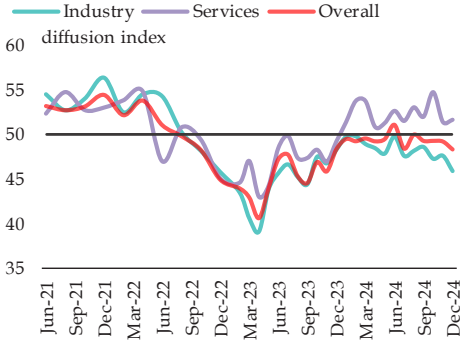
Punjab Industrial Employment Levels **Figure 2.17**



Source: BOS, Punjab

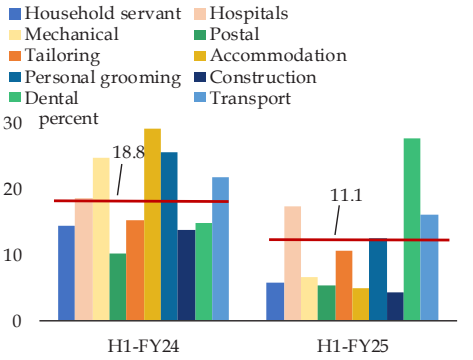
[29] The employment data discussed in this section pertains to LSM employment data of the Punjab for Jul-Sep FY25.

Business Confidence Survey: Employment Indices **Figure 2.18**



Source: SBP

Services Sector Wages Growth **Figure 2.19**



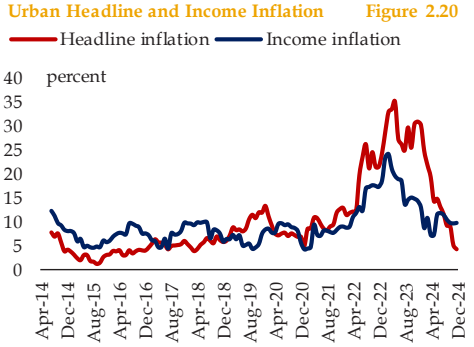
Source: PBS

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 services, and construction workers also exhibited a slowdown. Against this, medical-related services experienced a notable growth in remuneration during the 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.

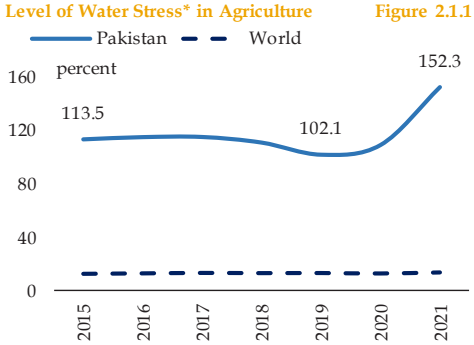
In Pakistan, around sixty-percent of the population depends on predictable rain-fed agriculture. However, rising global temperatures and shifting weather patterns have disturbed this predictability (Syed, 2022). The water stress situation in Pakistan is alarming, with water stress levels above 100 percent **(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:

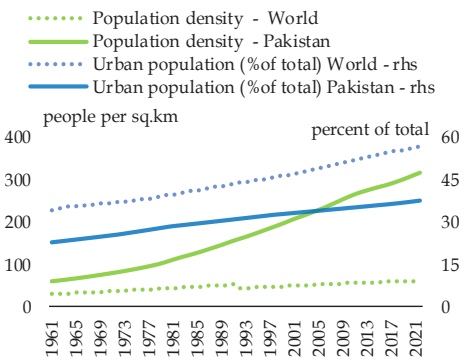
Level of Water Stress* in Agriculture **Figure 2.1.1**



*fresh water withdrawl as percentage of available freshwater

Source: FAO

Urban Population and Population Density **Figure 2.1.2**



Source: WB

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*

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

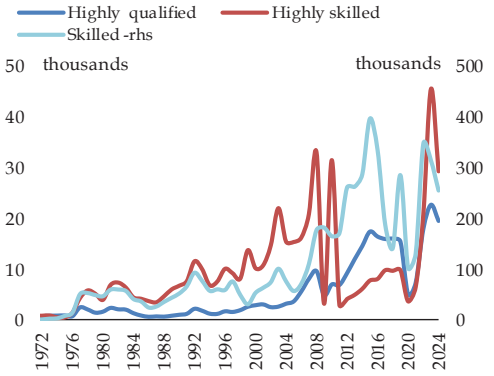
Brain drain[30] has varied impact on the source country's economy. On one hand, it helps generate remittances, and facilitates innovation, exports, and FDI in source economy through diaspora linkages.[31] On the other hand, it can negatively impact productivity in source countries by reducing skilled 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 Oversees 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-skilled[33] 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

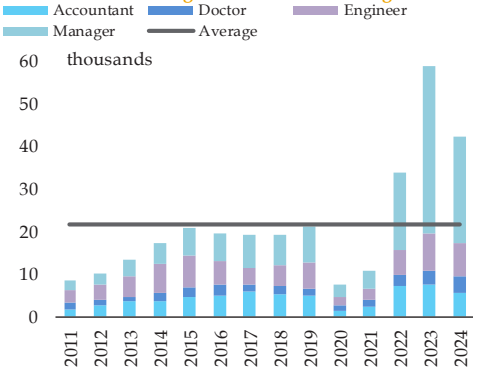
[30] The migration of highly educated, or highly skilled typically white collar workers from one country to another
[31] 16 of the Fortune 500 CEOs are of Indian origin. PwC's 28th Annual Global CEO Survey ranks India among the top five investment destinations for CEOs, highlighting the importance of 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/

Migration Trends **Figure 2.2.1a**



Source: BEOE

Profession-Wise Emigration **Figure 2.2.1b**



Source: BEOE

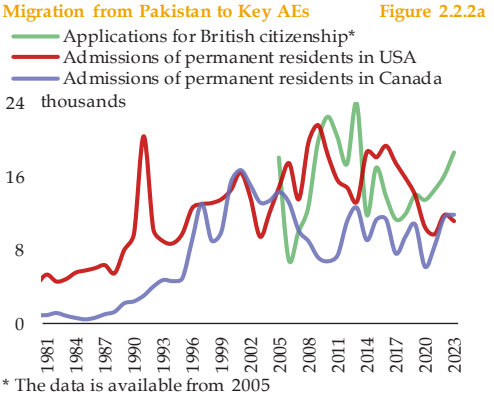
migrate if given the chance, with higher interest among urban residents (40 percent) and young males (62 percent). The desire to leave also rises with the education level.[36]

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.

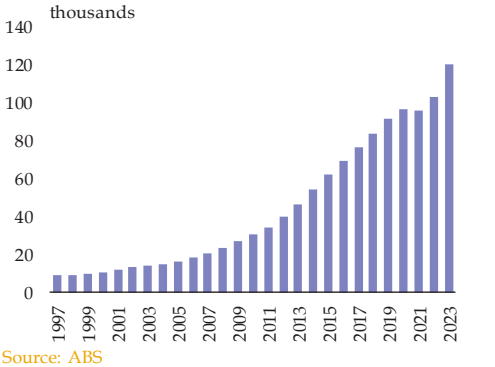
Migration from Pakistan to Key AEs **Figure 2.2.2a**



* The data is available from 2005

Sources: UDHS, UK Home Office and IRCC

Estimated Pakistan-born Resident Population in Australia **Figure 2.2.2b**



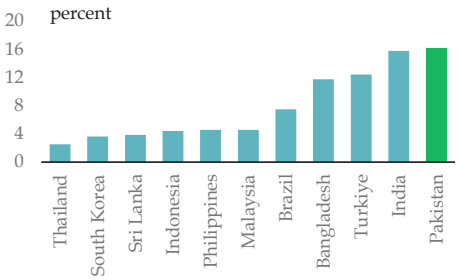
Source: ABS

[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).**

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

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)**.

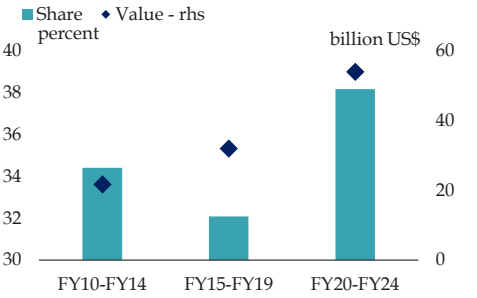
First with point-based immigration system in place in most AEs alongside unique visa opportunities, such as digital nomad visas,[41] some of the best young professionals leave the country. This creates a challenge to countries like Pakistan because of the limited availability of professionals in both 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

[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.

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 a 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 agenda[43], 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*

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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.
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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

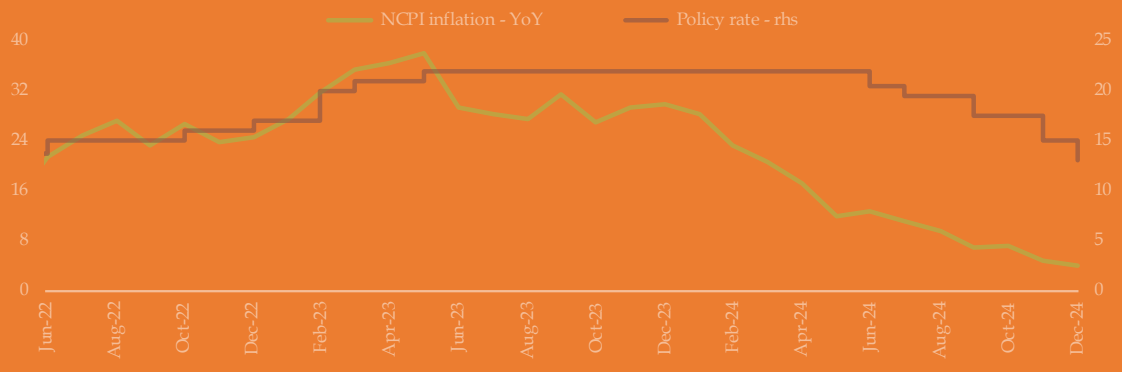
[42] Source: World Bank
[43] The Economic Transformation Agenda outlines timelines for aligning HR development with global labor demand, promoting skilled emigration, investment, and diaspora engagement to boost national development. Source: MoPDSI
[44] "Brain gain'' refers to the gain of human capital 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).

3

Monetary Policy and Inflation

National CPI inflation maintained almost consistent declining trend witnessed since January 2024, falling to a multi-year low in February 2025. Tight monetary policy and continued fiscal consolidation played a key role in this sharp disinflation. In addition, adequate supply of key food commodities and benign global commodity prices and a stable exchange rate amid improvement in external account contributed to favorable inflation outcomes. The steep decline in inflation and improved external position allowed the MPC to reduce the policy rate by a cumulative 1000 bps till January 2025. The ease in financial conditions and banks' efforts to meet ADR threshold to avoid additional tax fueled a sharp expansion in credit to private sector. Nevertheless, large net retirements of government budgetary borrowings led to a contraction in broad money in H1-FY25.

Monetary Policy and Inflation
(percent)



3.1 Policy Review

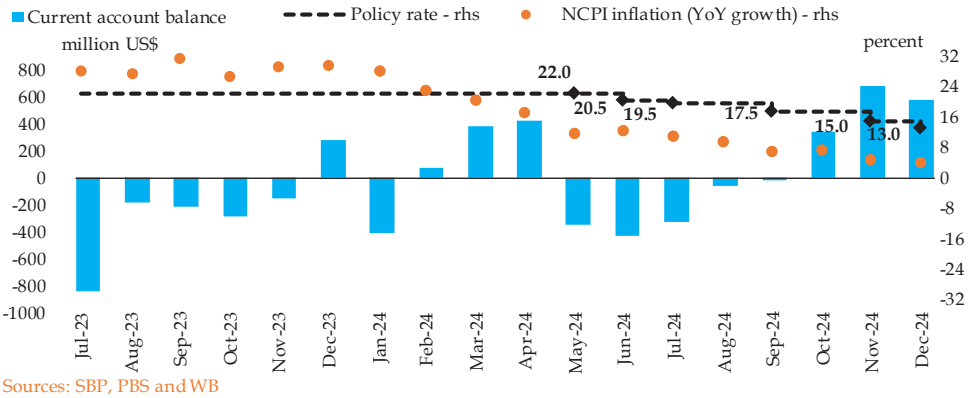
Steeper than anticipated fall in inflation and improved inflation outlook led the Monetary Policy Committee (MPC) to cut the policy rate in all of its meetings held between June 2024 and January 2025, with a cumulative reduction of 1000 basis points (bps). The National CPI (NCPI) inflation fell to a 6-year low in H1-FY25, from a multi-decade peak in H1-FY24. Monthly trend shows the decline became more pronounced from November 2024 onwards, with year-on-year (YoY) inflation falling below the SBP's medium-term target range of 5 – 7 percent. The combined impact of contained domestic demand, improved domestic supply of key food commodities, benign trend in global oil prices, a slight PKR appreciation, and a favorable base-effect mainly explain this steep disinflation (**Figure 3.1**).

The strengthening external account position further supported the MPC's decisions. A surplus in the current account balance allowed SBP to make significant FX purchases from the market; relatively conducive global financial conditions that helped increase investment flows; and disbursement of first tranche under the Extended Fund Facility (EFF) program of IMF supported the build-up of foreign exchange reserves, despite less-than-planned financial inflows.

Inflation outlook had notably improved when the MPC met for its first meeting in July 2024. The Committee noted that the impact of the FY25 budget measures on inflation projections was in line with the earlier expectations. Moreover, the external account continued to show positive trends, with increase in SBP reserves despite significant external debt repayments. Additionally, the country also secured a staff-level agreement with the IMF for a US$ 7.0 billion EFF program.

Accounting for these positive trends, adequately tight monetary policy stance and continued fiscal consolidation, the MPC projected the average NCPI inflation to come down significantly from 23.4

Trends in NCPI Inflation and Current Account Balance, and the SBP Policy Rate **Figure 3.1**



Sources: SBP, PBS and WB

percent in FY24 to the range of 11.5 – 13.5 percent in FY25.[1] The committee observed that fiscal slippages and any discretionary changes in administered prices of energy posed significant risks to these projections.

Furthermore, the MPC projected continuation of moderate expansion in economic activity in FY25. While agriculture sector growth was expected to slow given high base effect from last year and input conditions for kharif crops, relatively lower interest rates and planned expansion in development spending were likely to support activity in industry and services sectors. Incorporating these developments, the MPC projected the real GDP growth in the range of 2.5 – 3.5 percent in FY25. The modest increase in demand was also likely to translate in a concomitant increase in imports during FY25. However, continued strong growth momentum in workers' remittances and rising exports were expected to keep current account deficit in the range of 0 – 1.0 percent of GDP in FY25.[2] Thus, the improvement in inflation outlook and a stable external account outlook led the MPC to cut the policy rate by 100 bps to 19.5 percent in July 2024.

Inflation continued an almost consistent declining trend when the MPC met in September, November and December 2024. The combined impact of contained demand, a sharp fall in food inflation, benign global oil prices, absence of expected hikes in gas tariffs and petroleum development levy (PDL), and a favorable base effect, contributed to steep disinflation. However, the pace of decline in core inflation was relatively subdued, whereas inflation expectations of businesses and consumers remained volatile.

The Committee observed that calibrated rate cuts had key role in maintaining downward trajectory in inflation and managing external account pressures, while supporting gradual improvement in economic activity. Moreover, strong growth in workers' remittances and exports outweighed the increase in imports, leading to a surplus in current account balance during Jul-Oct 2024.

The reduction in borrowing cost and banks' efforts to meet advances-to-deposits ratio (ADR) threshold to avoid additional tax, fueled growth in private sector credit from October onwards. However, the broad money growth decelerated in November as the government made net retirement to banks. The continued fiscal consolidation amid transfer of a record-high SBP profit drove a surplus in the overall fiscal and primary balances during Q1-FY25, which reduced the government's financing requirements. Notwithstanding this improvement, tax revenue fell short of the target.

Taking stock of these developments, the MPC reduced the policy rate by a cumulative 650 bps in its meetings in September, November and December 2024 to 13 percent. The Committee noted that inflation outcomes were subject to substantial uncertainty arising from

[1] The MPC revised down inflation projection range to 5.5 – 7.5 percent in its meeting in January 2025.
[2] The MPC revised the projections in the range of -0.5 to 0.5 percent of GDP in its meeting in January 2025.

volatility in global commodity prices, unplanned adjustments in energy prices and any supplementary tax measures to meet the revenue shortfall. Given the risks inherent in these factors, the MPC anticipated the near-term inflation to remain volatile before eventually stabilizing within the target range.

The MPC assessed that the cumulative impact of the rate cuts since June 2024 would continue to unfold over the next few quarters, with the real policy rate remaining significantly positive to stabilize inflation within the 5 – 7 percent target range. However, the MPC noted the outcome to be conditioned on continued fiscal consolidation, timely realization of planned external inflows, and implementation of needed structural reforms.

3.2 Monetary Aggregates

The broad money (M2) contracted by 0.7 percent in H1-FY25, compared to an increase of 4.5 percent in the same period last year (**Table 3.1**). The contraction in M2 was mainly due to decline in Net Domestic Assets (NDA) that outweighed expansion in Net Foreign Assets (NFA) of the banking system. A surplus in current account balance, which helped strengthen the SBP reserves, mainly explains the expansion in NFA.

A large net retirement of budgetary borrowing to the banking system, driven by the transfer of hefty SBP profit, alongside the repayment of commodity loans, mainly led to the contraction in NDA during H1-FY25. This was despite a significant expansion in credit to non-government sector during this period.

On the liability side, currency in circulation (CiC) edged down slightly by Rs 37 billion in H1-FY25, compared to a sizeable decline of Rs 697 billion during the same period in FY24. This decline was entirely concentrated in Q1-FY25, whereas Q2-FY25 saw a slight expansion in CiC. This can be attributed to banks' efforts to meet the ADR threshold by end December 2024.

Monetary Aggregates - H1 **Table 3.1**

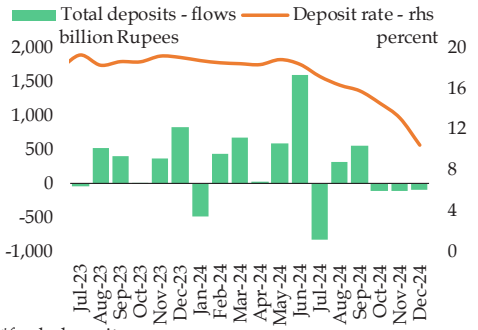
flows in billion Rupees, growth in percent

	Change in Stock		Cumulative Growth*		Contribution to M2 Growth	
	FY24	FY25	FY24	FY25	FY24	FY25
Broad money (M2)	1,388.2	-267.4	4.5	-0.7	4.5	-0.7
NFA	608.4	667.3	-	-	2.0	1.9
NDA	779.8	-934.7	2.4	-2.5	2.5	-2.6
Budgetary borrowing	2,084.0	-2,215.4	9.4	-7.5	6.7	-6.2
SBP	-1,744.2	-888.5	-33.3	-19.6	-5.6	-2.5
Scheduled banks	3,828.1	-1,326.8	22.5	-5.3	12.4	-3.7
Commodity operations	-229.2	-216.1	-15.4	-15.7	-0.7	-0.6
Credit to private sector	475.7	1,978.9	5.7	22.3	1.5	5.5
Credit to PSEs	-54.4	75.9	-2.4	3.5	-0.2	0.2
Other items net	-1,465.8	-2,101.6	-	-	-4.7	-5.9
Currency in circulation	-697.1	-37.2	-7.6	-0.4	-2.3	-0.1
Deposits	2,077.8	-226.0	9.6	-0.8	6.7	-0.6
Reserve money	-747.3	-33.9	-6.6	-0.3	-2.4	-0.1

*Growth in stocks as on December relative to June.

Source: SBP

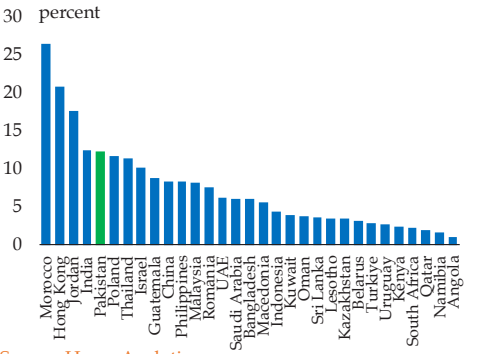
Weighted Average Deposit Rate* and Deposits **Figure 3.2**



*fresh deposits

Source: SBP

CiC to GDP Ratio 5-Year Average (2019-2023) **Figure 3.3**



Source: Haver Analytics

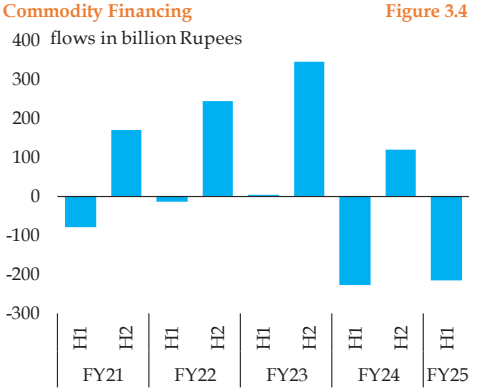
In this vein, some banks introduced service charges on deposits above a certain amount. Although withdrawn shortly after the imposition,[3] this may have discouraged deposits, leading to an expansion in CiC during Q2-FY25. In addition, declining interest rates, especially in Q2-FY25, and increased prospects of earning profit through investment in Pakistan Stock Exchange (PSX) also contributed to deposit withdrawals (**Figure 3.2**).

Notwithstanding the slight decline in H1-FY25, Pakistan remains among the countries with highest CiC in terms of GDP **(Figure 3.3).** Several underlying economic and structural factors contribute to higher CiC in Pakistan (**Box 3.1**). High level of CiC is one of the major constraints on credit as it reduces availability of loanable funds, which are critical for investment and economic growth.

Commodity Financing

Financing for commodity operations saw a net retirement of Rs 216 billion during H1-FY25, slightly lower compared to Rs 229 billion during the same period last year. This was almost entirely driven by repayment of loans availed for wheat procurement (**Figure 3.4**). This mainly reflected the impact of reforms in

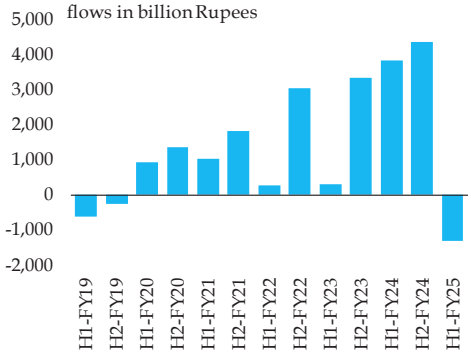
Commodity Financing **Figure 3.4**



Source: SBP

[3] After the removal of Minimum Deposit Rate (MDR) requirement on financial institutions, public sector enterprises and public limited companies from November 26th, scheduled banks withdrew fees on large deposits. (BPRD circular No.5 of 2024, SBP).

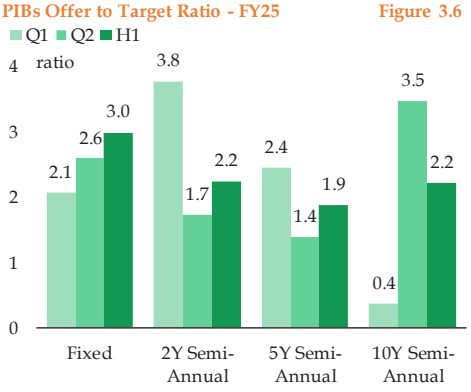
Government Borrowings from Scheduled Banks **Figure 3.5**



Source: SBP

commodity operations to stem accumulation of commodity debt. These measures included rationalization of wheat procurement, gradual abolition of minimum support price (MSP),[4] timely payment of subsidies, and transitioning to targeted subsidies.[5]

PIBs Offer to Target Ratio - FY25 **Figure 3.6**



Source: SBP

Government Borrowings

The government made a net retirement of Rs 1,327 billion to the scheduled banks in H1-FY25, for the first time since FY19 (**Figure 3.5**). In contrast to FY19 when the government borrowed from SBP to make repayments to scheduled banks, a lower fiscal deficit amidst the transfer of hefty SBP profit allowed the government to retire to scheduled banks in H1-FY25.

In this backdrop, to benefit from the declining interest rate environment and to contain the rollover risk, the government kept higher auction targets for PFLs and fixed rate PIBs, and planned net-retirements in T-bills (**Table 3.2**). In line with the targets, the government met its financing requirements from PFLs – Semi-Annual, followed by fixed rate PIBs, and made retirements in T-bills. Furthermore, the government introduced 2-year bills in both fixed and floating PIBs to attract market interest.[6] Given the declining interest rate scenario, the market showed keen interest in these securities, which is visible from a high offer-to-target ratio of 3.3 for 2Y – Fixed, and 2.2 for 2Y – Semi-Annual in H1-FY25 (**Figure 3.6**).

The reduction in policy rate along with the government's lower demand for financing led to a decline in T-bill cut-off rates during H1-FY25 (**Figure 3.7**). This further widened the negative spread between the cut-off rates on shorter-tenor securities and

[4] IMF (2024). Pakistan: 2024 Article IV Consultation and Request for an Extended Arrangement under the Extended Fund Facility-Press Release; Staff Report; and Statement by the Executive Director for Pakistan, International Monetary Fund, Washington, D.C.
[5] GOPb (2024). Punjab Debt Bulletin, Government of Punjab, Lahore.
[6] These bills had the feature of semi-annual coupon payments. In FY21, the government introduced 2-year PFLs with quarterly coupon payments.

Auction Summary - H1-FY25 **Table 3.2**

billion Rupees

	Target	Maturity	Offers (competitive)	Acceptance	Acceptance (net of maturity)
			Treasury Bills		
3-Month	1,695	1,405.1	5,740.3	2,135.8	730.7
6-Month	1,770	1,655.0	6,123.1	2,037.7	382.7
12-Month	3,420	7,106.4	9,509.6	3,678.2	-3,428.2
Total	**6,885**	**10,166.5**	**21,373.0**	**7,851.6**	**-2,314.8**
			Pakistan Investment Bonds		
Fixed rate					
2Y	325	-	1,082.4	247.4	247.4
3Y	350	-	744.4	262.9	262.9
5Y	370	-	1,361.9	472.8	472.8
10Y	335	-	382.9	211.1	211.1
Total	**1,380**		**3,571.6**	**1,194.2**	**1,194.2**
Floating rate					
Semi-Annual					
2Y	600	-	1,345.3	25.3	25.3
5Y	2,050	-	3,851.5	1,326.5	1,326.5
10Y	2,250	-	4,642.0	3,022.8	3,022.8
Quarterly					
2Y	40	-	61.0	-	
3Y	40	802.1	626.9	25.4	-776.7
Total	**4,980**	**802.1**	**10,526.7**	**4,400.0**	**3,597.9**

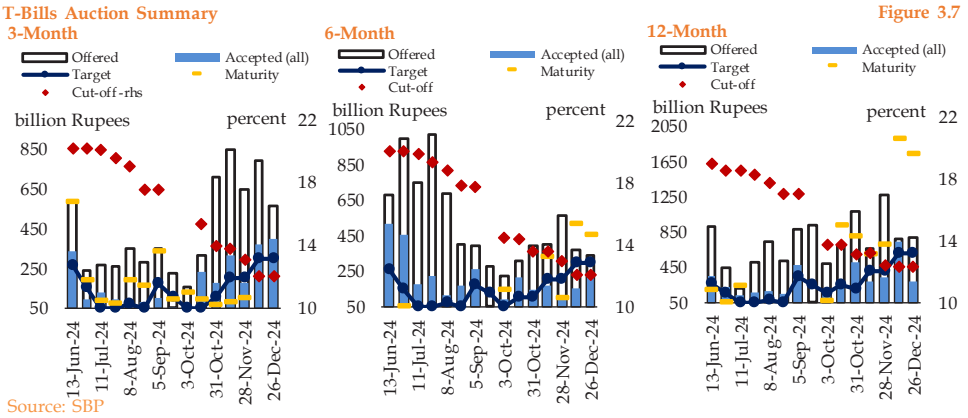
Source: SBP

the policy rate. After the transfer of SBP profit in September 2024 that drove a surplus in the fiscal balance during Q1-FY25, the government rejected all bids in the T-bill auction held on 19th September 2024. Subsequently, the government also announced first debt buyback auction in October 2024. In addition, inflation fell to single-digit from August 2024 onwards, leading the market to price in further reduction in the policy rate. These expectations of declining inflation and expected cut in the policy rate lowered the secondary market yields especially for shorter-tenor securities, which declined throughout H1-FY25 (**Figure 3.8**).

In anticipation of a further cut in the policy rate, the government made net retirements in 12-month T-bills and borrowed minimally in 3-month and 6-month T-bills. Moreover, the market showed contrasting behavior in bidding pattern during H1-FY25. In Q1-FY25, the market was more inclined to invest in 6-month and 12-month relative to 3-month T-bills. In Q2-FY25, however, offers for 3-month T-bills soared despite it being favorable for the market to invest in longer-tenor securities. This can be attributed to increased interest from non-bank participants.

Longer-tenor securities attracted market interest throughout the year, which was particularly pronounced during Q2-FY25. This reflected market interest to lock funds in longer-tenor instruments in view of further rate cuts ahead. Offers were

T-Bills Auction Summary Figure 3.7

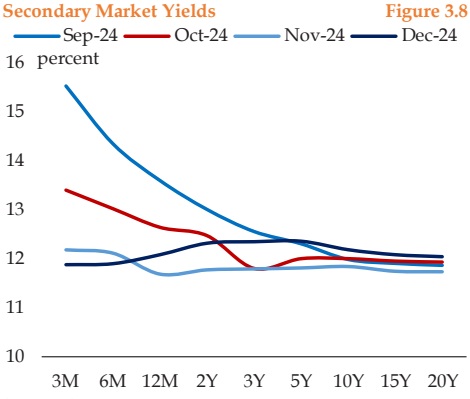


Source: SBP

especially higher for Fixed and 10Y – Semi-Annual coupon bonds.

A significant drop in the policy rate, faster-than-anticipated disinflation, improvement in external sector, and lower uncertainty shifted the secondary market yield curve downwards (**Figure 3.8**). In December, the slope of the yield curve also turned slightly positive. Specifically, the spread between the 20-year PIBs and 3-month T-bills turned positive by 16 bps in December from negative 46 bps in November. In light of economic literature on yield curves, this points to better macroeconomic outcomes in the near-term.[7]

Secondary Market Yields Figure 3.8



Source: SBP

Interbank Liquidity

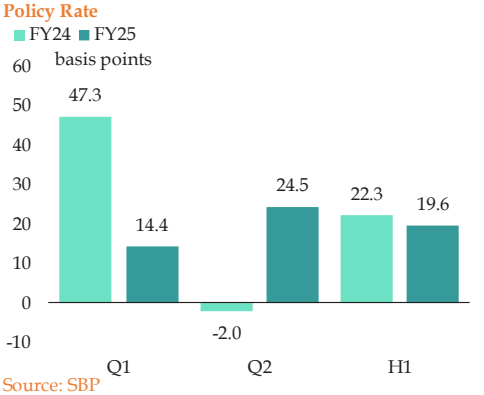
Liquidity pressures remained elevated in H1-FY25. This was despite a significant net retirement of government budgetary borrowing and commodity finance to scheduled banks. In addition, net FX purchases by SBP and a marginal decline in CiC further cushioned market liquidity. However, lower deposit mobilization, and surge in lending to the private sector strained interbank liquidity. Given these pressures, SBP injected a higher amount of liquidity in H1-FY25 in order to keep the Weighted Average Overnight Repo Rate

[7] Empirical evidence shows that an increase in the yield spread is a strong predictor of output growth in Pakistan. Hussain, F. & Mahmood, A. (2017). Predicting Inflation and Output in Pakistan: The Role of Yield Spread, *SBP Working Paper Series*, No.93.

(WAONR) close to the policy (target) rate through 7-day and 28-day OMO injections.[8] Resultantly, the average outstanding OMO stock rose to Rs 11 trillion at end-December 2024 as compared to the Rs 9 trillion at end-December 2023.

Due to persisting liquidity demand, WAONR remained above the policy rate on average during H1-FY25 (**Figure 3.9**). Specifically, the WAONR saw a larger positive deviation and higher volatility during Q2-FY25 compared to Q1-FY25 and the second quarter of last year (**Figure 3.10**).[9] The use of SBP's ceiling facility also increased during this period.[10] This could be traced to increased liquidity pressures in Q2-FY25 stemming from a sizeable expansion in credit to non-government sector, significant deposit outflows and an uptick in CiC. While the debt buyback

Average Deviation of WAONR from Policy Rate **Figure 3.9**

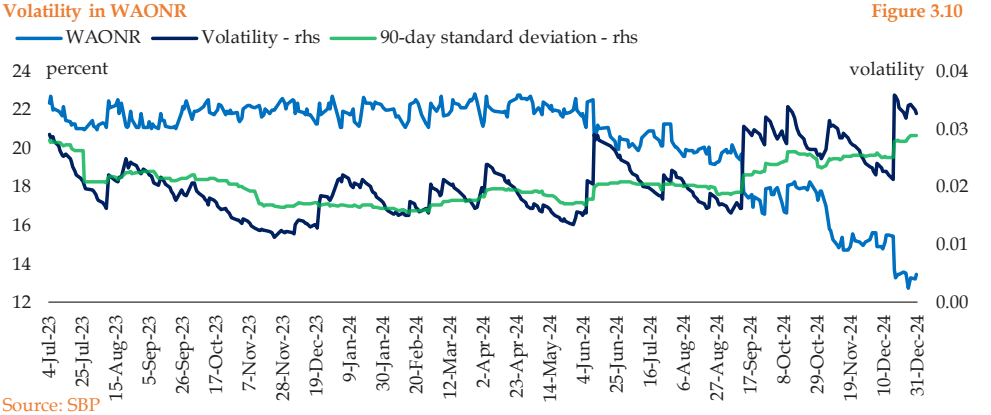


Source: SBP

auctions somewhat cushioned liquidity, in October (**Figure 3.11**), its impact was offset by rising liquidity pressures due to increased bank lending to private sector.

The liquidity requirements of the Islamic Banking Institutions (IBIs) also increased during H1-FY25 as the outstanding stock

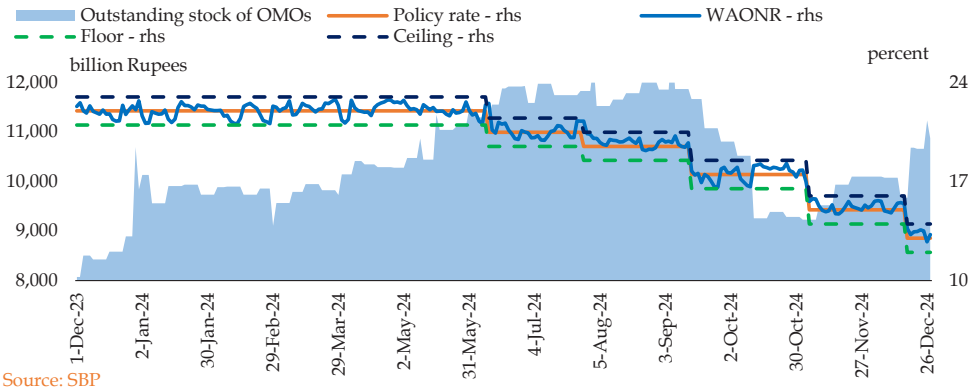
Volatility in WAONR **Figure 3.10**



Source: SBP

[8] The 7-day tenor made up 69 percent of the OMO injections whereas 28-day tenor made up 28.9 percent.
[9] Higher volatility in the WAONR corresponded with the MPC meetings as shifts in the policy rate spiked volatility on the same day.
[10] The use of ceiling facility stood at Rs 13,532 billion in H1-FY25, which is almost twice that of Rs 7,105 billion in H1-FY24.

Interbank Liquidity **Figure 3.11**



Source: SBP

of OMOs rose to Rs 503 billion compared to Rs 235 billion in the same period last year. Similarly, SBP also met the liquidity needs of IBIs through OMO injections.

Credit to PSEs

Credit to public sector enterprises (PSEs) increased by Rs 76 billion in H1-FY25 as compared to a net retirement of Rs 54 billion in the same period last year **(Table 3.1**). A sizeable borrowing by a large refinery mainly explains this increase, which outweighed significant retirements by PSO. The retirement by PSO reflected relatively better cash flow position of the company due to higher profits.[11] Increased borrowing by the refinery was meant to cover its maintenance and upgradation costs and to meet debt servicing obligations after temporary shutdown of operations for scheduled maintenance.

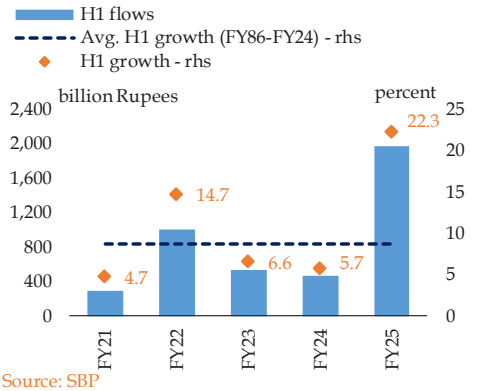
3.3 Private Sector Credit

Private sector credit (PSC) surged by 22.3 percent in H1-FY25, the highest growth for H1 since FY86 (**Figure 3.12**).[12] Almost entire increase was concentrated in Q2-FY25, specifically during October 2024, while Q1-FY25 saw seasonal net retirement. During Q2-FY25, the combined impact of easing financial conditions, some improvement in economic activity, and banks' efforts to avoid ADR-based tax,[13] led to an unprecedented expansion in PSC.

Following the reduction in the policy rate since June 2024, the weighted average lending rates (WALR) dropped sharply in H1-FY25 compared to the average rates observed in H1-FY24 (**Table 3.3**). The exchange rate also saw a slight appreciation during H1-FY25, which together with benign global commodity

[11] PSO (2025). Unconsolidated Financial Statements YTD Dec 2024, Pakistan State Oil Company Limited, Karachi.
[12] Based on monthly monetary survey data of December 2024.
[13] The additional tax based on ADR of banks was introduced in Finance Bill, 2021, and was applicable for the tax year 2024. The additional tax was 10 percent above the normal income tax, if ADR remained between 40 to 50 percent and 16 percent if ADR remains below 40 percent. Later, towards the end of December 2024, federal government removed this additional tax based on ADR.

Private Sector Credit **Figure 3.12**



Source: SBP

prices, helped in lowering the cost of imported inputs.

The input costs also moderated, as reflected by a steep reduction in the wholesale price index (WPI) inflation to 4.4 percent in H1-FY25, from 25.4 percent in the same period last year. However, energy prices – electricity, LNG and coal - continued to remain elevated though lower compared to last year (**Table 3.3**). The relative ease in overall cost of production, together with some uptick in demand and continued momentum in exports, induced higher production in some of the major LSM groups during this period (**Chapter 2)**, which also increased working capital requirements of the industry as a whole.

In addition to demand-driven increase, the ADR-based tax also contributed to the strong increase in PSC. Due to the seasonal retirement, the average ADR of the banking sector was below 40 percent at the end of Q1-FY25. Therefore, to avoid additional tax, banks looked for avenues to increase lending to private sector

Cost of Production **Table 3.3**

percent change YoY

	H1-FY24	H1-FY25
PKR/US$ ER (avg. +app. /-dep.)	-22.2	3.3
Weighted avg. lending rate*	21.5	17.1
Wholesale price index:	25.4	4.4
LNG	44.1	37.8
Coal	39.5	20.0
Electricity	27.7	7.9

* average for H1 (excluding zero mark-up and Inter-FIs)

Sources: SBP and PBS

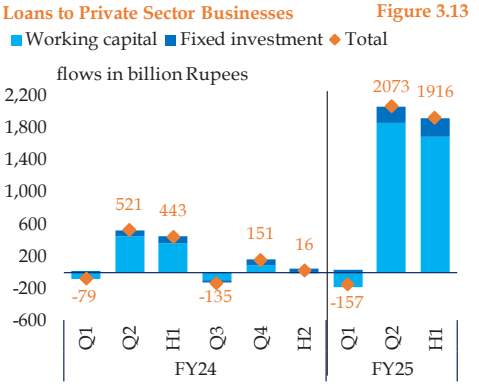
businesses and other segments from the start of October 2024.

Disaggregated analysis of loans to private sector businesses (PSBs) shows a substantial uptick in Q2-FY25. Though fixed investment loans also rose, the major thrust came from increase in working capital loans (**Figure 3.13**).

The momentum in exports partially explains the surge in working capital loans to export-oriented sectors

Increase in production and exports partially explains the expansion in credit requirements of some of the export-

Loans to Private Sector Businesses **Figure 3.13**



Source: SBP

Loans to Major Private Sector Businesses **Table 3.4**

flow in billion Rupees

	Total Loans*		Working Capital**		Fixed Investment		Total Loans*	
	H1						Q1	Q2
	FY24	FY25	FY24	FY25	FY24	FY25	FY25	
Total	442.6	1,915.7	369.3	1,686.2	76.0	240.9	-157.2	2,072.8
Manufacturing	307.2	1,401.0	279.7	1,305.1	29.5	100.1	-104.1	1,505.1
Textile	106.8	504.8	95.0	502.7	10.9	3.0	26.0	478.9
Basic pharma.	6.1	222.9	-0.9	215.1	7.2	8.0	1.2	221.6
Cement & plaster	-18.0	107.1	-16.3	119.7	-1.4	-12.3	-9.3	116.4
Rice processing	82.9	92.1	82.3	91.0	0.6	1.1	-18.9	111.0
Fertilizers	-33.5	45.8	-32.5	26.5	-1.0	19.4	-6.4	52.2
Refined petroleum	-5.1	42.7	-12.3	20.7	7.2	22.0	-10.9	53.6
Motor vehicles	15.3	27.9	14.9	20.7	0.3	7.2	1.0	26.9
Basic iron & steel	33.6	18.2	37.5	5.0	-3.8	13.2	3.1	15.1
Veg. & animal oils	18.9	17.6	19.1	18.7	0.1	-1.1	-21.2	38.8
Paper industry	16.0	14.4	10.4	10.1	5.6	4.3	5.4	9.0
Sugar	-49.4	-26.7	-41.2	-46.9	-8.2	20.2	-102.8	76.0
Telecommunication	11.0	115.1	-3.0	96.9	14.1	18.2	20.2	94.9
Wholesale & retail trade	84.2	91.7	73.5	64.5	11.0	29.6	-22.1	113.7
Agri.& fishing	73.0	59.9	28.4	28.5	44.7	31.5	-3.6	63.5
Construction	10.0	25.9	7.0	18.1	-3.7	9.3	12.6	13.3
Mining & quarrying	2.2	16.3	4.2	16.5	-2.0	-0.2	-8.6	24.9
Power gen. & dist.	-54.2	-23.9	-27.7	-15.3	-26.4	-8.0	-21.4	-2.4
Transport. & storage	7.2	-14.8	7.2	-20.2	0.1	5.7	-23.1	8.3
Real estate activities	-4.7	-0.4	-1.0	-1.4	-1.2	-0.7	-3.3	3.0

* Total amount also includes construction finance. In terms of IH&SMEFD Circular Letter No. 28 of 2020, the data on credit/loans has been revised since June 2020 due to inter-sectoral adjustment in private sector business.

** includes trade finance

Source: SBP

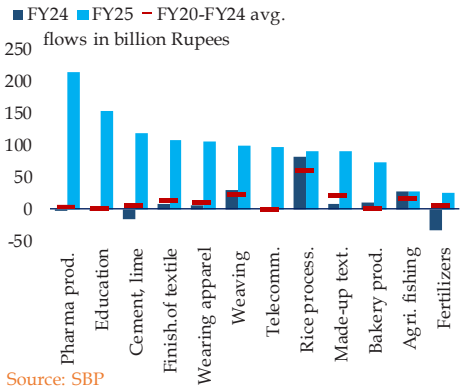
oriented sectors including *manufacturing of textile* and *rice processing* during H1-FY25. The credit off-take by sectors was not only higher compared to the same period last year, but also their past five years' average for H1 (**Table 3.4**).

Manufacturing of textile saw a significant rise of Rs 503 billion in working capital loans in H1-FY25, compared to Rs 95 billion in the same period last year. Weaving, finishing of textile, manufacture of made-up textile and wearing apparel were the major textile sub-sectors that saw expansion in production and exports. Especially the export quantum of garments, bed-wear and synthetic textile showed recovery after a dip in last year (**Chapter 5**). Moreover, the elevated energy and labor cost also raised requirement for working capital loans.

Similarly, working capital requirements of *rice processing* increased as rice export maintained the last year's momentum in H1-FY25 as well.[14] Increased rice milling,

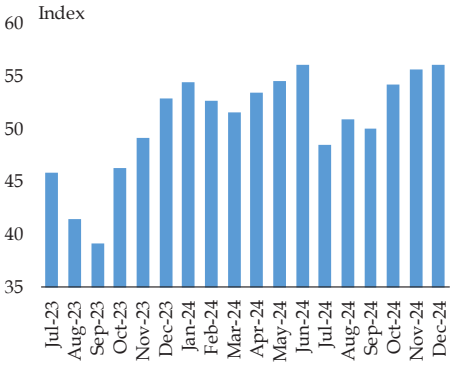
[14] Rice exports increased by 19.0 percent in H1-FY25 on top of growth of 48.4 percent in H1-FY24, which was driven by India's ban on certain rice categories. Source: PBS

Working Capital Loans to PSBs - H1 **Figure 3.14**



Source: SBP

Business Confidence Index **Figure 3.15**



Source: SBP

despite lower crop production, was on account of stocks available from the last year's bumper crop.

Some sectors saw unusual spike in working capital loans

Some of the sectors like *manufacturing of cement, lime and plaster; pharmaceutical production* and *fertilizers and nitrogen compounds* saw abnormally large increase in working capital loans, despite sluggish trends in production (**Figure 3.14**).

Manufacturing of pharmaceutical products availed the highest amount of credit, Rs 215 billion, in H1-FY25 , compared to a retirement of Rs 1 billion in the same period last year.[15] The higher loan off-take was partially supported by increase in production activity, while major part of the unprecedented expansion seems to be ADR-related lending.[16] However, elevated energy prices, particularly of coal and RLNG, partially explain the increase in working capital loans to *cement, lime and plaster manufacturing*.

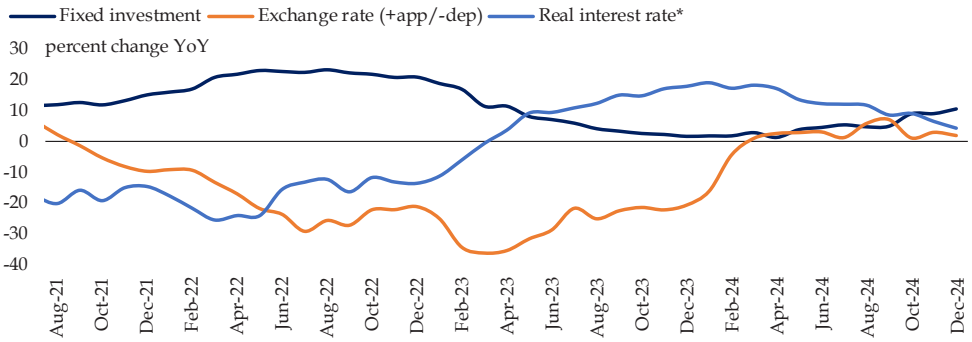
A one-off increase in *working capital loans* of Rs 154 billion was seen in *education sector,* which was about 9.0 percent of the total increase in working capital loans to private sector businesses during H1-FY25. Anecdotal evidence suggests that it was probably driven by ADR-related lending operations as the sector has never availed such a high amount of credit in past.[17]

Loans for fixed investment increased amid reduced uncertainty and improved prospects of economic stability

A sharp decline in inflation and reduction in the policy rate improved the overall business confidence (**Figure 3.15**). Moreover, slightly better macroeconomic

[15] The average working capital loan availed by the sector was just Rs 3.1 billion during H1 of last five years.
[16] The manufacturing of pharmaceutical products witnessed a net retirement of Rs 127 billion and Rs 96 billion in Jan-25 and Feb-25, respectively to result a cumulative net retirement of Rs 7 billion during Jul-Feb, FY25.
[17] The working capital loans to education sector saw a net retirement of Rs 103 billion and Rs 50 billion in Jan-25 and Feb-25, respectively. This resulted in a net decrease of Rs 0.2 billion in working capital loans during Jul-Feb, FY25 billion for the sector.

Real Interest Rate, Exchange Rate and Fixed Investment Loans **Figure 3.16**



* on forward looking basis (in percent)
Sources: SBP and PBS

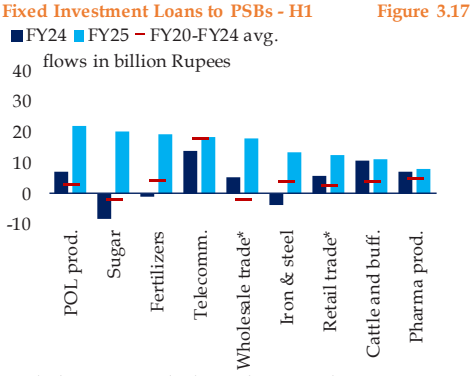
conditions and improved medium-term growth prospects, encouraged businesses to borrow for fixed investment (**Figure 3.16)**.

Specifically, *manufacture of refined petroleum products, sugar, fertilizers and nitrogen compounds, and telecommunications, wholesale and retail trade,* saw large increases in loans for fixed investment in H1-FY25. Some of these sectors even reported unprecedented increases in H1-FY25 (**Figure 3.17**).

The *manufacturing of refined petroleum products* availed fixed investment loans to support ongoing expansion project by one of the refineries aiming to produce EURO-V compliant fuels, and increase its refining capacity.[18] Other refineries also announced upgradation and expansion projects in annual reports for 2024 in light of 'Pakistan Oil Refining Policy for Upgrading Brownfield Refineries 2023 (as amended in February 2024)'.[19]

Fixed investment loans to *Sugar industry* witnessed an increase in H1-FY25, after showing a net-retirement during the last 3

Fixed Investment Loans to PSBs - H1 **Figure 3.17**



*excluding motor vehicles and motorcycles
Source: SBP

[18] Refinery Expansion and Upgradation Project (REUP) by Pakistan Refinery Limited (PRL) is aiming to increase the crude processing capacity from 50,000 bpd to 100,000 bpd. The FEED (Front End Engineering Design) study has been in process and the company has already spent US$50 million on the FEED study. Source: PRL financial reports and "Disclosure of Material" letter to PSX, May 2024.

[19] The main objective of the Policy is to modernize refineries to produce more environmentally friendly Euro-V fuels and reduce Furnace Oil production. Source: Ministry of Energy (Petroleum Division), Government of Pakistan.

years. These loans were in continuation of the announcement made by some of the sugar manufacturers last year to install ethanol distilleries.[20]

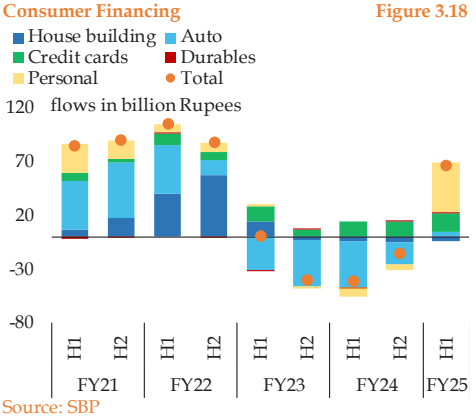
Pharmaceutical sector availed long-term loans to finance expansion in product lines and asset acquisition agreement between a local firm and a multinational firm.[21] Similarly, *telecommunication sector* obtained fixed investment loans for continued expansion in wired and wireless communication sectors, and manufacturing of mobile phones.

Consumer Financing

Consumer financing recovered in H1-FY25, after showing net retirement for the last two consecutive years. On cumulative basis, consumer financing recorded an increase of Rs 66 billion in H1-FY25 as compared to a net retirement of Rs 42 billion in H1-FY24 (**Figure 3.18**). A jump in personal loans primarily drove this expansion, which mainly reflects banks' efforts to meet ADR requirements. Moreover, amid the decline in borrowing costs, auto loans ticked up slightly, after showing net retirement in last two years.

Despite a decline in borrowing cost, housebuilding loans remained subdued. Elevated prices of construction materials and increase in tax on property transactions, have dampened demand in this segment. On the other hand, credit

Consumer Financing **Figure 3.18**



Source: SBP

cards maintained their upward momentum, continuing the growth trend observed over the past few years.

3.4 Inflation

The disinflationary trends, observed since January 2024, steepened during H1-FY25 with NCPI inflation falling to a multi-year low. The disinflation was broad-based, with dominant contribution from non-perishable food items (**Table 3.5, Figure 3.19a and 3.19b**). The interaction of improved supply conditions with weak domestic demand underpinned this steep disinflation. In addition, delay in energy price adjustments, benign global commodity prices and a favorable base effect, further reinforced the falling trend in inflation.

Improved availability of key food items mainly explains the sharp decline in non-

[20] Chashma Sugar Mills Limited and JDW Sugar Mills Limited announced to set-up these distilleries in Q3-FY24, which are expected to complete in Q3-FY25. Source: Various quarterly financial reports

[21] Lucky Core Industries (LCI) acquired long-term loans to successfully completed acquisition of manufacturing facility, selected pharmaceutical products, and associated trademarks under the Asset Purchase Agreements with Pfizer Pakistan Limited and other Pfizer groups. Source: Quarterly financial report for September 2024.

Average CPI Inflation Table 3.5

Percent

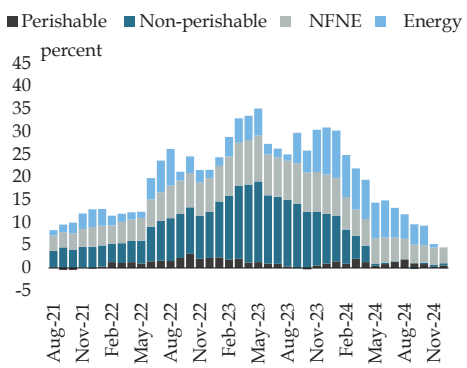
Items		Average Inflation during			Contribution		
	Wt.*	H1-FY24	H2-FY24	H1-FY25	H1-FY24	H2-FY24	H1-FY25
NCPI	**100**	**28.8**	**18.7**	**7.2**	**28.8**	**18.7**	**7.2**
Urban CPI	**100**	**28.0**	**20.7**	**8.7**	**28.0**	**20.7**	**8.7**
Food	**36.8**	**33.2**	**12.9**	**2.7**	**13.5**	**5.5**	**1.1**
Perishable	4.4	7.5	25.0	21.6	0.4	1.1	0.9
Non-perishable	32.4	37.0	11.5	0.5	13.1	4.4	0.2
NFNE (Core inflation)	**53.7**	18.4	13.9	9.5	8.7	6.3	3.5
Energy	**9.5**	47.9	76.1	24.8	5.8	8.9	4.1
Rural CPI	**100**	30.0	16.5	5.0	30.0	16.5	5.0
Food	**45.9**	33.7	12.9	0.4	16.8	6.7	0.2
Perishable	5.7	7.7	29.9	21.1	0.5	1.7	1.2
Non-perishable	40.3	37.8	10.7	-2.1	16.3	4.9	-1.0
NFNE (Core inflation)	**42.6**	25.9	19.3	12.7	3.5	6.9	4.6
Energy	**11.4**	27.2	23.3	2.0	9.6	2.9	0.3

*wt. = weight

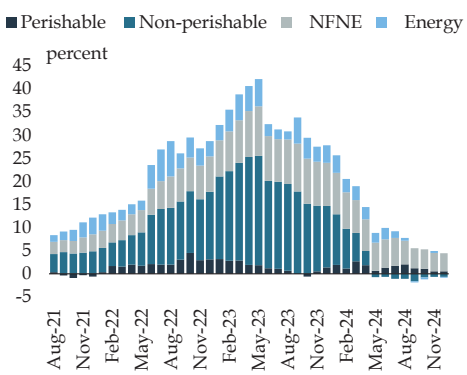
Source: PBS

perishable food inflation. Specifically, falling prices of wheat & its products alone accounted for around one-quarter of the decline in urban and one-third in rural inflation. Further, tight monetary policy stance and continued fiscal consolidation kept domestic demand in check. Despite a modest recovery in some of the demand indicators, spare production capacity in the economy helped ease inflationary pressures.[22] Also, the fading second-round effects of past shocks to food and energy prices contributed to a notable slowdown in core inflation.

Major Contributors to Inflation - Urban Figure 3.19a



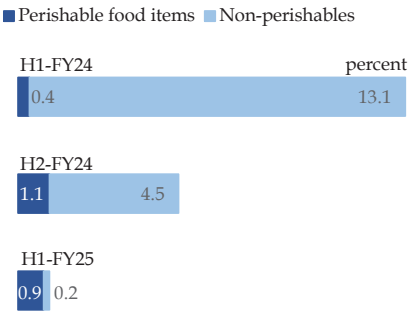
Major Contributors to Inflation - Rural Figure 3.19b



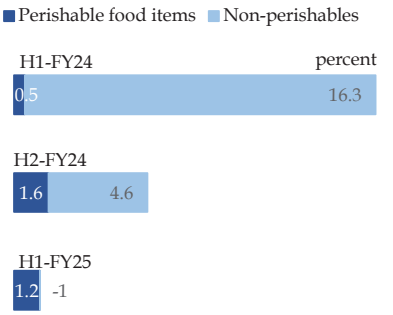
Source: PBS

[22] During H1-FY25, production in around half of the 123 LSM industries remained lower than the average levels observed during FY21-22, when the real GDP growth posted around 6 percent increase, indicating spare capacity in the economy.

Urban Food Inflation - Major Contributors **Figure 3.20a**



Rural Food Inflation - Major Contributors **Figure 3.20b**



Source: PBS

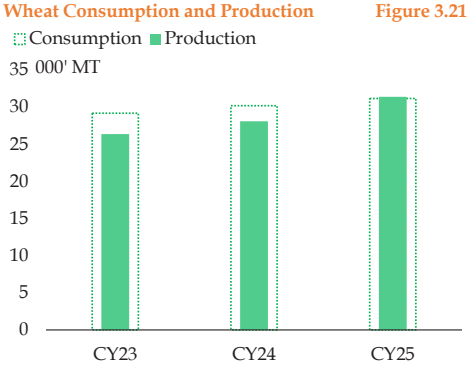
The significant impact of supply conditions on inflation dynamics highlights the need to introduce productivity-enhancing measures as one of the important policy interventions to achieve long-term price stability. Specifically, targeted productivity-enhancing measures in agriculture sector — such as optimizing input use, adopting efficient irrigation techniques, and logistics improvements can prevent supply disruptions and stabilize food inflation. Similarly, investment in human and physical capital can drive productivity gains, thereby contributing to stable inflation overtime (**Chapter 6**).[23]

Ample supply of key items lowered food inflation

Sufficient availability of key food items, and discontinuation of government intervention in the market for agricultural commodities mainly contributed to the steep decline in food inflation during H1-FY25 **(Figure 3.20a & 3.20b)**.

Specifically, prices of wheat and wheat products fell by 25 percent across urban and rural areas in H1-FY25. The bumper wheat crop in FY24, which was sufficient to meet domestic demand, along with large import volumes mainly underpinned the

Wheat Consumption and Production **Figure 3.21**



Note: The data shown corresponds to the crop year
Source: USDA

[23] Kim, S. Lim, H. & Park, D. (2012). Does Productivity Growth Lower Inflation in Korea? *Journal of Applied Economics*. Vol.45, No. 16. The study investigates the relationship between productivity growth and inflation using quarterly data from 1985 to 2002. They find that productivity growth unidirectional influences inflation, with a 1 percent increase in labor and Total Factor Productivity (TFP) reducing CPI inflation by 0.07–0.08 percent and 0.37–0.44 percent, respectively.

decline in prices of wheat and wheat products during H1-FY25 (**Figure 3.21**). In addition, the government's decision to discontinue the minimum support price (MSP) and withdrawal from procurement operations further pushed prices downward. In fact, the prices of wheat flour dropped close to the level seen in H1-FY23. Prices of other major non-perishable food items, such as rice, sugar and cooking oil, also fell compared to H1-FY24. This collective reduction more than offset the increase in prices of perishable food items.

Perishable food inflation saw a notable increase during H1-FY25

The prices of onions, tomatoes, and fresh vegetables rose sharply during H1-FY25. Specifically, onion prices increased by 40 percent in urban and 51 percent in rural CPI in H1-FY25, accounting for approximately 25 percent of urban and 33 percent of the rural perishable food inflation. The rise in onion prices was primarily due to constrained domestic supply. India, the world's second-largest onion exporter, imposed an export ban from December 2023 till June 2024, which resulted in a global supply shortage. This development led domestic traders to capitalize on the opportunity and export their produce at higher prices. As a result, onion exports more than doubled in the last quarter of FY24,[24] squeezing domestic supply in the first quarter of FY25. However, the price pressures eased with the arrival of Sindh's crop in Q2.

Energy inflation moderated as global oil prices eased and the exchange rate remained broadly stable

Urban energy inflation fell sharply from 47.9 percent in H1-FY24 to 24.8 percent in H1-FY25, reflecting the fading effects of the November 2023 gas tariff hike, which continued to exert upward pressure during the first four months of H1-FY25 **(Figure 3.22)**. As a result, energy's contribution to

Energy Inflation — Figure 3.22

Contribution, YoY

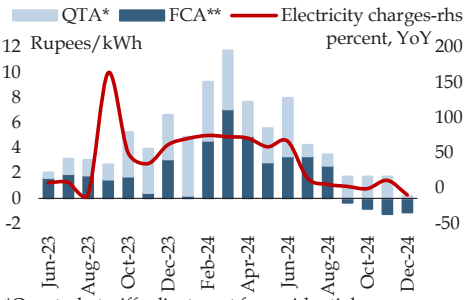
Urban	Jan-23	Feb-23	Mar-23	Apr-23	May-23	Jun-23	Jul-23	Aug-23	Sep-23	Oct-23	Nov-23	Dec-23	Jan-24	Feb-24	Mar-24	Apr-24	May-24	Jun-24	Jul-24	Aug-24	Sep-24	Oct-24	Nov-24	Dec-24
Energy	16.3	37.1	50.3	52.1	61.2	19.4	13.7	9.4	66.1	41.6	80.8	92.0	93.9	76.1	74.6	74.2	67.7	72.6	52.9	42.8	34.2	32.9	4.7	-0.7
Electricity charges	0.3	3.2	12.6	11.6	19.8	3.1	3.8	-4.1	41.2	20.2	13.9	24.2	27.8	25.2	25.4	23.1	19.4	23.2	6.1	2.3	1.0	-0.2	3.3	-3.1
Gas charges	0.0	8.1	8.6	8.9	9.3	7.0	6.0	5.5	8.0	6.7	55.3	56.3	56.1	48.7	47.2	48.3	47.7	48.8	43.3	41.5	39.7	38.9	3.7	3.5
Liquified hydrocarbons	0.4	3.3	2.6	2.6	3.0	0.7	-0.1	0.2	0.5	1.5	1.5	1.7	1.7	-0.5	-0.1	0.1	-0.8	-0.2	1.3	0.5	0.0	-0.3	0.3	0.3
Solid fuel	0.8	0.9	1.0	1.1	1.2	0.9	0.7	0.7	0.9	0.8	0.7	0.6	0.6	0.4	0.4	0.4	0.4	0.4	0.4	0.3	0.3	0.3	0.2	0.3
Motor fuel	14.7	21.6	25.5	27.9	27.9	7.7	3.3	7.1	15.4	12.5	9.4	9.1	7.6	2.3	1.7	2.4	1.0	0.4	1.9	-1.7	-6.8	-5.8	-2.8	-1.7
Rural	**Jan-23**	**Feb-23**	**Mar-23**	**Apr-23**	**May-23**	**Jun-23**	**Jul-23**	**Aug-23**	**Sep-23**	**Oct-23**	**Nov-23**	**Dec-23**	**Jan-24**	**Feb-24**	**Mar-24**	**Apr-24**	**May-24**	**Jun-24**	**Jul-24**	**Aug-24**	**Sep-24**	**Oct-24**	**Nov-24**	**Dec-24**
Energy	25.7	37.5	46.6	47.3	52.5	19.8	14.9	12.0	48.6	36.7	25.7	30.4	31.2	22.7	23.6	22.0	17.6	20.9	11.4	4.8	-1.9	-3.6	3.6	-1.1
Electricity charges	0.2	2.1	8.3	7.5	12.6	2.1	2.7	-3.0	25.8	13.5	9.1	15.4	17.5	16.9	17.1	15.4	13.0	15.6	4.3	1.6	0.7	-0.2	3.1	-2.9
Liquified hydrocarbons	2.4	5.3	4.5	4.5	4.7	1.5	0.5	0.6	0.9	2.4	2.5	2.5	2.5	0.0	0.7	0.6	-0.4	0.8	1.8	1.1	-0.1	-0.2	0.4	0.4
Solid fuel	11.5	12.9	13.9	13.8	14.1	10.2	9.0	8.2	9.9	8.6	6.5	5.5	5.4	4.0	4.4	4.1	4.3	4.1	3.8	3.7	3.4	3.2	3.4	3.4
Motor fuel	11.6	17.1	19.9	21.4	21.2	6.1	2.8	6.2	12.0	12.1	7.6	7.1	5.9	1.8	1.4	1.9	0.7	0.3	1.5	-1.6	-5.9	-6.4	-3.3	-2.0

Note: The color gradient represents intensity, with green indicating lower values, yellow for moderate values, and red for higher values.

Source: PBS

[24] Source: Pakistan Bureau of Statistics

Trends in Electricity Charges and Tariff Adjustments **Figure 3.23**

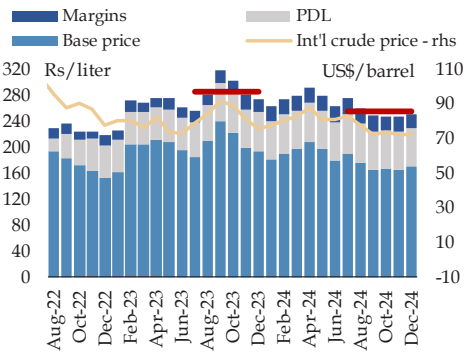


*Quarterly tariff adjustment for residential consumers
** Fuel charge adjustments
Sources: NEPRA and PBS

urban headline inflation receded significantly towards the end of H1-FY25.

The government's approach to electricity tariff adjustments in H1-FY25 further moderated the energy inflation. Although an annual adjustment[25] of Rs 5.72/kWh was scheduled to take effect on July 1, 2024, its implementation was staggered to give relief to consumers. An initial increase of Rs 3.29/kWh was applied between July and September 2024, with the remaining increment phased-in from October onward. Additionally, the collection of quarterly adjustment charges for July and August was advanced to June, providing temporary respite in electricity tariffs during H1-FY25 (**Figure 3.23**).[26]

Composition of Motor Fuel Prices **Figure 3.24**



Source: OGRA

Favorable fuel charge adjustments,[27] which declined during Sep-Dec 2024 compared to the same period last year, also contributed to lower electricity prices. Meanwhile, softening global oil prices and stable PDL rates alleviated fuel price pressures (**Figure 3.24**).

Underlying inflationary pressures considerably eased in H1-FY25

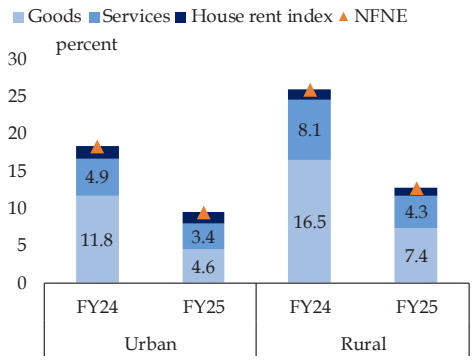
Underlying inflationary pressures receded during H1-FY25, with Non Food Non Energy (core) inflation coming down to almost half of the level seen in H1-FY24 (**Figure 3.25**). Urban core inflation continued the almost consistent declining trend since December 2023, reaching a 34-month low of 8.1 percent in December 2024.[28]

[25] Annual rebasing adjusts electricity tariffs based on Power Purchase Price (PPP), distribution and supply margins, and prior period adjustments. For FY25, the PPP increased by Rs 4.86/kWh compared to FY24, as per the NEPRA notification dated July 11, 2024.
[26] Source: NEPRA notification dated July 11, 2024, and May 31, 2024, effective from June 01, 2024.
[27] Fuel charge adjustments reflect changes in the fuel cost component of the Power Purchase Price (PPP). These adjustments are made on a monthly basis to account for fluctuations in fuel prices.
[28] Rural core inflation also continued the almost consistent declining trend since October 2023, reaching a 33-month low of 10.7 percent in December 2024.

Item-wise analysis of the core basket indicates the deceleration was broad-based. Around three-fifth of the items in the urban basket recorded single-digit increase in prices in H1-FY25, compared to only 11 percent in H1-FY24. Similarly, around 44 percent of the items in rural basket saw single-digit increase in prices in H1-FY25, compared to only 13 percent in H1-FY24 (**Figure 3.26a and 3.26b**).

Decline in core goods' prices mainly explains the decrease in core inflation, whereas services inflation somewhat softened, though it remained elevated.[29] Weak domestic demand, stable exchange rate, decline production costs as indicated by WPI inflation, fading second-round effects of past shocks to food and energy prices, and ease in inflation expectations explain the significant moderation in core inflation.

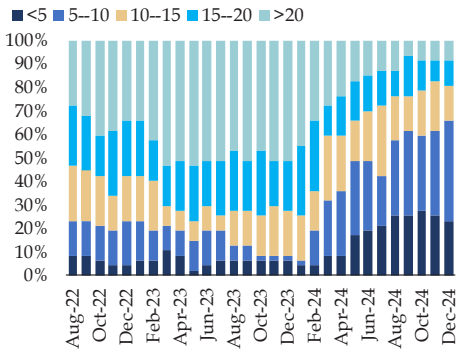
NFNE Inflation **Figure 3.25**



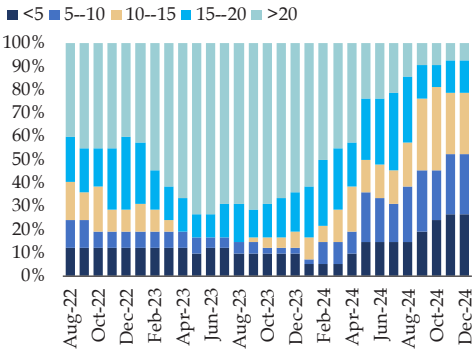
Source: PBS

Continued tight monetary policy stance and fiscal consolidation were instrumental in keeping domestic demand subdued.[30] While there were signs of recovery in demand during H1-FY25, spare capacity in large industries reflects that demand-

Frequency Distribution of Urban NFNE Items **Figure 3.26a**



Frequency Distribution of Rural NFNE Items **Figure 3.26b**

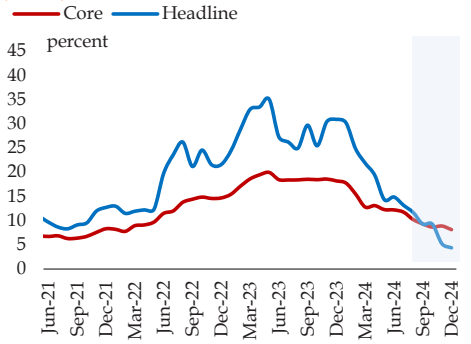


Sources: PBS and SBP staff calculations

[29] The higher services inflation is due to slower adjustments in wages and contracts, that take longer to reflect fluctuations in raw material and energy costs, causing services inflation to trail both goods inflation and headline inflation during high inflation periods. Source: Bańbura, M. Bobeica, E. & Hernández, C.M. (2023). What drives core inflation? The role of supply shocks. *ECB Working Paper Series*, No. 2875.

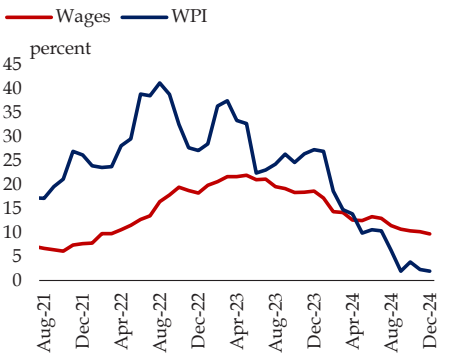
[30] The impact of tight monetary policy stance typically begins to influence inflation in 6 to 10 months, with the full transmission materializing over 18 to 24 months. Source: Hussain, F., Hussain, F. & Hyder, K. (2022). Monetary Policy Effectiveness in Pakistan: An In-depth Analysis of Four Transmission Channels, *SBP Working Paper Series*, No. 109.

Trends in Headline and Core Inflation (Urban) **Figure 3.27**



Source: PBS

Trends in Wages and WPI **Figure 3.28**

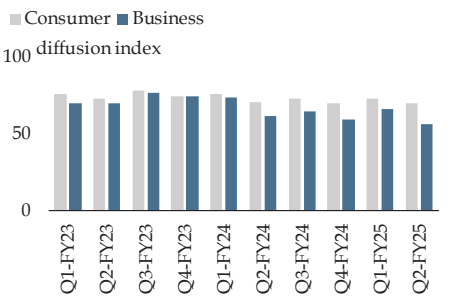


Source: PBS

driven pressures remained contained.[31] Furthermore, moderation in global commodity prices amid ease in supply chain bottlenecks and exchange rate stability reduced imported inflation.

In addition to these demand and supply dynamics, dissipating second-round effects of past shocks to food and energy prices that had spilled over to broader prices and wages during FY24, further escalated the disinflationary process during H1-FY25. This can be evidenced by the convergence of the headline to core inflation in the last few months of FY24 (**Figure 3.27**), which indicates the fading impact of the shocks to food and energy prices.[32,33] Hence, as the

Inflation Expectations **Figure 3.29**



Note: Diffusion index ranges from 0 to 100, with 50 indicating neutrality; above 50 signals higher inflation expectations, below 50, lower.

Source: SBP

[31] Fisher, P.G., Mahadeva, L. & Whitley, J. D. (2014). The output gap and inflation: Experience at the Bank of England, *BIS Conference Papers*, Vol.4. Examining the UK economy, Fisher et al. (2014) find that the output gap plays a significant role in forecasting inflation. The impact of policy changes on inflation in a given period depends not only on the current period's output gap but also on past and future output gap levels. Moreover, a negative demand shock, which gives rise to a negative output gap leads to disinflationary trends, which may sustain on account of excess productive capacity in the economy.

[32] Cecchetti, S. G. & Moessner, R. (2008). Commodity prices and inflation dynamics, *BIS Quarterly Review*, 12/2008. While investigating the presence of second round effects of shocks to food and energy prices on headline inflation in cross section of emerging economies, they found that core inflation did not revert to headline inflation which suggested absence of second round effects on wages and expectations. They argued that when headline inflation returns to the core, it indicates transitory nature of commodity price shocks, reducing concerns about second-round effects.

[33] Borio, C., Lombardi, M., Yetman, J., & Zakrajšek, E. (2023). The two-regime view of inflation, *BIS Papers*, No. 133. Examining inflation regimes, Borio et al. (2023) show that a decline in long-term inflation expectations strengthens the reversion of headline inflation to core, mitigating the persistence of second-round effects.

effect of temporary shocks to food and energy prices waned, the growth in wages and input costs also weakened during H1-FY25 (**Figure 3.28**).[34,35] Similarly, lower inflation expectations of consumers and businesses, especially during Q2-FY25, also indicate the fading impact of the transitory shocks (**Figure 3.29**).

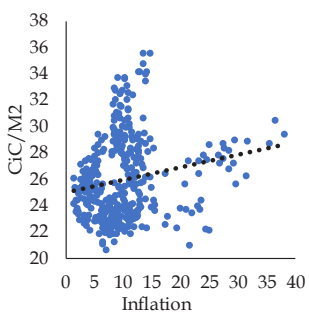
Box 3.1: Recommendations to Contain Currency in Circulation in Pakistan*

Literature identifies several factors responsible for increase in CiC in Pakistan, including changes in financial landscape, macroeconomic conditions, tax policies and frequent episodes of economic and policy uncertainty. Khaskheli et al. (2013) and Ejaz et al. (2020) found that CiC increased during the episodes of high inflation, as higher prices necessitate increased cash withdrawals to meet transaction demand (**Figure 3.1.1a**).[i,ii] Moreover, during periods of heightened economic and political instability, people tend to hold more cash as a precautionary measure (**Figure 3.1.1b**). Contrary to general economic theory that defines a negative relationship between interest rates and CiC, high interest rates seem to have played little role in mitigating currency demand in Pakistan (**Figure 3.1.1c**). Predominant use of cash based transactions in the informal economy may explain this trend.[iii] Low documentation requirements and lack of regulatory oversight encourage the use of cash as preferred mode of transactions in the informal economy.

The past trends suggest that currency in circulation declined during 1990s with improvements in financial inclusion amid banking sector reforms (**Figure 3.1.2**), which enhanced access to formal financial services. This trend was further reinforced by financial innovations such as credit/debit cards, and online banking. However, the imposition of a withholding tax (WHT) on non-filers' banking transactions in 2015[iv] incentivized cash transactions fueling large increase in the CiC-to-M2 ratio.

To streamline efforts towards financial inclusion, SBP has introduced two financial inclusion strategies (NFIS) - 2015-18 and 2019-23. These strategies were aimed at increasing outreach of financial infrastructure to unbanked population through improvement in regulatory framework, introducing

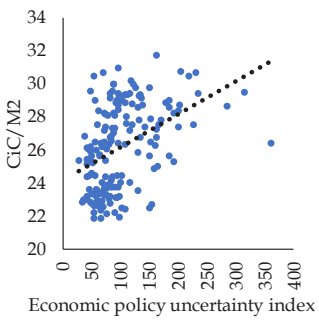
Inflation and CiC/M2 Figure 3.1.1a



Note: Data points range from Jun-90 till Aug-24

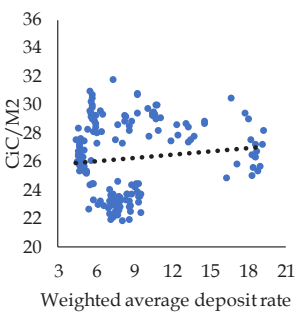
Source: SBP

EPU Index and CiC/M2 Figure 3.1.1b



Note: Data points range from Aug-10 till Aug-24

WADR and CiC/M2 Figure 3.1.1c

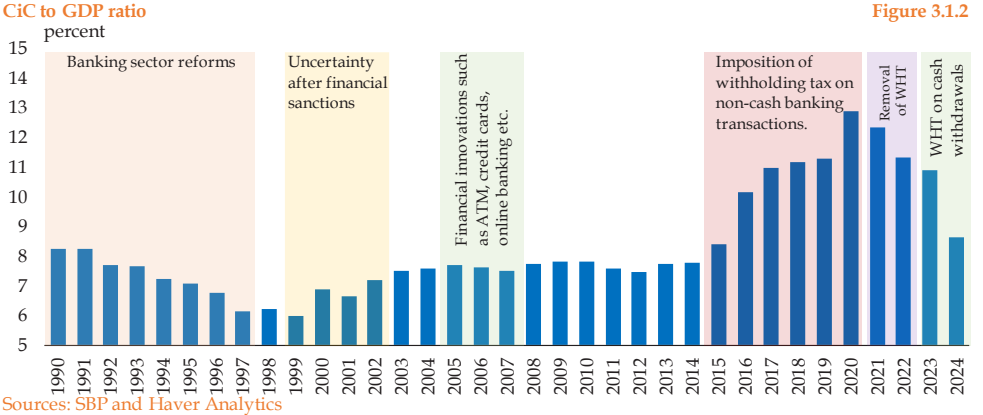


Note: Data points range from Jan-11 till Aug-24

[34] Wages in H1-FY25 increased by 10.9 percent as compared to 19.2 percent in H1-FY24.

[35] Wages include charges/wages for tailoring, household servants, cleaning and laundering, construction workers, garbage collection, dental services, doctor fees, mechanical services, and personal grooming services.

CiC to GDP ratio **Figure 3.1.2**



Sources: SBP and Haver Analytics

digitization of financial services, and increasing public-private partnership. As a result of these efforts, percentage of adult population having a bank account increased to 64 percent in 2023 from 13 percent in 2014. Further to capitalize on the achievements in the two strategies, the SBP launched its third NFIS - 2024-2028, recently.

Increasing access to financial services is the key to reduce the use of cash in the economy. In view of literature and international experiences, several recommendations are proposed to further reduce the use of cash in the economy.

Enhancing financial and digital literacy: Pakistan's low financial literacy rate, indicates potential for greater financial inclusion by stepping-up efforts to enhance financial literacy. For instance, Sri Lanka, with financial literacy rate of 59 percent compared to Pakistan's 26 percent has achieved much higher financial inclusion as (**Table 3.1.1**).[v,vi] This highlights the transformative impact of financial education on financial inclusion. Moreover, in view of low literacy levels in the country, removing barriers, such as extensive documentation requirements for opening bank accounts may increase outreach of formal financial services.[vii] Similarly, revamping the role of credit bureaus to assess credit worthiness of small borrowers and substituting collateral requirements with social collateral and personal guarantees can significantly enhance financial inclusion.

Enhancing the quality of customer services: Anjum et al. (2017) identified various factors that banks should focus to expand their quality of services.[viii] Key factors include staff behavior, which can greatly influence customer satisfaction through positive interactions. Additionally, comfortable and well-organized seating arrangements, clear and helpful guidance, efficient processes and reduced wait times enhance the overall customer experience. Improvement in quality of financial services and increased client satisfaction can further reduce barriers to financial inclusion.

Expanding Shariah-compliant banking to cater to religious preferences: According to the Global Findex Database, 7 percent of Pakistanis cite religious reasons for not having a bank account. Expanding shariah-compliant banking solutions also hold potential to enhance financial inclusion by integrating individuals voluntarily excluded from the formal financial system due to religious beliefs.

Financial Inclusion Indicators **Table 3.1.1**

	Year	Pakistan	Sri Lanka	India	Bangladesh
Percentage of population with formal bank account	2021	64%[a]	89%	78%	53%
Financial literacy rate	2014	26%	59%[b]	24%	19%
Commercial bank branches per 100,000 adults	2023	10.8	17.3	14.5	8.8
ATMs per 1,000 adults	2023	12.0	-	24.9	13.6
Mobile money agent outlets: active per 100,000 adults	2023	181.8	-	-	601.9

[a] 2023, [b] 2022

Sources: SBP, WB Findex, IMF Financial Access Survey, and GFLEC

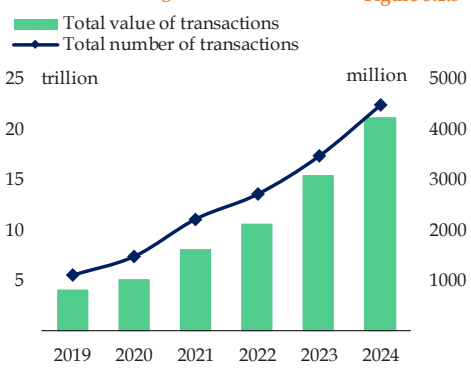
Removing tax on cash withdrawals: The imposition of a withholding tax (WHT) on non-filers' banking transactions in 2015 led to a large increase in the CiC-to-M2 ratio. SBP (2017) found that WHT led to 3.7 percentage point increase in growth of CiC during Jul 2015-Apr 2017.[ix] CiC saw a significant decline after the removal of WHT. Hence, there is a need to refine tax policy to avoid unintended consequences of measures that lead to increase in cash circulation in the economy.

Increasing documentation of the economy: Pakistan has an unusually large informal economy. Since transactions in informal sector are often conducted outside the banking system, cash remains the preferred medium due to its convenience and privacy. There is a need to direct policy efforts to encourage documentation of the economy, which may reduce use of cash based transactions.

Closing the gender gap with women-focused financial programs and tools: Only 47 percent of women in Pakistan have formal accounts, compared to 81 percent of men.[x] Addressing gender disparity in financial inclusion holds a unique opportunity. Women can be empowered through enhancing their mobility, access to technology and targeted financial programs.

Digitalization can play key role to move towards cashless economy. Over the years, significant steps have been taken to expand digital financial services. Mobile phone penetration has enabled innovations like branchless banking, which began in 2008 and has since grown rapidly (**Figure 3.1.3**). Initiatives like the Asaan Mobile Account (AMA) in 2015 and Roshan Digital Account (RDA) in 2020 facilitate easier access to banking services, even for those with basic mobile phones.[xi] The introduction of RAAST in 2021, a cost-free and interoperable instant payment system, has further driven the adoption of digital financial services, enhancing efficiency and inclusivity. Nonetheless, obstacles such as limited internet access, technological barriers, and cybersecurity concerns continue to hinder progress. The introduction of digital currencies and mobile wallets have significant potential to increase financial inclusion. Regulatory oversight and robust security measures can also aid leveraging digital solutions to reduce reliance on cash-based transactions.

Branchless Banking Transactions **Figure 3.1.3**



Source: SBP

** The contribution of Muhammad Zuhaib is acknowledged in writing this box.*

References

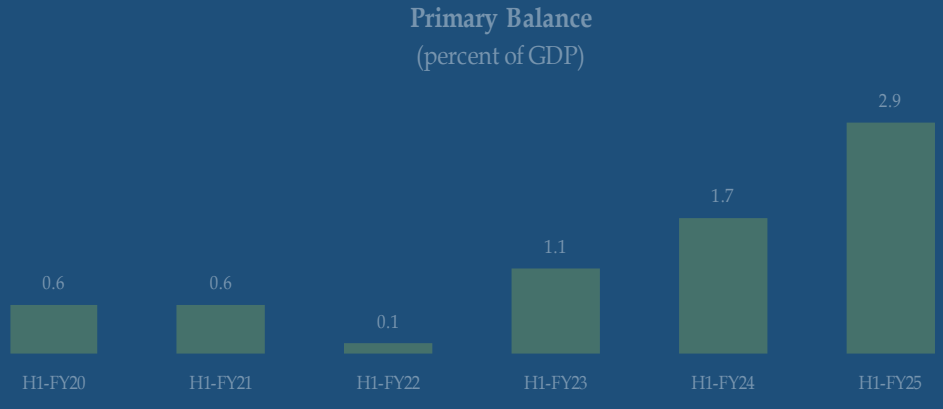
[i] Khaskheli, G.H. Ahmed, A. & Hyder, K. (2013). The Behavior and Determinants of the Currency Deposit Ratio in Pakistan, *SBP Research Bulletin*, Vol.9, No.1.

[ii] Ejaz, M. Iqbal, J. Nafees, M. & Pasha, F. (2020). The Conundrum of Rising Demand for Currency in Pakistan, *SBP Staff Notes 01/20*.
[iii] According to World Economics (2023), the size of the informal economy is 35.7 percent, Available at: www.worldeconomics.com
[iv] The government imposed a withholding tax on non-filers of income tax returns through the Finance Act 2015 at a rate of 0.6 percent on all non-cash banking transactions. It was later removed through the Finance Act 2021. Moreover, a WHT tax on cash withdrawals was introduced through the Finance Act 2005 and was also removed through the Finance Act 2021. However, it was reintroduced through the Finance Act 2023.
[v] CBSL (2021). Financial Literacy Survey Sri Lanka, Central Bank of Sri Lanka, Colombo.
[vi] Klapper, L. Lusardi, A. & Oudheusden, P.V. (2014). Financial Literacy Around the World, *Global Financial Literacy Excellence Center*, California.
[vii] WB (2009). Bringing Finance to Pakistan's Poor, The World Bank, Washington, D.C. USA.
[viii] Anjum, M. Xiuhun, B. Abbas, J. & Shuguang, Z. (2017) Analyzing predictors of customer satisfaction and assessment of retail banking problems in Pakistan, *Cogent business & management*. Vol.4, No.1.
[ix] SBP (2017). State of Pakistan's Economy, Annual Report FY17, State Bank of Pakistan, Karachi
[x] SBP (2024). National Financial Inclusion Strategy 2024-28, State Bank of Pakistan, Karachi
[xi] SBP (2022). Financial Stability Review, Annual Report FY22, State Bank of Pakistan, Karachi

4

Fiscal Policy and Public Debt

The pace of fiscal consolidation steepened in FY25. The overall fiscal deficit was contained to the lowest level since H1-FY05, while primary balance posted a larger surplus. This strong fiscal performance largely owes to higher SBP profits, followed by decent gains in tax revenue and decline in disbursement of power subsidies. The fiscal consolidation slowed the pace of public debt accumulation. Moreover, the overall public debt profile improved in terms of maturity, roll over, and currency risk. For the first time, GoP also conducted buyback auctions of market treasury bills manifesting the easing of liquidity conditions for the government. The improved fiscal performance and foreign exchange earnings slightly boosted the overall debt repayment capacity.



4 Fiscal Policy and Public Debt

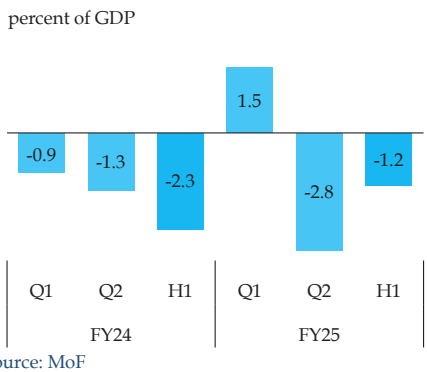
4.1 Fiscal Trends and Policy Review

Fiscal consolidation continued, with primary balance recording a higher surplus in H1-FY25 compared to the same period last year. In the same vein, overall fiscal deficit in H1-FY25 nearly halved compared to the same period last year (**Figures 4.1a & 4.1b**). This improvement was driven by a significant increase in revenue, as well as a decline in non-interest expenditure as percent of GDP.[1] Meanwhile, contribution of provincial surplus to the primary balance doubled compared to the last year (**Table 4.1**).

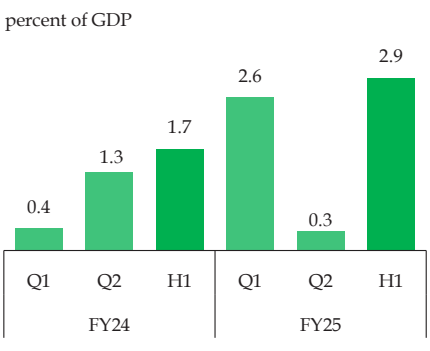
The major contribution to improved revenue performance came from record high SBP profit, followed by modest gains in tax revenue as percent of GDP. Despite the above-target collection of direct taxes, the half-year target for tax revenue was missed by a wide margin. This shortfall was due to underperformance of indirect taxes, notwithstanding the additional revenue mobilization measures introduced in the FY25 budget. Faster-than-anticipated decline in inflation and relatively muted growth in import values in PKR terms, as well as less than sufficient administrative efforts, constrained the indirect tax collection.

On the other hand, the decline in non-interest expenditure (as percent of GDP) could be attributed to lower-than-budgeted disbursement of power subsidies, austerity measures and pension reforms. While grants increased due to enhanced coverage under the Benazir Income Support Programme (BISP), development spending remained almost unchanged in terms of GDP. In contrast to the non-interest expenditure, mark-up payments continued to increase owing to rising debt stock from persistently high fiscal deficit in recent years. Nonetheless, declining interest rates, stable exchange rate, and slower debt accumulation helped moderate the pace of increase in interest payments.

Fiscal Balance **Figure 4.1a**



Primary Balance **Figure 4.1b**



Source: MoF

[1] Non-interest expenditure excludes the statistical discrepancy. If this discrepancy is included, the non-interest expenditure increases from 4.8 percent of GDP in H1-FY24 to 5.0 percent in H1-FY25.

Consolidated Fiscal Indicators **Table 4.1**

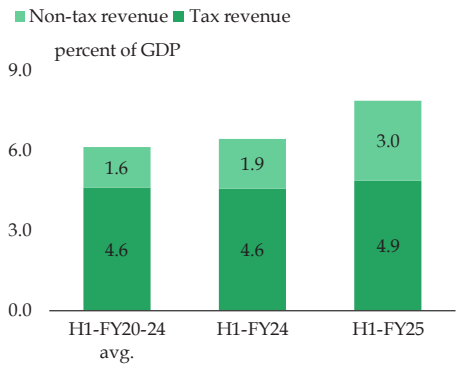
	Values (billion Rupees)				Growth (percent)			
	FY24	FY25			FY24	FY25		
	H1	Q1	Q2	H1	H1	Q1	Q2	H1
Total revenue	**6,854**	**5,827**	**3,937**	**9,764**	**45.9**	**117.0**	**-5.6**	**42.5**
Tax revenues	4,834	2,776	3,292	6,067	29.5	25.2	25.8	25.5
FBR taxes	4,469	2,563	3,062	5,625	30.3	25.5	26.1	25.9
Non-tax revenue	2,020	3,051	645	3,696	108.8	550.9	-58.4	83.0
SBP profit	972	2,500	0	2,500	161.9	-	-	157.2
PDL collection*	473	262	288	549	165.9	17.8	14.8	16.2
Total expenditure	**9,262**	**3,931**	**7,370**	**11,302**	**45.1**	**7.2**	**31.7**	**22.0**
Current expenditure	8,565	3,537	6,581	10,118	41.3	11.5	22.1	18.1
Mark-up payments	4,220	1,306	3,835	5,142	64.0	-5.3	35.0	21.8
Development expenditure & net lending	661	277	467	744	3.9	-2.0	23.3	12.5
PSDP	673	278	494	772	13.9	-2.8	27.7	14.7
Federal	130	23	110	133	-4.4	-44.5	23.2	1.9
Provincial	543	256	383	639	19.4	4.1	29.0	17.7
Statistical discrepancy	36	117	322	440	-111.4	-44.4	-284.4	1,124.2
Fiscal balance	**-2,408**	1,896	-3,434	**-1,538**	**-**	**-**	**-**	**-**
percent of GDP	***-2.3***	*1.5*	*-2.8*	***-1.2***	-	-	-	-
Primary balance	**1,812**	3,202	401	**3,604**	**-**	**-**	**-**	**-**
percent of GDP	***1.7***	*2.6*	*0.3*	***2.9***	-	-	-	-
Revenue balance	**-1,711**	2,290	-2,645	**-354**	**-**	**-**	**-**	**-**
percent of GDP	***-1.6***	*1.8*	*-2.1*	***-0.3***	-	-	-	-
Financing (net)	2,408	-1,896	3,434	1,538	-	-	-	-
External	608	-157	78	-79	-	-	-	-
Domestic	1799	-1,739	3,356	1,617	-	-	-	-
Memorandum items:					-	-	-	-
Provincial balance	289	360	416	775				
percent of GDP	*0.3*	*0.3*	*0.3*	*0.6*				
Non-interest expenditure^	5,006	2,508	3,213	5,720	-	-	-	-
GDP#	106,045	124,150	124,150	124,150	-	-	-	-

*on petrol/diesel; ^total expenditure minus mark-up payments & statistical discrepancy; #budget estimate for the full year

Source: MoF

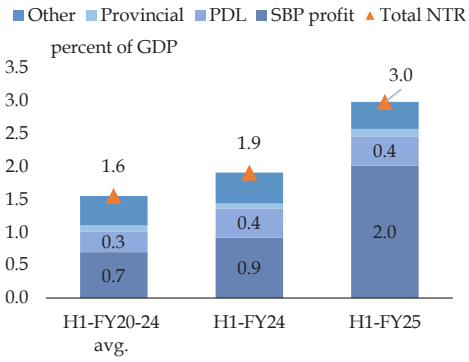
While fiscal consolidation continued in the first half of FY25, it is important to assess the sustainability of the underlying trends. The impact of high interest rates, a major factor behind recent gains, has started to taper off, akin to other factors like stable exchange rate and low inflation outturns. This is already reflected in subdued indirect tax collection despite revenue measures introduced in the FY25 budget. Meanwhile, the rise in interest payments, albeit slowing down, has further squeezed the fiscal space for productivity-linked spending on health, education and PSDP. In this backdrop, it is imperative to implement reforms aimed at broadening of tax base and providing resilience to revenue mobilization. The reforms should also rationalize taxation across sectors and products and reduce indirect taxes, which are inherently regressive, for an equitable distribution of

Breakdown of Total Revenue **Figure 4.2**



Source: MoF

Breakdown of Non-tax Revenue **Figure 4.3**



Source: MoF

tax burden.[2] In this regard, amendments to provincial agriculture income tax regimes is a step in the right direction.

4.2 Revenue

Total revenue collection increased to 7.9 percent of GDP in H1-FY25, up from 6.5 percent last year. In continuation of last year's trend, most of this increase came from non-tax revenue (NTR) (**Figure 4.2**).

Non-tax revenue increased from 1.9 percent of GDP in H1-FY24 to 3.0 percent in H1-FY25 (**Figure 4.3**). This increase was mainly on account of transfer of record SBP profit, which resulted from SBP's money market operations at elevated interest rates, as well as net exchange gains amid stronger PKR during FY24.[3,4] Another factor that supported higher non-tax revenue was PDL collection, backed by recovering POL sales.[5] However, as the PDL rate remained unchanged, its contribution to NTR growth declined compared to last year.[6] Moreover, Punjab's income from investments also contributed to total non-tax revenue.

Tax Revenue

Tax revenue increased from 4.6 percent of GDP in H1-FY24 to 4.9 percent in H1-FY25, with direct taxes being the major contributor (**Table 4.2**). Income tax from banks and withholding taxes played a key role. The rise in banks' tax payments could

[2] For instance, there has been a sharp rise in share of income tax paid by salaried individuals, as well as banks, in the tax revenue over the last few years. In comparison, share of agriculture income tax collected by provinces has remained very low and stagnant. In case of products, domestic sales tax collection has been majorly contributed by electrical energy during recent years; having about one-third share in total domestic sales tax collection.

[3] The annual profit of SBP is transferred to the government after publication of the audited balance sheet, usually in the first half of the following fiscal year.

[4] SBP recorded net exchange gains of Rs 186 billion in FY24, compared to a considerably high net exchange loss of Rs 875 billion in FY23. Source: SBP Annual Financial Statements 2023-24

[5] POL sales increased by 7.3 percent in H1-FY25, compared a decline last year. Source: OCAC

[6] PDL on petrol and diesel was last increased to Rs 60 per liter each on September 01, 2023 and November 01, 2023, respectively.

Tax Revenue in H1 **Table 4.2**

value in billion Rupees; growth in percent

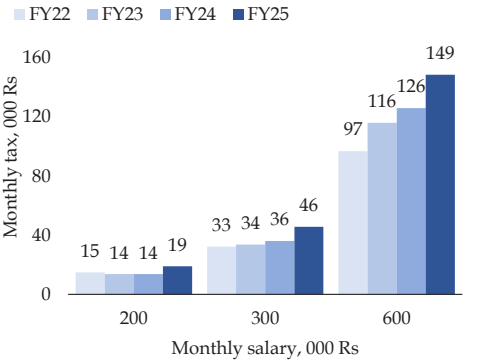
	Value		Growth		Percent of GDP	
	FY24	FY25	FY24	FY25	FY24	FY25
Direct taxes	2,149	2,782	40.9	29.4	2.0	2.2
Indirect taxes	2,320	2,843	21.9	22.5	2.2	2.3
Sales tax	1,515	1,898	19.1	25.3	1.4	1.5
Customs	541	599	15.8	10.7	0.5	0.5
FED	265	347	61.0	31.0	0.2	0.3

Source: FBR

be attributed to increase in the minimum tax rate from 39 percent to 44 percent.[7] Moreover, there was a considerable increase in banks' profit-before-tax, driven by investment in government securities at higher interest rates.[8] In case of withholding taxes (WHT), the major boost came from personal income tax (PIT), helped by a significant uptick in progressive tax rates introduced in the FY25 budget (**Figure 4.4**).[9]

It is pertinent to highlight that the contribution of direct taxes to growth in tax revenue, which has remained quite robust in FY23 and FY24, somewhat waned in H1-FY25. A key factor behind this trend is declining interest rate environment, which has impacted the interest-sensitive components of the direct taxes. This is particularly evident in slower growth of WHT on the income earned by individuals on their profit-bearing bank accounts and

Personal Income Tax in Recent Years **Figure 4.4**



Source: taxcalculator.pk

investment in government securities, and banks' income tax (**Figure 4.5**).

Indirect taxes inched up from 2.2 percent of GDP to 2.3 percent of GDP, in contrast to a decline last year (**Table 4.2**). The muted performance of indirect taxes was despite a reasonable growth in sales tax and federal excise duty (FED). Upward revision in electricity tariffs largely drove the increase in sales tax.[10] Moreover, the government announced new revenue mobilization measures in the FY25 budget to strengthen tax collection. For instance, it rationalized the list of goods subject to exemptions or concessional rates, like tractors, leather and textile products, local supply of poultry feed, stationery items, and DAP.[11] Similarly, the tax on mobile phone (worth less than US$ 500) was

[7] Simultaneously, advances to deposit ratio (ADR) tax on banks was abolished. Source: www.pakistancode.gov.pk/english/UY2FqaJw1-apaUY2Fqa-apaUY2Npa5pqbw%3D%3D-sg-jjjjjjjjjjj

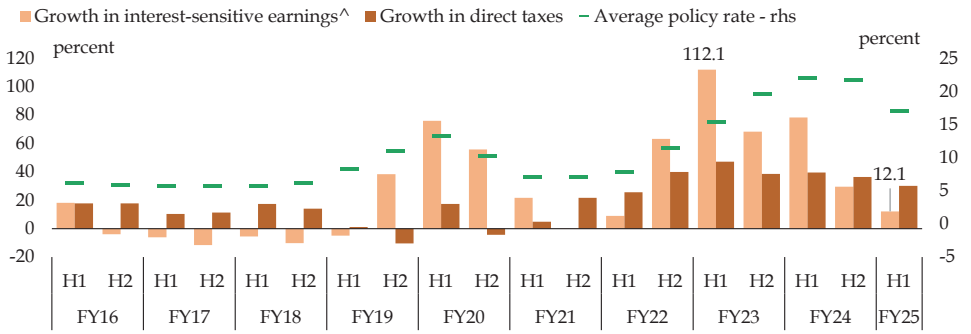
[8] Banks' markup earnings from investments, heavily concentrated in government securities, rose by 10.5 percent in H1-FY25; in comparison, loans and advances yielded 9 percent lower returns in H1-FY25 than the same period last year. Consequently, banks' profit-before-tax was up 4.7 percent in H1-FY25. Source: Financial Soundness Indicators, State Bank of Pakistan

[9] PIT grew by 16.2 percent in H1-FY25, compared to the 58.8 percent last year.

[10] See Chapter 3 for more details on electricity tariffs.

[11] For instance, 18 percent sales tax on DAP was imposed. Initially, tractors, which were earlier exempt, were subjected to 10 percent in the FY25 budget; the rate was later raised to 14 percent.

Policy Rate and Income Tax on Interest-sensitive Earnings **Figure 4.5**



^ means sum of income tax paid by banks and WHT on 'bank interest & securities' (interest earnings of individuals)
Sources: Staff calculations based on data from various FBR Biannual Reports, MoF, SBP, and Haver Analytics

changed from per unit to standard ad valorem tax (18 percent).[12] In case of FED, a duty of Rs 15/kg was levied on the supply of sugar to food manufacturers, among other measures.

Notwithstanding these measures, the target for indirect taxes was missed, resulting in a shortfall of about Rs 384 billion in the overall tax revenue. In part, this is due to the economic factors—mainly GDP, inflation, imports, and LSM—turning out to be less favorable compared to the FBR projections for FY25 (**Table 4.3**).[13] For instance, subdued imports (in PKR) had a direct bearing on sales tax collected at import stage, as well as customs duties. Moreover, other reasons for missing the target could be the insufficient administrative efforts to mobilize revenue. This is evident from lower number of sales tax filers added to the active taxpayer list: 1.18 million during

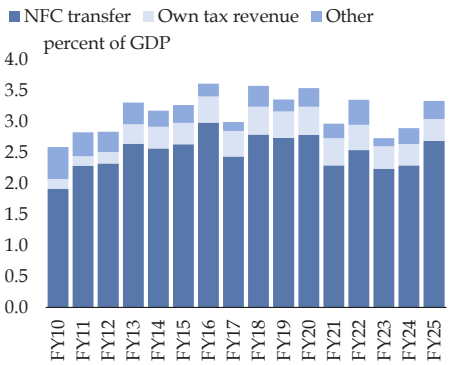
Economic Indicators in FY25 **Table 4.3**

growth in percent

	Annual Projections	Actual (H1-FY25)
Imports	16.9	3.3
Inflation	15.6	7.2
Real GDP	3.7	1.5
LSM	3.5	-1.9

Source: FBR Evidence Based Revenue Forecasting FY25

Provincial Revenue in H1 **Figure 4.6**



Source: MoF

[12] For example, smart phones (CBUs) worth US$ 100 to US$ 200 were earlier subject to Rs 1,680/- per unit. Now, all mobile phones below US$ 500 are subject to standard GST rate of 18 percent. It may be noted here that multiple slabs below US$ 500 have been reduced to only one, where the sales tax is 18 percent regardless of the origin of manufacturing, local or foreign.

[13] FBR, in its *Evidence Based Revenue Forecasting* reports, uses assumptions for various economic indicators to project revenue collection for the year ahead.

Consolidated Expenditure in H1 **Table 4.4**

values in billion Rupees; growth in percent

	Values		Growth		Percent of GDP	
	FY24	FY25	FY24	FY25	FY24	FY25
Total expenditure	**9,226**	**10,862**	**37.7**	**17.7**	**8.7**	**8.7**
Current expenditure	**8,565**	**10,118**	**41.3**	**18.1**	**8.1**	**8.2**
Federal	**6,529**	**7,643**	**50.2**	**17.1**	**6.2**	**6.2**
Mark-up payments	4,220	5,142	64.0	21.8	4.0	4.1
Domestic	3,718	4,675	63.5	25.7	3.5	3.8
Foreign	502	467	67.6	-7.1	0.5	0.4
Defence	758	890	18.6	17.5	0.7	0.7
Pension	404	450	25.9	11.2	0.4	0.4
Running of civil government	302	339	33.4	12.1	0.3	0.3
Subsidies	375	237	90.9	-36.8	0.4	0.2
Grants to others	469	585	20.6	24.6	0.4	0.5
Provincial	**2,035**	**2,475**	**18.6**	**21.6**	**1.9**	**2.0**
Development expenditure & net lending	**661**	**744**	**3.9**	**12.5**	**0.6**	**0.6**
Total development expenditure	**673**	**772**	**13.9**	**14.7**	**0.6**	**0.6**
PSDP	673	772	13.9	14.7	0.6	0.6
Federal	130	133	-4.4	1.9	0.1	0.1
Provincial	543	639	19.4	17.7	0.5	0.5
Net lending PSE's	**-12**	**-28**	**-126.2**	**136.4**	**-**	**-**
Memorandum items:						
Non-interest (total) expenditure	5,006	5,720	21.4	14.3	4.7	4.6
GDP	106,045	124,150*	26.4	17.1	-	-

* Budget estimate

Source: Ministry of Finance

first six months of FY25 compared to 1.33 million in the same period of FY24.[14]

The provincial taxes, on the other hand, increased only slightly in terms of GDP, mainly on account of sales tax on services. The provincial tax to GDP ratio has hovered around 0.4 percent of GDP since H1-FY16 (**Figure 4.6**). The lackluster performance of provincial own tax collection could be linked to less-than-required efforts amid huge revenue transfers from the federal government under the NFC award.[15]

4.3 Expenditure[16]

In contrast to increase in revenue, total expenditure stood unchanged (in terms of GDP) in H1-FY25, with a decline in non-interest expenditure offsetting the slight increase in interest payments (**Table 4.4**).

Non-interest Expenditure

Continuing the last year's trend, the non-interest expenditure declined in terms of GDP in H1-FY25. Almost the entire decline could be attributed to lower disbursement of subsidies, mainly to power sector, which

[14] FBR

[15] For more details, see Box 4.4 in *The State of Pakistan's Economy, Annual Report FY17*. https://www.sbp.org.pk/reports/annual/arFY17/Chapter-04.pdf

[16] This section excludes statistical discrepancy, consistent with previous reports. Due to the large discrepancy reported for H1-FY25, the trends vary by including it.

account for around 90 percent of total subsidies. During H1-FY25, there were no disbursements to the IPPs on account of clearance of circular debt arrears, unlike last year when about half of the budgeted amount was disbursed (**Table 4.5**).[17] However, there was an increase in inter-disco tariff differential subsidy (TDS) [18], partly due to the staggered distribution of the annual tariff rebasing.[19]

Furthermore, there was a sharp fall in other subsides as well. The government's decision to abolish gas subsidy to fertilizer plants, an untargeted subsidy which did not serve the intended purpose of lowering the urea prices for farmers, helped rationalize the subsidy spending.[20] This policy pivot followed the rationalization of gas subsidies to the industrial sector last year.[21]

While subsidies declined, growth in spending on the running of civil government and pension decelerated, keeping it almost unchanged in terms of GDP. This is partly on account of the austerity measures announced by the government in September 2024, in continuation of the measures introduced in February 2024. These measures included ban on the government's purchase of all types of non-essential vehicles and machinery/equipment, creation of new and ad-hoc posts, and non-obligatory visits abroad.[22] In addition, the government also introduced the much-needed reforms to

Breakup of Subsidies and Grants **Table 4.5**

billion Rupees

	H1 (P)		Percent of Annual BE	
	FY24	FY25	FY24	FY25
Subsidies				
Power subsidies	**331.0**	**214.0**	**17.1**	**21.1**
IPPs	131.0	0.0	50.0	0.0
Tariff differential	193.6	161.2	50.1	35.0
Inter disco	49.1	156.3	32.8	56.6
KE	116.4	3.0	68.1	1.7
Tube-wells	3.1	1.9	31.1	18.8
AJK	24.9	0.0	45.3	0.0
Other	6.0	52.3	8.2	33.5
Non-power subsidies	**44.7**	**23.8**	**27.7**	**10.0**
Fertilizer plants	10	0.0	40.0	0.0
Wheat	5.7	6.2	34.4	22.7
Others	29.0	17.6	65.0	0.0
Total subsidies	**375**	**237**	**35.3**	**17.4**
Grants				
Grants to provinces	**54.0**	**59.0**	**58.9**	**52.5**
Grants to others	**469.0**	**585.0**	**35.7**	**35.2**
BISP	183.7	232.3	39.4	39.2
AJK and GB	68.1	100.3	55.9	58.0
Contingent liability	67.4	39.8	28.5	14.7
DIII*	-	20.0	0.0	100.0
Others	150.3	192.8	30.5	31.7
Total grants	**524**	**644**	**37.2**	**36.3**

*Digital Information Infrastructure Investment;
P: provisional

Source: MoF

[17] The subsidy under this subhead (Rs 215 billion) is expected to be disbursed in H2-FY25.
[18] TDS is the difference between the uniform tariff notified by the government and distribution company-wise tariff determined by NEPRA.
[19] Initially, the government had announced lump sum annual rebasing for both protected and non-protected categories of consumers. Later, to give relief to the consumers, the government decided to stagger the increase over a period of four months, Jul-Oct 2024. This alone raised the TDS by Rs 50 billion. Source: NEPRA Notification dated July 11, 2024
[20] IMF (2024). Pakistan: 2024 Article IV Consultation and Request for an Extended Arrangement under the Extended Fund Facility-Press Release; Staff Report; and Statement by the Executive Director for Pakistan, International Monetary Fund, Washington, D.C.
[21] The government had disbursed Rs 25 billion and Rs 730 million to the fertilizer plants and industrial sector in FY24, while there was no LNG subsidy. In FY23, these subsidies cumulatively stood at about Rs 53 billion.
[22] MoF Notification dated September 04, 2024

Provincial Fiscal Accounts in H1 **Table 4.6**

values in billion Rupees; growth in percent

	Values		Growth		Percent of GDP	
	FY24	FY25	FY24	FY25	FY24	FY25
Total revenue	**3,071**	**4,140**	**33.9**	**34.8**	**2.9**	**3.3**
NFC transfer	2,435	3,339	29.5	37.1	2.3	2.7
Own revenue	444	585	18.9	31.8	0.4	0.5
Taxes	365	443	20.5	21.2	0.3	0.4
*GSTS**	*230*	*261*	*23.4*	*13.6*	*0.2*	*0.2*
Non-tax	79	143	12.0	80.4	0.1	0.1
Fed. transfers	191	216	386.1	12.7	0.2	0.2
Loans (net)	115	125	-477	8.1	0.1	0.1
Grants	76	91	9.0	19.7	0.1	0.1
Total expenditure	**2,782**	**3,365**	**26.9**	**21.0**	**2.6**	**2.7**
Current	2,074	2,524	19.7	21.7	2.0	2.0
Development	543	639	19.4	17.7	0.5	0.5
Statistical	165	202	-	-	-	-
Overall balance	**289**	**775**	**186.1**	**167.9**	**0.3**	**0.6**

*general sales tax on services

Source: MoF

reign in rising pension bill. This is a welcome development from the sustainability standpoint, however, there are significant gaps that still remain unaddressed (**Box 4.1**).

In contrast to subsidies and other expenditure, grants rose mainly due to increase in the number of BISP beneficiaries (**Table 4.5**). The government had targeted to add 0.7 million beneficiaries to the social net in FY25, while simultaneously meeting the half year target set in the EFF.[23]

Moreover, the government disbursed the whole-year budgeted amount (Rs 20 billion) for the Digital Information Infrastructure Initiative (DIII) that is meant to enhance cybersecurity of government's ICT infrastructure. In addition to grants, provincial current expenditure increased notably, led by spending on the general public service (**Table 4.6**).[24]

Lastly, PSDP remained stagnant in terms of GDP, as well as in growth terms. This follows the lowering of the annual federal and provincial PSDP targets under the EFF.[25]

Interest Expenditure

Interest payments maintained the rising trend in H1-FY25 (**Table 4.7**). The increase was in tandem with the upsurge in debt stock due to persistently large fiscal deficit, as well as higher interest rates in recent years. However, the pace of increase in interest payments considerably decelerated amid falling interest rates, stable exchange rate, and improved fiscal indicators. The impact was particularly pronounced in case of domestic interest payments (**Figure 4.7**).

Mark-up Payments as Percent of Major Fiscal Variables and GDP in H1 **Table 4.7**

	FY20-24 Avg.	FY24	FY25
Total expenditure	**35.1**	**45.7**	**47.3**
Current expenditure	38.8	49.3	50.8
PSDP	393.1	626.8	666.0
Non-interest expenditure	55.6	84.3	89.9
Total revenue	**47.3**	**61.6**	**52.7**
FBR tax	69.4	94.4	91.4
Net FBR tax*	163.5	207.5	225.0
GDP	**2.9**	**4.0**	**4.1**

* FBR tax revenue adjusted for NFC transfers to provinces

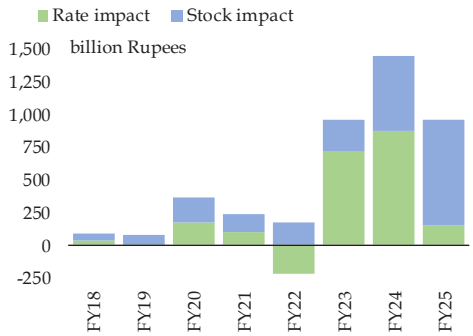
Sources: MoF; SBP staff calculations

[23] IMF Staff Report October 2024

[24] General public service mainly includes expenditure on account of executive, legislative, and fiscal organs of the provincial governments.

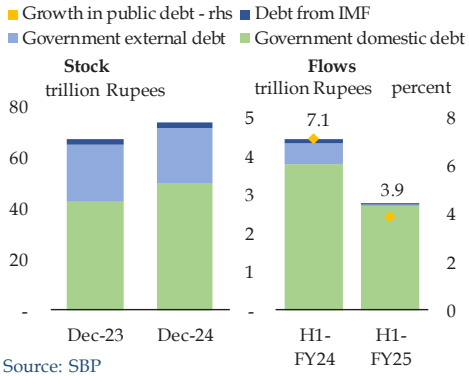
[25] Federal PSDP target was lowered from Rs 1.4 trillion to Rs 983 billion, and provincial target, from Rs 2.5 trillion to Rs 1.9 trillion. Source: IMF Staff Report October 2024 and Ministry of Finance

Breakdown of Absolute Change in Domestic Interest Payments in H1 Figure 4.7



Source: Staff calculations based on MoF and SBP data

Public Debt - Stock and Flows Figure 4.8



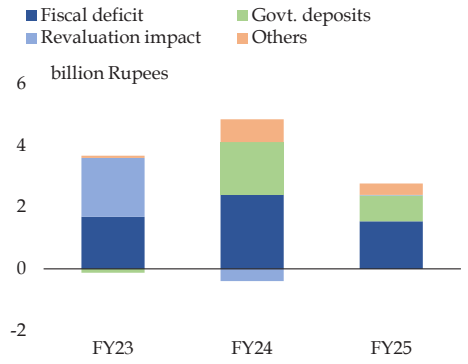
Source: SBP

4.4 Public Debt

Significant fiscal consolidation achieved in H1-FY25 slowed the pace of public debt accumulation to 3.9 percent in H1-FY25, from 7.1 percent in the same period last year (**Figure 4.8**). A stable exchange rate and lower accumulation in government deposits also contributed to the slower growth in public debt **(Figure 4.9)**.

Both the domestic and external debt contributed to slower pace of debt accumulation during H1-FY25.

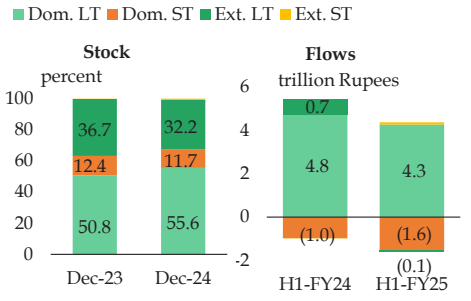
Sources of Change in Public Debt in H1 Figure 4.9



Source: SBP

Nonetheless, 98 percent of the increase in public debt during H1-FY25 was sourced domestically, mainly through long-term instruments, while government retired short-term domestic and long-term external debt during the period under review **(Figure 4.10)**. As a result, the overall public debt profile in terms of average time to maturity, rollover risk, and currency risk improved in H1-FY25. Moreover, a notable increase in revenue collection, increase in foreign exchange earnings and build-up in foreign exchange reserves boosted the overall debt

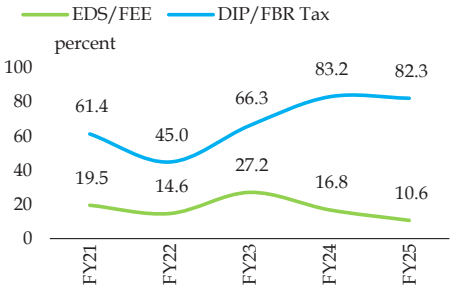
Composition of Public Debt Figure 4.10



Dom.= Domestic Debt, Ext. = External Debt, ST= Short-term, LT= Long-term

Source: SBP

Repayment Capacity of Government in H1 **Figure 4.11**



Note: EDS: External Debt Servicing; FEE: Foreign Exchange Earnings; DIP: Domestic Interest Payments
Sources: MoF and SBP

repayment capacity of the country **(Figure 4.11)**.

Domestic Debt

Growth in domestic debt almost halved compared to the same period last year **(Table 4.8)**. To contain the roll-over and interest rate risk and improve the maturity profile of domestic debt, the government mobilized a substantial amount from long-term securities, while making net retirements in T-bills. The improved liquidity position, supported by a lower fiscal deficit, allowed the government to conduct buyback auctions of T-bills amounting to Rs 1.0 trillion in H1-FY25 **(Box 4.3)**.

Furthermore, the falling interest rate environment benefitted the government as most of the debt was raised through variable rate instruments.[26] During H1-FY25, the average coupon payment rate on variable rate instruments decreased from 21.4 percent to 20.5 percent.[27]

In terms of institution-wise holding, the increase in domestic debt stock was primarily due to non-bank entities, particularly corporates, as ADR-based additional tax constrained the banks from

Government Domestic Debt and Liabilities **Table 4.8**

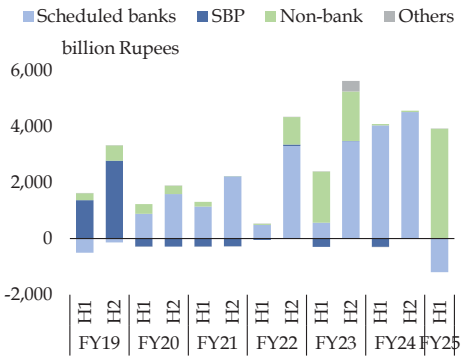
billions Rupees, growth and share in percent

	Stock		Flows		Share in debt stock		Growth over end-June	
	Dec-23	Dec-24	Jul-Dec FY24	Jul-Dec FY25	Dec-23	Dec-24	Dec-23	Dec-24
Government Domestic Debt	**42,594.8**	**49,883.3**	**3,785.0**	**2,723.1**	**100.0**	**100.0**	**9.8**	**5.8**
GOP Ijara Sukuk	4,419.0	5,709.3	1,268.4	943.1	10.4	11.4	40.3	19.8
Pakistan Investment Bonds	25,608.7	31,216.2	3,599.5	3,190.4	60.1	62.6	16.4	11.4
Prize Bonds	382.6	394.3	0.1	9.2	0.9	0.8	0.0	2.4
Treasury Bills (T-bills)	8,288.4	8,602.0	-980.8	-1,565.3	19.5	17.2	-10.6	-15.4
National Saving Schemes (NSS)	2,748.9	2,785.8	-69.7	78.0	6.5	5.6	-2.5	2.9
Naya Pakistan Certificates (NPCs)	118.7	81.0	-24.0	-3.1	0.3	0.2	-16.8	-3.7

Source: SBP

[26] By the end of June 2024, around 55 percent of the stock of government securities (excluding PIBs held by SBP) was on floating rate. It increased to around 60 percent at the end of December 2024. This may help reduce interest payments in the declining interest rate scenario, lowering government's cost of borrowing.
[27] The effect of cut in policy rate has not been fully translated into reduced interest rates due to semiannual revision of coupon rate. As most of the maturing coupon payments in H1-FY25 were based on the prevailing interest rates in H2-FY24, the downward revision in interest rate during H1-FY25 will significantly affect the bi-annual coupon payments PFL, albeit, in H2-FY25.

Institution-wise Flows in Domestic Debt **Figure 4.12**



Source: SBP

making investments in government securities. This also helped the government to make a net retirement to scheduled banks, for the first time since FY19 **(Figure 4.12)**. Consequently, the share of banks' holding of government securities declined from 76.2 percent at end-June to 67.4 percent by the end-December 2024, while the share of non-banks/corporates nearly doubled from 17.7 percent to 32.6 percent.

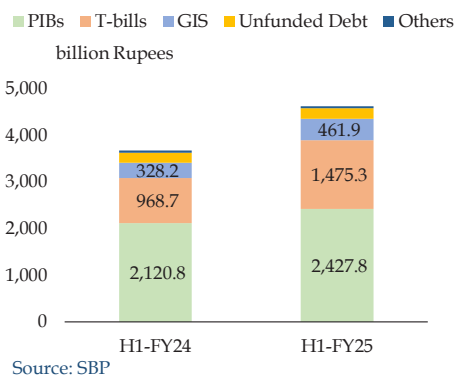
Other debt instruments, such as National Saving Schemes (NSS) and Prize Bonds also witnessed net inflows during H1-FY25, reflecting increased interest of retail investors. The NSS (net of prize bonds) showed net inflows, reversing the trend of net outflows observed during the past three years. Relatively higher return on bank deposits and government securities, especially PFLs and T-bills, could have been a possible reason for net outflows during the past few years.[28] However, reduced differential between the rate of returns on bank deposits and government securities and profit rates on NSS instruments led to lower outflows from NSS in H1-FY25.

Domestic Debt Servicing

Interest payments on domestic debt during H1-FY25 were predominantly against PIBs and T-bills owing to higher stock as well as interest rates (**Figure 4.13**). In the case of unfunded debt, significant interest payments were associated with the Behbood Saving Scheme. Nonetheless, the domestic debt repayment capacity based on the ratio of Domestic Interest Payments (DIP) to FBR Taxes slightly improved as a result of relatively higher growth in FBR taxes **(Figure 4.11)**.

Overall, the government's strategy in H1-FY25 effectively lengthened debt maturities, reduced rollover and currency risks, diversified the investor base (by engaging more non-bank participants), and lowered interest costs.

Interest Payments on Domestic Debt **Figure 4.13**



Source: SBP

[28] The average rate of return on NSS during H2-FY21 – FY24 was 14.47 percent, while return on PFLs and T-bills was 14.63 percent and 15.74 percent, respectively.

Public External Debt **Table 4.9**

million US$; growth in percent

	Stock				Flows		Growth	
	Jun-2023	Dec-2023	Jun-2024	Dec-2024	H1-FY24	H1-FY25	H1-FY24	H1-FY25
Public external debt	**84,050.1**	**87,761.8**	**86,525.1**	**86,621.4**	**3,711.7**	**96.3**	**4.4**	**0.1**
Government external debt	**76,926.2**	**80,165.5**	**78,147.4**	**78,128.6**	**3,239.3**	**-18.8**	**4.2**	**0.0**
Long term (>1 year)	**76,765.9**	**80,066.2**	**77,387.6**	**77,016.3**	**3,300.3**	**-371.3**	**4.3**	**-0.5**
Paris club	7,901.1	7,541.1	6,474.4	5,745.8	-359.9	-728.6	-4.6	-11.3
Multilateral	37,363.1	38,813.6	39,248.0	39,663.7	1,450.5	415.7	3.9	1.1
Other bilateral	17,572.3	19,644.1	18,552.4	17,908.9	2,071.9	-643.5	11.8	-3.5
Euro Sukuk global bonds	7,800.0	7,800.0	6,800.0	6,800.0	0.0	0.0	0.0	0.0
Commercial loans/credits	5,563.8	5,611.3	5,490.3	5,774.7	47.5	284.4	0.9	5.2
Naya Pakistan Certificates	534.3	628.3	783.9	1,054.8	93.9	270.9	17.6	34.6
Short term (< 1 year)	**160.3**	**99.3**	**759.8**	**1,112.2**	**-61.0**	**352.5**	**-38.1**	**46.4**
Multilateral	160.3	99.3	250.0	389.6	-61.0	139.6	-38.1	55.8
From IMF	**7,124.0**	**7,596.3**	**8,377.6**	**8,492.8**	**472.4**	**115.1**	**6.6**	**1.4**
Foreign exchange liabilities	**10,831.2**	**11,938.6**	**11,731.2**	**11,709.5**	**1,107.5**	**-21.6**	**10.2**	**-0.2**
Central bank deposits	2,700.0	3,700.0	3,700.0	3,700.0	1,000.0	0.0	37.0	0.0
Other liabilities (SWAP)	4,224.9	4,271.0	4,169.6	4,181.0	46.0	11.4	1.1	0.3
Allocation of SDR	3,904.0	3,966.6	3,860.8	3,827.9	62.6	-32.9	1.6	-0.9

Source: State Bank of Pakistan

External Debt and Liabilities

Public external debt grew marginally by 0.1 percent during H1-FY25. Net repayment of long-term Paris club and other bilateral debt mainly contributed to the slowdown in external debt accumulation. Moreover, appreciation of US dollar against other international currencies together with a decrease in net external disbursements also contained expansion in external debt.[29]

The slight increase in external debt during H1-FY25 was mainly on account of inflows in NPCs and commercial loans **(Table 4.9)**. Higher rate of return was instrumental in case of the former, while the latter reflects government's efforts to plug the financing gap due to lower-than-planned realization of long-term external financing. Another reason to avail short term financing could be to avoid relatively higher cost on long-term commitments amid prevailing higher global interest rates.

External Disbursements

External disbursements remained lower at US$ 3.6 billion compared to US$ 5.5 billion in H1-FY24 **(Table 4.10)**. Only 18.6 percent of the budgeted inflows of US$ 19.6 billion for FY25 were realized during H1-FY25, which was considerably lower than the corresponding period of FY24.
The share of multilateral inflows decreased to 51.7 percent during H1-FY25, from 62.3 percent in the same period last year.

[29] The appreciation of US dollar against other currencies lowered the stock of external debt by US$ 1.3 billion during H1-FY25.

Summary: External Disbursements **Table 4.10**

million US$

	Grants		Loans		Total	
Sources	**H1-FY24**	**H1-FY25**	**H1-FY24**	**H1-FY25**	**H1-FY24**	**H1-FY25**
Multilateral	**25.6**	**22.0**	**2,219.7**	**1,841.9**	**2,245.3**	**1,863.9**
ADB	8.0	3.5	581.4	905.5	589.4	909.0
AIIB	-	-	287.0	51.0	287.0	51.0
IBRD	5.4	14.7	111.9	125.5	117.4	140.3
IDA	10.9	-	1,029.7	-	1,040.6	-
Bilateral	**58.0**	**71.4**	**665.1**	**240.3**	**723.1**	**311.7**
China	2.0	2.4	40.2	96.8	42.2	99.2
France	-	-	20.1	100.3	20.1	100.5
USA	25.1	-	-	-	-	39.4
Japan	13.6	9.9	-	-	17.3	-
Saud Arabia	-	-	595.4	-	595.4	-
Commercial banks	**-**	**-**	**-**	**500.0**	**-**	**500.0**
NPC	**-**	**-**	**491.5**	**927.6**	**491.5**	**927.6**
Time deposits	**-**	**-**	**2,000.0**	**-**	**2,000.0**	**-**
Total	**83.6**	**93.5**	**5,376.3**	**3,509.9**	**5,459.9**	**3,603.3**

Source: EAD

Among the multilateral institutions, the major disbursements were made by Asian Development Bank (ADB), followed by International Bank for Reconstruction and Development (IBRD) and Asian Infrastructure Investment Bank (AIIB). Regarding bilateral disbursements, its share markedly declined to 8.7 percent from 20.1 percent in H1-FY24 with the largest inflows coming from China, France and USA **(Table 4.9)**.

Unlike H1-FY24, more than 50 percent of the external disbursements were meant for non-project financing/BOP support while the share of project financing was lower than last year. The decline in external financing, despite a positive external outlook and the ongoing IMF program, points to efforts needed to further improve the country's risk perception.[30]

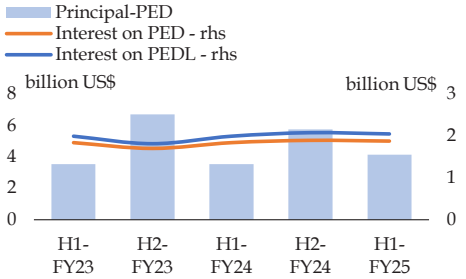
External Debt Servicing

The overall external debt servicing increased to US$ 6.2 billion during H1-FY25 compared to US$ 5.5 billion in H1 FY24 **(Figure 4.14)**. This increase mainly emanated from relatively higher principal repayments to multilateral and bilateral creditors, IMF and NPC holders. The interest payments amounted to US$ 2.04 billion, slightly higher compared to US$ 2.0 billion in the corresponding period of last year.

Major interest expense was incurred on long-term debt, which constituted around 90 percent of the total interest on public external debt. However, a decline in the long-term debt stock helped contain interest expense at US$ 1,518.0 million during H1-FY25, marginally lower than

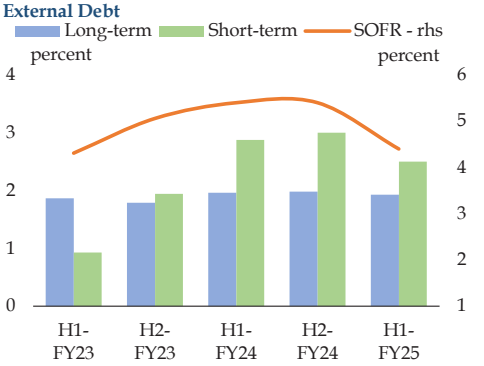
[30] During H1-FY25, Moody's Ratings raised Pakistan's outlook position to positive from stable.

External Debt Servicing - Principal and Interest **Figure 4.14**



PED: Public External Debt (govt. debt + debt from IMF)
PEDL: Public External Debt and Liabilities (PED + liabilities)
Source: SBP

Tenor-wise Effective Interest Rates on External Debt **Figure 4.15**



Source: SBP

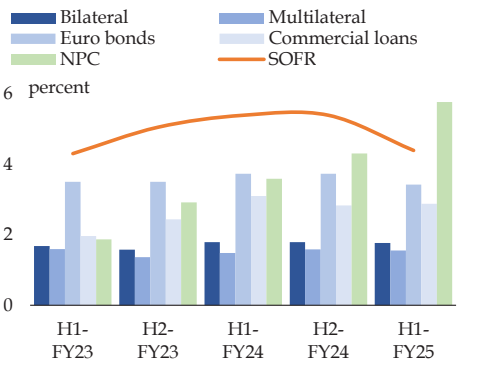
US$ 1,521.0 million in the same period last year. In contrast, the interest payments on debt from the IMF and external liabilities registered an increase, notwithstanding a decreasing global interest rate environment.[31]

The composition of debt servicing depends on interest rate charged on various categories. Historically, the average effective interest rates on long-term loans has remained lower than on the short-term debt.[32] Although both are concessional in nature, the interest rates on short term debt follow the dynamics of global financial markets **(Figure 4.15)**.[33]

Furthermore, the average effective interest rate on debt from multilateral (excluding IMF) and bilateral creditors seem to be fixed and concessional in nature, carrying interest rates substantially lower compared to that on NPCs, commercial loans and Euro bonds **(Figure 4.16)**.

Amongst the other categories, external financing through NPCs stayed relatively more expensive, followed by Euro bonds and commercial bank loans. In addition, with the exception of debt extended by multilateral and bilateral creditors, the costs of raising external funds through NPCs, Euro bonds and commercial loans are driven by global market conditions.

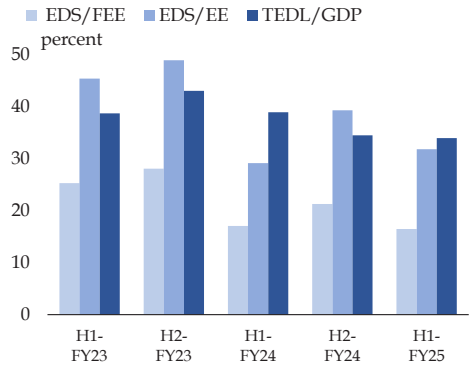
Effective Interest Rates on External Debt **Figure 4.16**



Source: SBP

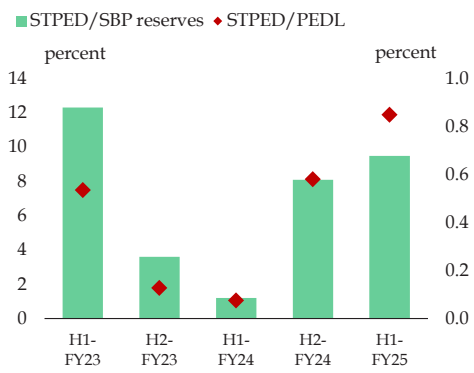
[31] Interest cost on IMF debt increased due to relatively higher effective interest rate and higher stock during H1-FY25.
[32] The average effective interest rate is calculated as the ratio of interest payments of current period to the average debt stock of the previous two periods.
[33] The Secured Overnight Financing Rate (SOFR) is the benchmark rate for dollar-denominated derivatives.

Solvency Indicators for External Debt **Figure 4.17**



Source: SBP

Liquidity Indicators for External Debt **Figure 4.18**



Source: SBP

External Debt Sustainability

Ease in external borrowing constraints, after entering into IMF program, along with surplus in current account balance are the major factors leading to an improvement in Pakistan's external debt sustainability. Moreover, a stable PKR against US dollar and gains owing to US dollar appreciation against other international currencies also helped in strengthening the sustainability position of external debt.

The solvency indicators carried forward their positive momentum from the previous year. The assessment based on Total External Debt & Liabilities (TEDL) to GDP ratio, External Debt Service (EDS) to Foreign Exchange Earnings (FEE) ratio and EDS to Exports Earning (EE) ratio depict enhancement in the country's capacity for the repayment of external debt **(Figure 4.17)**.

Unlike the solvency indicators, liquidity indicators deteriorated due to increase in short-term external debt during H1-FY25. The ratios of Short-term External Public Debt (STEPD) to SBP reserves and STEPD to Public External Debt & Liabilities (PEDL) slightly deteriorated during H1-FY25 **(Figure 4.18)**. Despite an increase in the SBP's foreign exchange reserves, the increase in short-term external debt was the major factor causing deterioration in liquidity indicators. In the backdrop of rising external debt stock and debt servicing, there is a need to explore innovative solutions from sustainability perspective. In this regard, **Box 4.2** makes a recommendation, which also help address the climate vulnerability – another key issue facing the country.

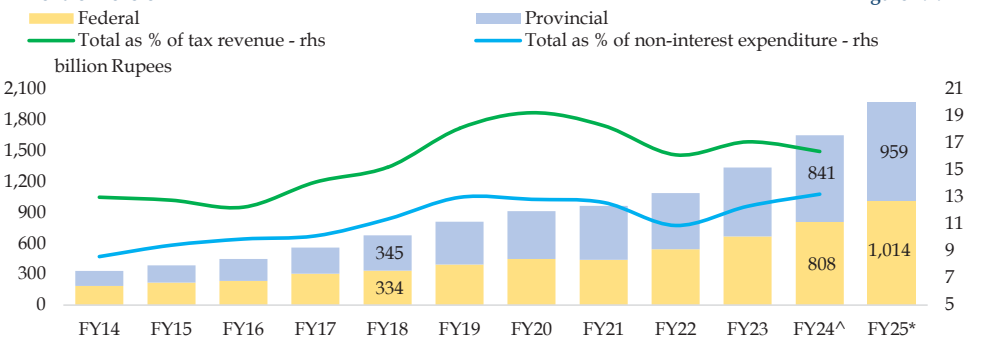
Box 4.1 Rising Pension Bill and the Recent Reforms

Pakistan's pension bill has increased at the compound annual growth rate (CAGR) of 17.3 percent from Rs 333 billion in FY14 to Rs 1,649 billion in FY24 (**Figure 4.1.1**). In comparison, the CAGR of tax revenue was 14.7 percent, while that of non-interest expenditure was 12.4 percent. Moreover, the pension bill is about two to three times the consolidated federal and provincial spending each on education, health and social protection. These trends, if continue, could create challenges for fiscal sustainability.

In this context, the provincial governments had established pension funds in the 2000s to mitigate future pension risk. However, these funds have proven far from sufficient to meet the sharply rising pension payouts, especially in the last few years.[34] For instance, in FY03, the size of Khyber Pakhtunkhwa's (KP) pension fund was almost three times its pension bill; by FY25, the pension liabilities have reached more than four times the size of the fund. In light of this, the federal and provincial governments have implemented key reforms in the past three years.

These reforms include: i) shift from Defined Benefit (DB) Model to Defined Contribution (DC) Pension Schemes for new recruits, requiring both employees and the government to contribute to a pension fund;[35,36] ii) setting a minimum service age by KP, while Sindh and the federal government imposed pension reductions for those retiring before 60 in order to discourage early retirements;[37] iii) abolished multiple pensions, limiting individuals to draw only one pension at a time; iv) tightened family pension rules, restricting eligibility and setting time limits;[38] v) started to use the average of the last 24 months'

Trend of Pension Bill **Figure 4.1.1**

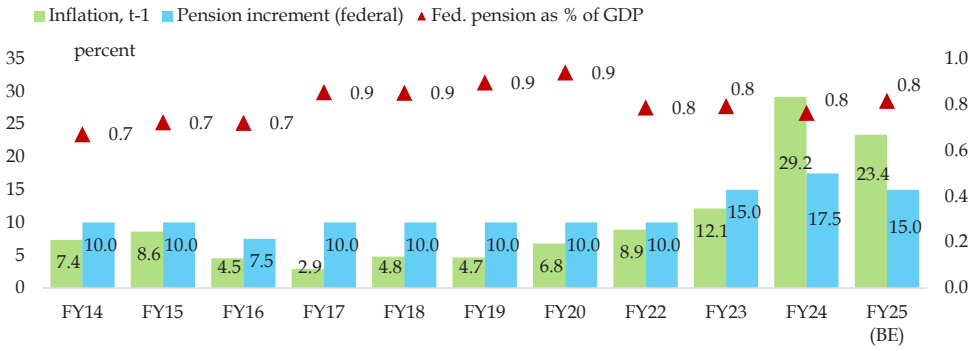


^Revised estimates for provinces; *Budget estimates

Sources: Federal and Provincial Budget Documents; and Fiscal Operations Data

[34] As per the budget documents, the federal government has set aside Rs 10 billion a year for the *Federal Pension Fund* in FY23 through FY25. These funds generate profits through various investment avenues. However, there is no publicly available information on the modalities of the fund, or even if government actually spent the earmarked budget.
[35] To be applied on new recruits in KP from June 07, 2022; in Sindh from July 01, 2024; in Punjab from November 14, 2024; in federation, from July 1, 2024 for civilians, and from July 1, 2025 for armed forces.
[36] It may be noted that these funds shall be maintained through employee-government contributions, unlike the existing pension funds in provinces, which are government-funded.
[37] Earlier, the federal employees would see a reduction in their post-retirement benefits if they retired before completing 30 years of service. However, the rules were silent in case of an employee who would complete 30 years of service before reaching the age of 60, hence encouraging the trend of early retirements.
[38] For instance, family members of civilians in the federal government can avail ordinary family pension for a maximum period of 10 years. In KP, the long list of beneficiaries has been reduced to the pensioner's widow/widower, dependent children and parents.

Trend in Net Pension Increase and Inflation **Figure 4.1.2**



Sources: PBS and Ministry of Finance's various circulars

salary instead of the last drawn pay as base to calculate pension; and vi) future pension increases of the federal employees to be based on a fixed baseline pension.[39]

While these reforms are welcoming, there are still some important issues that need to be addressed in order to make pension bill sustainable. These are discussed as follows:

i. Indexation of pension increments: Pension increments in Pakistan are ad-hoc in nature, and not indexed to some variable, like CPI inflation, wage growth, or growth in nominal GDP, as per the international best practices. This has two major implications for Pakistan. One, the pension bill often increases in nominal terms, as well as in percent of GDP. If increments were indexed to inflation, these would have been mostly lower than the ad hoc increments announced in recent years (**Figure 4.1.2**). Two, it makes difficult for the policymakers to assess future pension risks and design an appropriate coping strategy. In this backdrop, indexing will not only help in devising a proper strategy, it will also facilitate in lowering the gross replacement rate (**Figures 4.1.3**).[40] Furthermore, other ad-hoc increments, like medical allowances, may also be reconsidered.

ii. Abolishing carried-forward increments: Under the current plan, the increments are applied to existing as well as future pensioners, leading to a very high gross replacement rate (**Figures 4.1.3 & 4.1.4**). For example, an increment of 15 percent announced at the start of FY23 was admissible to the existing pensioners as of June 30, 2022, as well as to those who would retire on or after July 01, 2022. Such increments remain in effect until the government decides to discontinue a particular increment. Moreover, these retrospective increments are applied to the commuted amount at the time of restoration as well.[41]

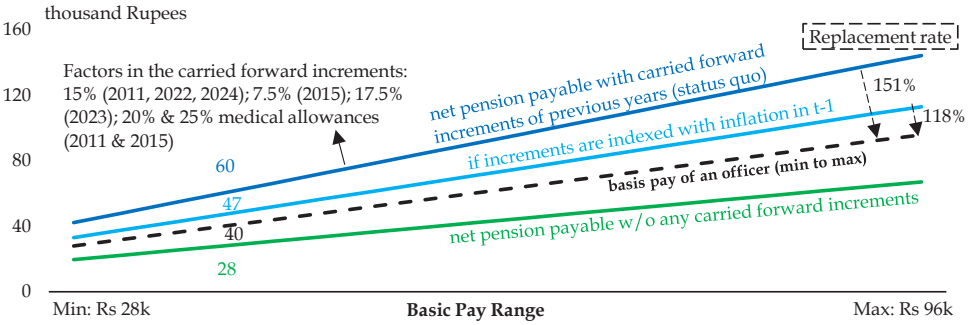
Admissibility of the carried-forward increases creates double jeopardy for policymakers, as the basic pay scale, an integral part of the total emoluments, are revised from time to time (mainly to maintain real

[39] From January 01, 2025, net pension (gross minus commuted portion) calculated at the time of retirement will be termed as baseline pension; for existing pensioners, current pension shall be deemed as baseline pension; any increase in pension shall be granted on this base

[40] Gross replacement rate is the ratio of the net pension payable to pre-retirement total emoluments.

[41] This means that the commuted amount is automatically inflated over the commutation period. Commutation is the post-retirement option of getting a lump-sum portion of future pension payments in advance. Pensioners can commute up to 35 percent of their gross pension in Pakistan.

Scenario Analysis of Pension of an Officer Retiring in December 2024 **Figure 4.1.3**

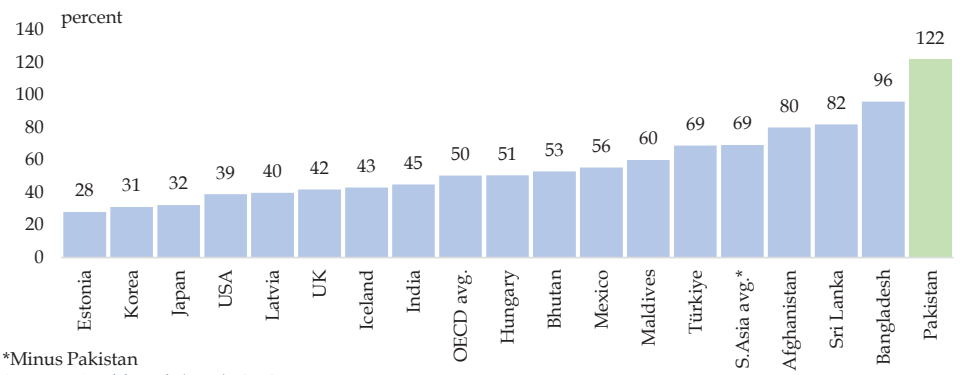


Note: 1) It is assumed that total emolument is equal to the basic pay, the most conservative scenario. Actual base for pension calculation includes different allowances, like special allowance.
Sources: Staff calculations based on Ministry of Finance's various circulars, and SBP

wages), leading to increase in government's expenditure, as well as expansion of the base on which pension is calculated. The carried-forward pension increments, applied on the expanding base, then have a compounding effect on the pension payouts of the government.

iii. Rationalization of the federal government contribution: In the new contributory pension scheme, the federal government contributes 20 percent of the basic pay, double the contribution by the employees. Meanwhile, the Punjab government contributes 12 percent, which is slightly more than the 10 percent share of employees.[42] Peer country comparison also suggests that the governments usually contribute more; however, the difference is smaller. For instance, in Maldives, both parties contribute 7 percent

Gross Replacement Rate **Figure 4.1.4**



*Minus Pakistan
Sources: World Bank (2020); OECD

[42] Source: Punjab Defined Contribution Pension Scheme Rules. Other provinces are yet to roll out similar rules for their DC schemes.

apiece; in India, government and employee contribute 10 percent and 14 percent, respectively;[43] and in Sri Lanka, employee contributes 8 percent of the wage, and employer, 12 percent.

Moreover, given the new DC scheme applies to only new recruits in Pakistan, the government's expense might increase in the short to medium term, as it has to set aside contributions for the new employees, as well as pay out the exisiting employees/retirees from its revenue as per the defined benefit scheme.

** The contribution of Muhammad Farhan Akber is acknowledged in writing this box.*

Box 4.2: Debt-for-climate Swaps*

Debt-for-climate swap is a type of climate financing that lowers a country's debt obligation in exchange for using the freed fiscal resources to counter or adapt to climate change. It is executed in bilateral and tripartite settings, with the latter being more common.[44] It is especially useful for the countries that are afflicted by high indebtedness, climate vulnerability, and limited fiscal space to manage both of these risks. This is usually true of low- and middle-income countries.

Ecuador, a middle-income country, has secured the largest deal to date, in which it bought back its US$ 1.6 billion debt at a 60 percent discount in 2023, while committing to use the debt relief for protecting and nourishing its Galapagos Islands (one of the world's most valuable ecosystems). Moreover, Belize, a Caribbean country, was able to pare its external debt by 10 percent of GDP in 2021, in exchange for commitment to conserving its coral reef.[45]

In the past, these swaps have delivered tangible climate outcomes. For instance, America's Tropical Forest and Coral Reef Conservation Act (TFCCA) has helped conserve more than 68 million acres of tropical forests, equal to an area larger than New Zealand, in different countries including Brazil, Peru, Indonesia, and the Philippines.[46]

Feasibility for Pakistan

On the demand side of swaps, Pakistan is among the countries most exposed to climate risk (95th percentile in a group of 107 developing countries). At the same time, its public external debt to GDP ratio is also moderately high (41st percentile) among the peer countries (**Figure 4.2.1**). Secondly, Pakistan is one of the most biodiverse countries in the world.[47] It could use debt-for-climate swaps, among other climate financing modalities, to protect its biodiversity, which is considered a global public good.

In this connection, Pakistan has already issued Delta Carbon Blue bond to finance protection of mangroves in Sindh. Building on this, biodiversity and climate projects pertaining to ocean conservation

[43] 1) In India, government's contribution was 10 percent till January 30, 2019. 2) Maldives and India had introduced defined contributions plans in 2010 and 2004, respectively.
[44] Tripartite agreements include private entities (like the NGO's and commercial banks), on top of debtor and creditor countries that are the only parties in bilateral agreements.
[45] www.imf.org/en/Publications/fandd/issues/2022/03/Country-cases-meeting-the-future-Belize-Colombia-Ghana#Belize
[46] TFCCA: The US Congress had enacted this Act in 1998, paving the way for many of the debtor countries to enter into debt-climate swaps with the US government. While it initially targeted tropical forests, in 2019, its scope expanded to include coral reefs. It is considered a "highly successful" initiative. Source: https://www.nature.org/en-us/about-us/who-we-are/how-we-work/policy/tropical-forest-conservation-act/
[47] www.cbd.int/countries/profile?country=pk

External Debt and Climate Risk of Pakistan vis-a-vis the Peer Countries **Figure 4.2.1**

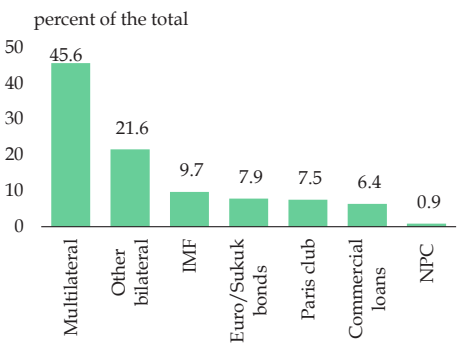
Sources: Germanwatch and Haver Analytics

(like protection of coral reefs) and forest management (afforestation) could be negotiated in swaps. Similarly, swaps could be used to redirect fiscal resources towards soil conservation, renewable energy, wastewater management, desalination plants and water storage/transport infrastructure (like canals, barrages, and dams) in water-stressed regions. It is important to note here that V20, of which Pakistan is a member, had issued a communique in 2024, encouraging bilateral partners and the private sector to engage with the V20 on debt-for-climate swaps, among other things.[48]

On the supply side, the usage of debt-for-climate swap has gained traction in the last two decades; about 145 deals have been concluded to date. In 2023, eight multilateral development banks and development finance institutions launched *The Joint Declaration and Task Force on Credit Enhancement of Sustainability-Linked Sovereign Financing for Nature & Climate* at the COP28, with a renewed focus on mobilizing private sector credit through innovative instruments like debt swaps and green bonds.[49] Moreover, NGOs like The Nature Conservancy, which has completed four such deals to date are actively promoting these swaps. In this backdrop, Pakistan can engage these institutions for arranging funds for debt-for-climate swaps at a discounted interest rate, which it can use to buyback debt from bilateral and commercial creditors, as well as work towards fostering climate resilience and adaptation (**Figure 4.2.2**).

** The contribution of Muhammad Farhan Akber is acknowledged in writing this box.*

Public External Debt* by Source **Figure 4.2.2**



*excludes FX liabilities; as of end-June FY24
Source: SBP

[48] It issued this communique, titled "Unlocking Growth and Prosperity through Innovations in Climate Finance and Debt" at the IMF/World Bank Spring Meetings 2024. V20 Finance Ministers is a collaborative initiative of economies (currently 68) systematically vulnerable to climate change. Source: www.v-20.org/v20-ministerial-dialogue-xii-communique

[49] www.iadb.org/en/news/eight-international-organizations-and-development-finance-institutions-join-forces-boost

Box 4.3: Buyback Auctions of Market Treasury Bills*

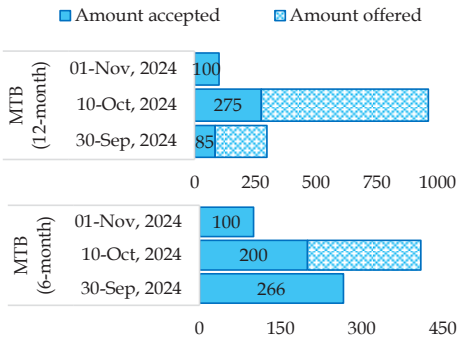
A buyback refers to repurchase of debt instruments by government from the secondary market before their original maturity. The objective of buyback auctions is predominantly *to smooth the redemption profile* and *to mitigate rollover/ refinancing risk*. [i] Besides, the government can save interest cost depending upon the interest rate environment. Developed economies execute buyback operations on both regular and ad-hoc basis, keeping in view the magnitude of available liquidity with them and prevailing interest rate and market dynamics. [ii] However, it is not frequently used in developing economies primarily because of the lack of surplus liquidity available to governments in these economies. [iii]

The motivation for buyback auctions in Pakistan emanated from improved liquidity due to transfer of hefty SBP profit in September 2024. The government found it opportune to gain from buying back the T-bills issued at higher rates and raise the long-term debt at lower rates in falling interest rate environment. Accordingly, the government repurchased four issues of the MTBs maturing in December 2024 with the outstanding amount of around Rs 3.6 trillion at the average yield of more than 20 percent.[50] The process also facilitated in reducing the rollover risk.

These buybacks were conducted through special auctions. GOP announced specific debt security along with the indicative target amount it intended to buy back through competitive bidding process. The auctions were oversubscribed in light of the declining interest rate environment as offers exceeded the targets for both the issues. Thus, government was able to buyback a cumulative of Rs 1.026 trillion – with Rs 566 billion in 6-month and Rs 460 billion in 12-month MTBs – in these auctions.

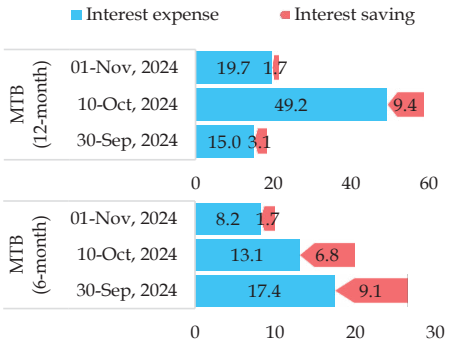
It is worth mentioning that acceptance remained around 73 percent of the target in 6-month tenor and further declined to 34 percent in 12-month tenor. The lower acceptance is mainly because market placed bids at high prices in the subsequent auctions compared to the first auction held on September 30, 2024 (**Figure 4.3.1**). The overall subscription of these buyback auctions accounted for 27 percent of the maturing MTBs, which reduced the borrowing requirements in subsequent auctions.[51] The estimates

Bid Pattern of Buyback Auctions **Figure 4.3.1**



Source: SBP

Impact on Debt Servicing **Figure 4.3.2**



Source: SBP staff calculations

[50] These were 6 and 12 month issues of MTBs maturing on 12-Dec, 2024 and 26-Dec, 2024.
[51] As communicated in the MTB auction calendar for the period of Dec 2024 - Feb 2025, the government has set the target of Rs 1.35 trillion, which is approximately 41 and 24 percent lower than the maturity of auction scheduled on 12-Dec, 2024 and 26-Dec, 2024, respectively.

suggest government saved a total of around Rs 30 billion in debt servicing with these operations (**Figure 4.3.2**).

While government had reduced immediate cost, roll over risk and, improved maturity profile, the literature suggests frequent buybacks run the risk of distorting market expectations, building inflationary pressures and increasing borrowing cost if poorly managed. [iv] Hence, the government should properly communicate the desired objective of buyback in order to avoid aforementioned distortions. [v]

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

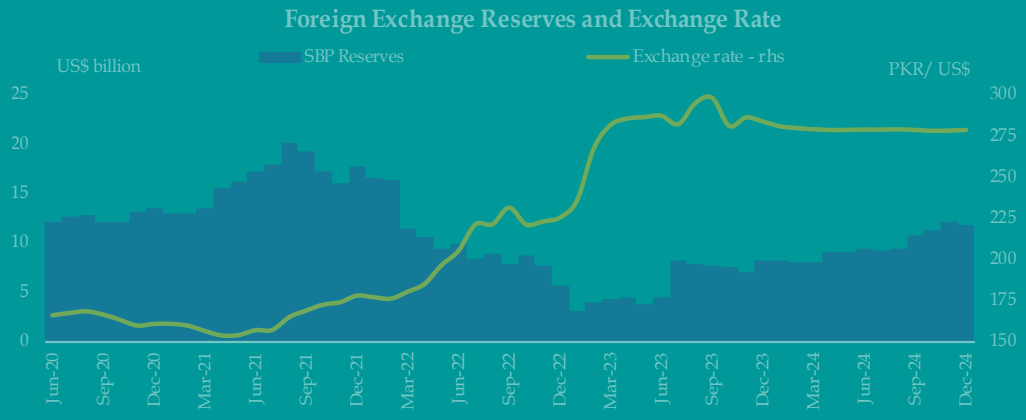
References:

i. Blommestein, H.J., Elmadag, M.E., Ejsing, J.W. (2012). Buyback and Exchange Operations: Policies, Procedures and Practices among OECD Public Debt Managers. OECD Working Papers on Sovereign Borrowing and Public Debt Management No. 5 accessed at www.dx.doi.org/10.1787/5k92v18rh80v-en
ii. Krishnamurthy, A., Nagel, S., Vissing-Jorgensen, A. (2017). ECB Policies Involving Government Bond Purchases: Impact and Channels. *NBER Working Paper* No. 23985
iii. Togo, E. (2007). Coordinating Public Debt Management with Fiscal and Monetary Policies: An Analytical Framework. *The World Bank Banking and Debt Management Department Debt Management Advisory Services Policy Research Working Paper* No 4369
iv. Connolly, M.F., Struby, E. (2024). Treasury Buybacks, the Federal Reserve's Portfolio, and Changes in Local Supply. *Journal of Banking & Finance* Vol (168)
v. Rutherford, K.D.G.M (2007). Buybacks in Treasury Cash and Debt Management. Federal Reserve Bank of New York Staff Report No. 304

5

Balance of Payments

Pakistan's external sector showed marked improvement with the current account balance turning into a surplus, driven by robust growth in workers' remittances and exports that more than offset the increase in imports and repatriation of profits and dividends. The surplus in current account overshadowed weak official financial inflows. Moreover, net FDI increased and inflows in NPCs edged up. The current account surplus, together with disbursement of first tranche under IMF's EFF, led to a further build-up in foreign exchange reserves and induced much needed stability in the foreign exchange market.



5 Balance of Payments

5.1 Global Economic Developments

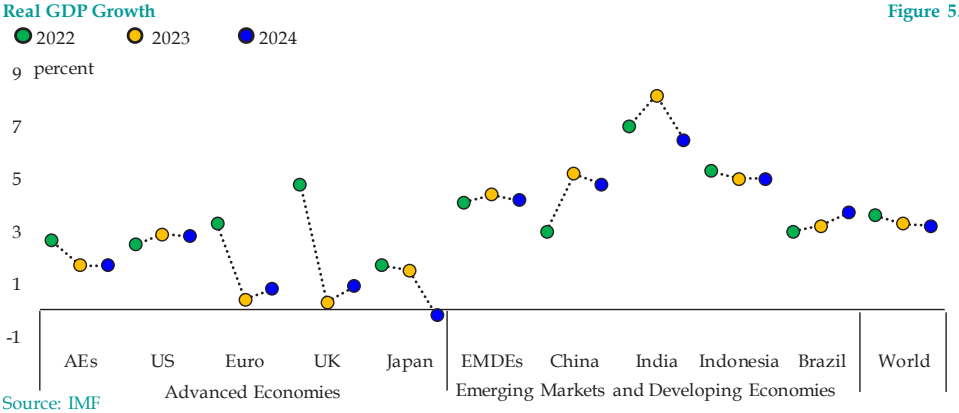
The global economic landscape gradually turned favorable towards the end of 2024. Specifically, global growth steadied, trade volumes recovered, commodity prices softened, inflation declined, and subsequent reduction in the policy rates by advanced economies (AEs) somewhat eased global financial conditions.

As per IMF estimates, the global economy grew by 3.2 percent in 2024, slightly lower than 3.3 percent last year (**Figure 5.1**). While growth in AEs ticked-up, supported by strong domestic demand and exports of goods, this slight dip was primarily due to slower growth in two of the major emerging market and developing economies (EMDEs), China and India. The former suffered due to property market crisis and lower consumer confidence, while high cost pressures led to a slower manufacturing output in the latter. Notwithstanding slower growth, EMDEs continued to contribute more than 50 percent to the global GDP growth.

The steady growth, especially in AEs, was instrumental in stimulating cross-border trade. The global trade volumes, which contracted for the most part of 2023, recorded an expansion throughout 2024, with increase in new export orders for EMDEs including Pakistan (**Figure 5.2**). This suggests that ongoing geopolitical tensions have minimally disrupted trade volumes, primarily because of the creation of bilateral/ regional blocs. Consequently, trade has increased within the blocs instead of between them, which has somewhat reduced global supply chain pressures and alleviated adverse movement in the global commodity prices.[1]

Overall global commodity price index declined by 3.9 percent in H1-FY25, mainly on account of improved supply of energy and food items (**Figure 5.3**). This was further complemented by dampened

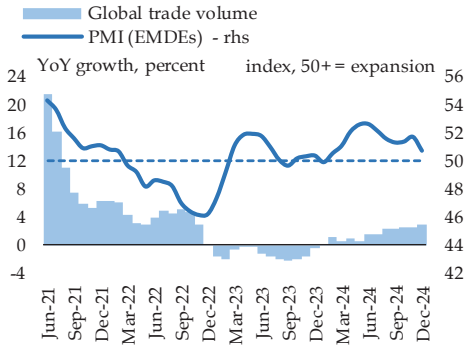
Real GDP Growth **Figure 5.1**



Source: IMF

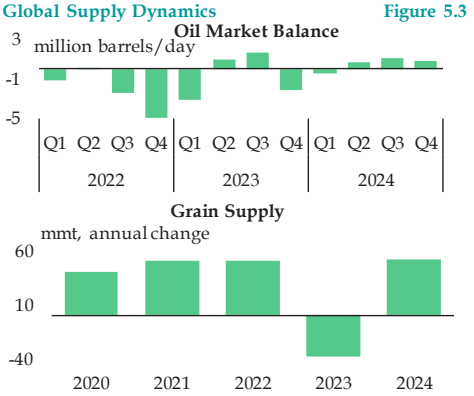
[1] IMF (2024). World Economic Outlook, October 2024, International Monetary Fund, Washington.

Global Trade and PMI **Figure 5.2**



PMI: Purchasing Managers' Index
Sources: CPB World Trade Monitor and S&P Global

Global Supply Dynamics **Figure 5.3**



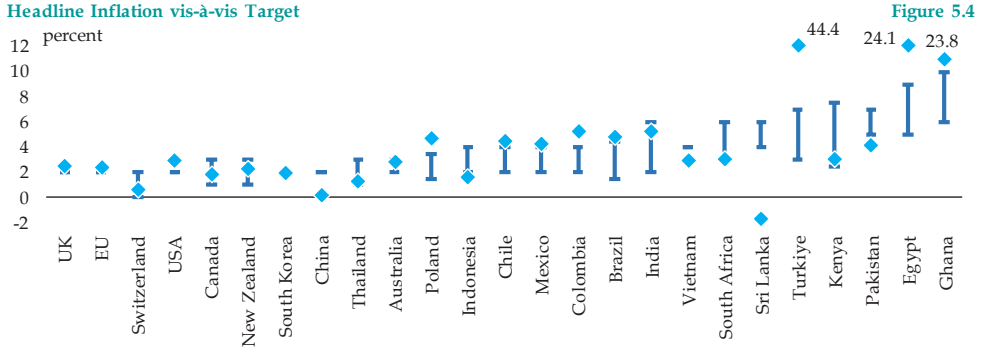
Oil market balance = supply - demand in each quarter
Supply = opening stocks + prod. in the crop season
Sources: EIA and USDA

demand of iron and steel due to sluggish construction activity in China.

The decline in commodity prices and lagged impact of monetary tightening cooled down inflationary pressures in both the AEs and EMDEs, despite some upward price pressure in services sector. In several AEs, inflation has remained close to targets due to aforementioned favorable demand and supply factors. A similar pattern was observed in majority of EMDEs, although there was a slight uptick in inflation outturns in some countries towards the end of 2024 (**Figure 5.4**).

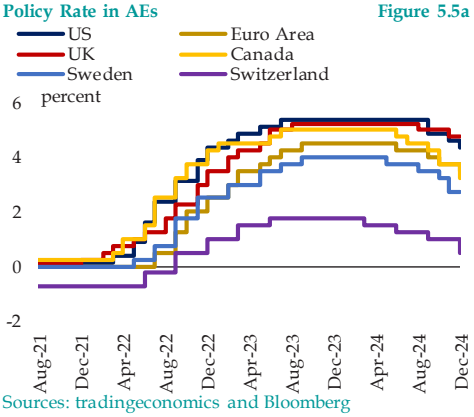
Accordingly, both the AEs and EMDEs continued to ease monetary policy stance, keeping in view their inflation targets. The response was more synchronized in AEs as inflation in these economies approached their targets relatively faster than those in EMDEs. In some of the EMDEs, wage growth and higher demand for services have even led to an increase in core

Headline Inflation vis-à-vis Target **Figure 5.4**



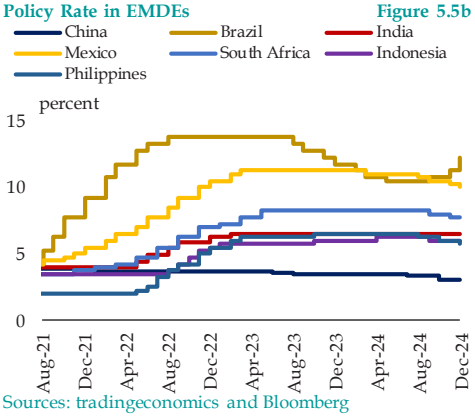
Note: vertical lines refer to the range of inflation target as announced by concerned authority and marker refer to the Dec-2024 inflation (YoY) reading
Sources: tradingeconomics, country websites, and Bloomberg

Policy Rate in AEs Figure 5.5a



Sources: tradingeconomics and Bloomberg

Policy Rate in EMDEs Figure 5.5b



Sources: tradingeconomics and Bloomberg

inflation. As a result, some of the central banks paused further monetary easing, with a few even raising the policy rates (**Figure 5.5a & 5.5b**).

The reduction in the policy rates by major AEs' central banks eased global financial conditions in H1-FY25. This had positive spillovers on emerging economies, specifically in the context of capital flows and exchange rate volatility.

As global investors sought higher returns, their risk appetite strengthened, which translated into increased capital flows to EMDEs. This also created room for some of the EMDEs to access international capital markets for raising funding at reduced cost. The low and stable sovereign spreads even enabled some economies with weak credit ratings to issue sovereign bonds.

5.2 Pakistan's Balance of Payments

Pakistan's balance of payments (BoP) continued to improve as current account balance (CAB) turned into a surplus, offsetting significantly lower financial inflows during H1-FY25 **(Table 5.1)**. The turnaround in the current account is largely attributed to a sustained increase in workers' remittances and volume-driven exports. The surplus in CAB, combined with the disbursement under the IMF's EFF, contributed to the build-up of FX reserves, and induced stability in the foreign exchange market.

Both domestic and global factors underpinned the improvement in CAB. Steady growth in the global economy and increased trade volumes boosted demand for Pakistani labour abroad and exports. Additionally, growing digitisation in the gulf region, and various initiatives by the government and the SBP provided a boost to IT exports and remittances.

The combined impact of these factors alleviated pressures emanating from growth in imports and increase in primary income deficit. Import of both goods and services grew sharply, outpacing exports. As a result, the trade in goods and services balance deteriorated. Further, the primary income deficit substantially widened due

Pakistan's Balance of Payments **Table 5.1**

million US$

	FY23	FY24	FY24		H1-FY25	H1-FY25 over H1-FY24
			H1	H2		Abs. change
Current account balance	**-3,275**	**-2,072**	**-1,611**	**-461**	**1,160**	**2,771**
Trade in goods	**-24,819**	**-22,177**	**-10,260**	**-11,917**	**-11,636**	**-1,376**
Exports	27,876	30,980	15,155	15,825	16,297	1,142
Imports	52,695	53,157	25,415	27,742	27,933	2,518
Services balance	**-1,042**	**-3,110**	**-1,538**	**-1,572**	**-1,500**	**38**
o/w ICT exports	2,596	3,223	1,456	1,767	1,865	409
Primary income balance	**-5,765**	**-8,986**	**-4,052**	**-4,934**	**-4,545**	**-493**
o/w interest payments	4,612	5,546	2,817	2,729	2,676	-141
Secondary income balance	**28,351**	**32,201**	**14,239**	**17,962**	**18,841**	**4,602**
o/w Workers' remittances	27,333	30,251	13,436	16,815	17,847	4,411
Capital account balance	375	195	109	86	78	-31
Financial account balance*	**468**	**-5,370**	**-4,961**	**-409**	**-515**	**4,446**
Direct investment (net)*^	**-670**	**-2,126**	**-1,064**	**-1,062**	**-1,422**	**-358**
Portfolio investment (net)*^	**1,012**	**376**	**-71**	**447**	**70**	**141**
Other Investment	**135**	**-3,610**	**-3,821**	**211**	**837**	**4,658**
Build-up in FX assets abroad	**-964**	**-381**	**-451**	**70**	**-238**	**213**
FX loans & liabilities	**-1,099**	**3,229**	**3,370**	**-141**	**-1,075**	**-4,445**
Banks	**1,241**	**715**	**150**	**565**	**-122**	**-272**
General government	**-2,085**	**1,565**	**2,137**	**-572**	**-353**	**-2,490**
Disbursements	9,891	6,044	2,887	3,157	2,582	-305
Amortization	11,660	6,727	2,843	3,884	3,208	365
other liabilities (net)	-316	2248	2093	155	273	-1820
Other sectors	**-255**	**-50**	**84**	**-134**	**-600**	**-684**
Disbursements	398	2,419	644	1,775	275	-369
Amortization	1,663	1,905	786	1,119	831	45
other liabilities (net)	1,010	-564	226	-790	-44	-270
Net errors and omissions	**-850**	**-631**	**-453**	**-178**	**-42**	**411**
Overall balance	**4,218**	**-2,862**	**-3,006**	**144**	**-1,711**	**1,295**
SBP's liquid reserves (end-period)	**4,445**	**9,390**	**8,233**	**9,390**	**11,732**	
PKR/US$ app(+)/dep(-) in % (end-period)	**-28.4**	**2.7**	**1.5**	**1.3**	**-0.1**	

*as per BPM6, negative sign means net FX inflow into Pakistan and vice versa ^FDI (net) = net FDI inflows - net FDI outflows

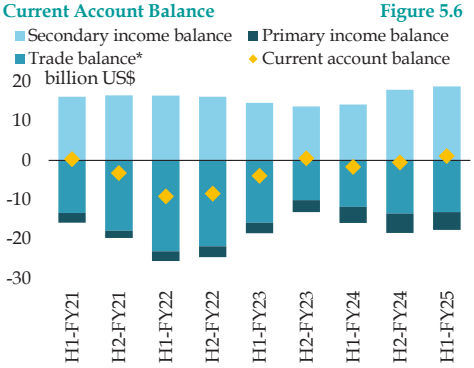
Source: SBP

to increased repatriation of profits and dividends.

Nevertheless, sustained increase in remittances and Information and Communication Technology (ICT) exports are encouraging developments from the perspective of diversification in sources of foreign exchange earnings. However, for a sustainable external account, it is imperative to fully exploit the economy's export potential by scaling up efforts for diversifying export basket and enhancing productivity.

The net financial inflows, however, remained considerably lower compared to the last year. This was mainly because of official loan disbursements falling short of commitments. The private inflows, on the other hand, edged up during H1-FY25.

Current Account Balance — Figure 5.6

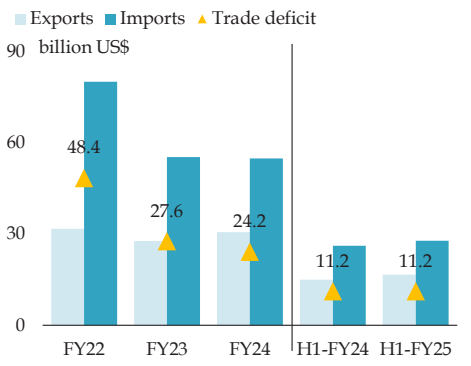


* Goods and services
Source: SBP

5.3 Current Account

CAB posted a surplus of US$ 1.2 billion in H1-FY25 compared to a deficit of US$ 1.6 billion in the corresponding period last year. This improvement in CAB was mainly on the back of a sizable increase in workers' remittances, while trade and primary income balances deteriorated **(Figure 5.6)**.

Pakistan's Merchandise Trade — Figure 5.7



Source: PBS

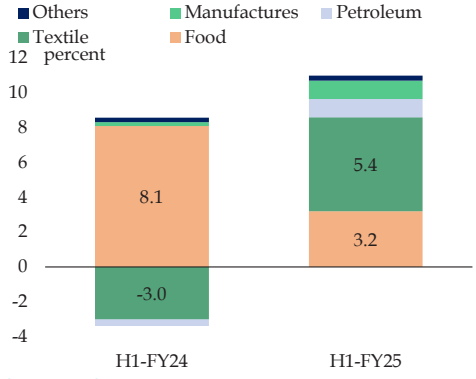
Trade (in goods) Balance[2]

Merchandise trade deficit remained stagnant at last year's level (**Figure 5.7**). Exports maintained last year' growth momentum, supported mainly by an increase in exports of high value added textiles, rice, petroleum, pharma and plastics. However, the gains in exports were offset by a significant rise in imports, mainly textile, machinery, agri and chemical related.

Exports

Exports, as per PBS data, posted a double-digit growth during H1-FY25, largely driven by higher volumes **(Table 5.2)**. The growth also remained broad-based with major contribution coming from textile group, followed by food, petroleum products, and other manufactures (**Figure 5.8**).

Contribution to Export Growth — Figure 5.8



Source: PBS

[2] The analysis in this section is based on customs data reported by the Pakistan Bureau of Statistics. The information in this section does not tally with the payments or BOP data. To understand the difference between these two data series, see Annexure on Data Explanatory Notes.

Merchandise Exports **Table 5.2**

million US$

	H1-FY24	H1-FY25	Change		Volume and Price Effect	
			Absolute	Percent	VE	PE
Exports	**14,985.9**	**16,631.4**	**1,645.6**	**11.0**	**-**	**-**
Textile	**8,283.2**	**9,084.6**	**801.3**	**9.7**	**-**	**-**
Apparel	3,871.8	4,610.0	738.2	19.1	309.7	428.5
Home textile	1,877.2	2,110.2	233.0	12.4	223.9	9.1
Cotton yarn	588.5	365.1	-223.4	-38.0	-223.9	0.5
Raw Cotton	53.4	0.6	-52.8	-98.8	-52.8	0.0
Non-textile	**6,701.3**	**7,546.9**	**844.2**	**12.6**	**-**	**-**
Food	3,478.9	3,960.0	481.1	13.8	-	-
Rice	1,637.9	1,875.3	237.5	14.5	310.6	-73.1
Basmati	367.5	433.8	66.4	18.1	112.7	-46.3
Non-basmati	1,270.5	1,441.5	171.1	13.5	220.4	-49.3
Oil seeds	364.1	303.9	-60.2	-16.5	61.0	-121.3
Sugar	21.1	342.6	321.5	-	381.7	-60..2
Petroleum	114.2	271.7	157.5	137.9	-	-
Petroleum products	102.4	229.1	126.7	123.8	-	-
Other manufactures	2,001.7	2,159.2	157.8	7.9	-	-
Pharma	154.8	236.5	81.8	52.8	60.1	21.6
Plastic	178.9	263.0	84.1	47.0	43.1	41.0
Cement	135.9	167.5	31.5	23.2	46.0	-14.4

Source: PBS

Textile exports

Textile exports rose by 9.7 percent in H1-FY25, against a decline of 5.0 percent last year. The growth in textile exports primarily stemmed from value added textiles, apparel and home textiles. Two major developments contributed to this turnaround. First, protests-related disruptions in industrial activity in Bangladesh diverted orders to other textile producers in Asia, including Pakistan. Second, stable exchange rate and reduced domestic uncertainty helped Pakistani exporters in securing larger orders at better negotiated prices.

Despite the increase in textile exports, the unit values of Pakistan's apparel exports remained lower compared to the regional peers (**Table 5.3**). This may be indicative of low quality of Pakistan's exports, as well as a higher ratio of cotton in textile manufacturing. It may be noted that demand for man-made fiber (MMF) based textiles is increasing in the international market. Moreover, MMF is relatively cost-effective, resource efficient, and has less labor-intensive production processes (**Table 5.4**).[3]

Pakistan's textile sector also struggles with low Total Factor Productivity (TFP) and underdeveloped capabilities in high-fashion and technical textiles. This results in a skewed focus on men's apparel exports, which fetch lower unit prices

[3] SBP (2018). The State of Pakistan's Economy, Third Quarterly Report FY18, State Bank of Pakistan, Karachi.; AR (2023). The rise of MMF, Apparel Resources, Available at: www.apparelresources.com/business-news/manufacturing/the-rise-of-mmf/, Accessed on February 14, 2025.

Unit Prices of Apparel Exports (H1-FY25) Table 5.3

Exports to US	% change	Unit Value (US$/M²)
World	-1.7	3.2
Sri Lanka	-1.4	4.5
Thailand	-6.4	3.4
Philippines	-10.0	4.0
Cambodia	-1.8	3.4
India	-4.0	3.3
Vietnam	0.2	3.9
Bangladesh	-2.1	3.3
Pakistan	3.9	3.0
Exports to EU-27	**% change**	**Unit Value (Euro/KG)**
Philippines	-10.2	30.6
Thailand	9.3	37.3
Vietnam	-3.6	26.5
India	-5.0	19.3
Bangladesh	-0.6	14.6
Pakistan	-0.9	12.1

Source: SBP staff calculation based on Otexa and EuroStat

compared to women apparel.[4] This also corroborates the findings on labor productivity of Asia's garment sector, in which Pakistan is the lowest. Notably, the countries with higher unit values have invested in making their production processes more capital intensive.[5]

Export of low value-added textiles fell sharply[6]

Decline in domestic cotton production pushed the domestic prices above import parity. This resulted in negligible raw cotton exports during H1-FY25. Yarn exports also fell sharply in H1-FY25 as

Regional Comparison of Apparel Exports - 2024 Table 5.4

	MMF - Quantum Terms	MMF - Value Terms	Overall Unit Price (US$/M2)	W&G Unit Price
US				
World	56.0	44.7	3.2	4.7
Sri Lanka	51.7	52.0	4.3	7.2
Thailand	38.8	57.4	3.3	5.8
Philippines	39.2	57.1	3.9	7.5
Cambodia	51.7	38.0	3.4	5.0
India	22.8	17.9	3.4	6.1
Vietnam	60.7	56.5	3.7	4.9
Bangladesh	29.3	25.0	3.2	4.2
Pakistan	9.7	20.6	3.0	5.3

**W&G stands for Women & Girls' Apparel*

Source: SBP staff calculation based on Otexa

upstream textile segments, such as spinning and weaving, faced additional challenges. These included removal of zero-rating for local supplies under the export facilitation scheme (EFS), and higher energy and operational costs.[7]

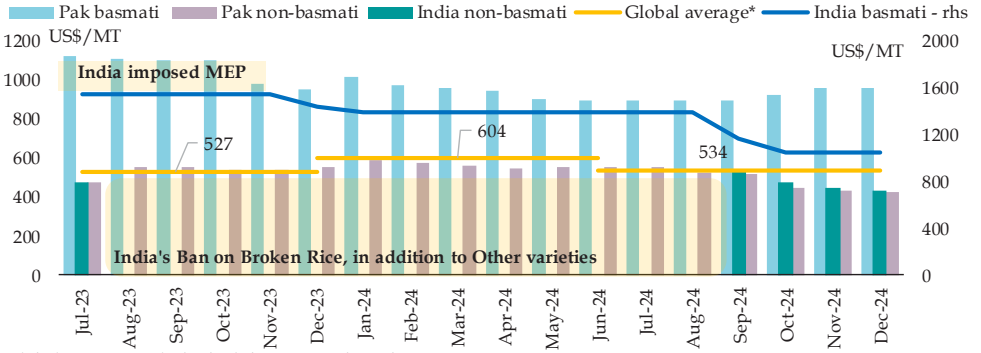
Non-textile exports

Food exports remained on an upward trajectory

Food exports increased for the second consecutive year, with rice maintaining its position as the leading contributor (**Table 5.2**).[8] Unlike last year, the growth was driven by higher volumes, as most rice exporters adjusted to lower prices after India's re-entry in the global rice market (**Figure 5.9**).[9] Additionally, record-high

[4] Hussain, S.T., Malik, K.Z., Khan, U., Faheem, A., Nabi, I. & Hamid, N. (2013). A comparative analysis of the garments sector of Pakistan, International Growth Center.
[5] ILO (2022). Employment, wages and productivity trends in the Asian garment sector, International Labour Organization, Geneva.
[6] Domestic cotton production in H1-FY25 faced significant challenges due to pest infestations, heatwaves and erratic rainfalls in South Punjab, leading to late harvesting and poor quality.
[7] APTMA Blog. Available at www.aptma.org.pk/category/industry/, Accessed on February 12, 2025. Moreover, as per APTMA, over 40 percent of spinning mills have ceased operations.
[8] Rice makes up around 47.4 percent of total food exports and 24.8 percent of total non-textile exports.
[9] As per SBP staff calculation based on PBS (July-Dec) data, the unit values across all rice categories have decreased compared to last year.

Rice Prices in International Market **Figure 5.9**



*global average includes both basmati and non basmati
Sources: FAO and WB

global rice stocks, supported by robust production, kept international prices in check.[10]

Within rice, basmati exports increased by 18.1 percent in H1-FY25. Pakistan mainly exported basmati rice to Kazakhstan, Saudi Arabia, Afghanistan, Yemen, and Oman during H1-FY25. Increase in exports to Kazakhstan was supported by Pakistan's price advantage over India. Exports to Saudi Arabia was the outcome of trade advocacy resulting in a Saudi commitment to source 20 percent of its rice imports from Pakistan. Similarly, Business to Government (B2G) collaborative efforts created export opportunities to Oman.[11]

The exports of non-basmati rice also increased from US$ 1.3 billion to US$ 1.4 billion. Within the non-basmati rice, *irri* mainly contributed to this increase, as its exports to Afghanistan, Philippines, Indonesia and Kenya rose during H1-FY25. The increase in export to Philippines may be attributed to their lower domestic production.[12] In case of Kenya, the demand for Pakistani rice increased owing to its zero-tax policy on rice shipments till November 30, 2024.[13]

During H1-FY25, Pakistan also exported sugar amounting to US$ 343 million, against almost insignificant exports last year (**Figure 5.10**).[14] Additionally, sugar

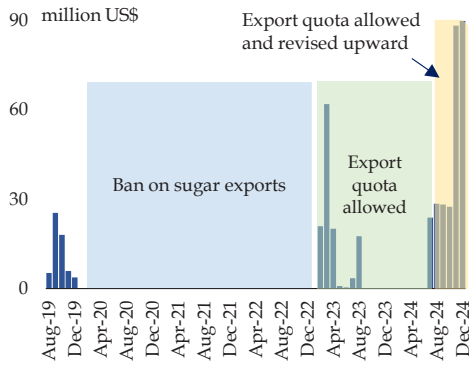
[10] USDA (2025). Rice Market Outlook. United States Department of Agriculture, Washington D.C.
[11] Officials from Oman committed to facilitate procurement processes for Pakistani rice.
[12] VIS (2024). Rice Sector Report, VIS Credit Rating Company Limited, Karachi.
[13] Kenya Gazette (2024). The Kenya Gazette Vol. CXXVI – No. 75 dated 31st, May 2024 Available at: www.kra.go.ke/images/publications/Gazette--Importation-of-Grade-1-White-Milled-Rice-Duty-Free.pdf. Accessed on January 5, 2025. In addition, Pakistani rice exporters secured export contracts at the International FoodAg due to B2B and B2G efforts of TDAP. (Source: Official TDAP X-account Available at: https://x.com/official_tdap/status/1824468283472457926)
[14] Economic Coordination Committee (ECC) of Cabinet allowed an export quota of sugar in June 2024. The export quota was later revised upward, based on frequent sugar stock reports submitted to ECC by the Committee on Monitoring Sugar Export . SBP had also advised the authorized dealers to facilitate the sugar exporters in light of MOI&P (O.M) F. No.1(6)/2022-23-CAO dated June 26, 2024 through EPD circular letters: No. 04 of 2024 dated July 1,

exports to Tajikistan benefitted from B2G arrangement.[15]

Among other food items, exports of fish almost remained unchanged, while export of oilseeds declined significantly in H1-FY25. In case of oil seeds, exports of sesame seed to Vietnam, Saudi Arabia, and Egypt dropped. A significant decline of 25.7 percent was recorded for China due to re-entry of Sudanese and Ethiopian suppliers in the market.[16] Moreover, higher production of oilseeds globally, particularly in Brazil and Argentina, put downward pressure on prices.[17]

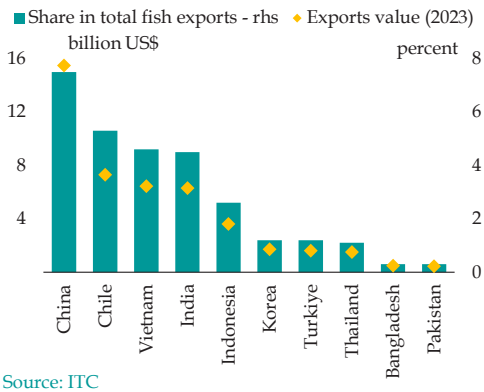
On fish exports, analysis reveals that the country's annual fishery export earnings have averaged US$ 400 million during the last decade, far lower than the export earnings of other similar coastal countries (**Figure 5.11a**). Pakistan's fish export destinations have remained largely unchanged over the years resulting in a higher market concentration. Moreover, unit prices have remained much lower than the regional peers (**Figure 5.11b**). In this context, **Box 5.1** discusses key factors behind this underperformance and recommendation to harness the large potential in Pakistan.

Sugar Exports **Figure 5.10**



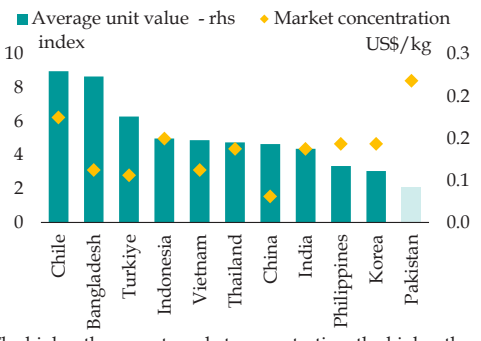
Sources: PBS and ECC

Fish Exports: Value and Share **Figure 5.11a**



Source: ITC

Fish Exports: Trade Indicators **Figure 5.11b**



The higher the export market concentration, the higher the value

2024 for 150,000 MT; No. 08 of 2024 dated September, 30, 2024 for 100,000 MT; No. 13 of 2024 dated October, 18, 2024 for 40,000 MT.

[15] Under a bilateral arrangement, Pakistan Sugar Mills Association facilitated export to Tajikistan.

[16] Pakistan had benefitted last year from both higher demand from China amid supply disruptions - from Sudan, Ethiopia, and Myanmar - alongside removal of a 9 percent import duty by China.

[17] USDA (2025). World Agricultural Production, *United States Department of Agriculture Circular Series* February, 2025.

Other non-food exports

Furnace oil exports increased in H1-FY25 due to a favorable change in the energy mix in recent years (**Figure 5.12**). Gradual replacement of costly furnace oil based power plants with coal-fired plants, and reliance on other cheaper sources has led to an excess of furnace oil in the country.

Exports of cement is maintaining the trend

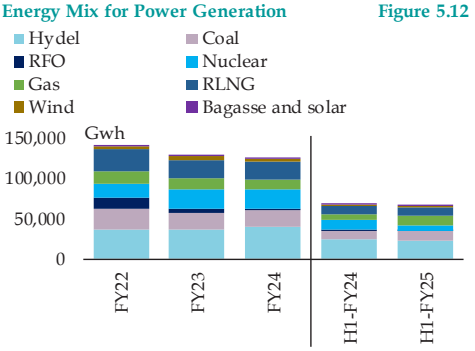
Cement exports increased in H1-FY25, mainly destined to Afghanistan. Export viability also improved amid decrease in international coal prices.[18] Moreover, the industry also explored new markets with export of clinker to Gabon and Yemen.

Exports of other manufactures picked up

Pharma exports increased to $237 million, up by 52.8 percent during H1-FY25 against a decline of 12 percent last year. The increase was driven by both volume and price effects. The former was due to expanded market access, particularly in Congo, Guyana, Djibouti, Kenya and Sudan[19], under the Engage Africa Policy, while the latter reflects improved availability of raw materials.[20] Exports to established markets - Afghanistan, Cameroon, Thailand, Philippines Uzbekistan and Turkmenistan – also increased during the period under review.[21]

Similarly, exports of plastic materials increased, primarily because of higher demand for polypropylene in China, Bangladesh, Kenya, Jordan and Mozambique.[22] Expandable and General Purpose Polystyrene plastic saw significant growth in exports due to an increase in global demand for lightweight and sustainable packaging.

Energy Mix for Power Generation **Figure 5.12**



RFO: Refined furnace oil, RLNG: Regasified liquefied natural gas
Source: NEPRA

Imports

Imports, as per PBS data, grew by 6.4 percent during H1-FY25 compared to a contraction of 16.2 percent last year. The growth was broad-based as imports of all major groups, except for food, increased in H1-FY25 (**Figure 5.13**). Though global commodity prices moderated, import volumes, particularly of raw materials, grew in line with some pick-up in domestic economic activity **(Table 5.5)**.

[18] According to World Bank, global prices of coal decreased from $146/MT in June to $121/MT in December 2024.
[19] These countries provide a good export opportunity as their regulatory requirements are comparatively less stringent. Notably, Pakistan's export products are of low quality which limits its ability to access high-end markets.
[20] Over 90 percent of raw material used in pharma is imported. Source: ICAP (2024). Pharmaceutical Industry.
[21] Key insights drawn from Xevant, Quartz, IDP Analytics.
[22] The demand for polypropylene comes from its diverse applications such as packaging, automotive, and construction.

Merchandise Imports **Table 5.5**

million US$

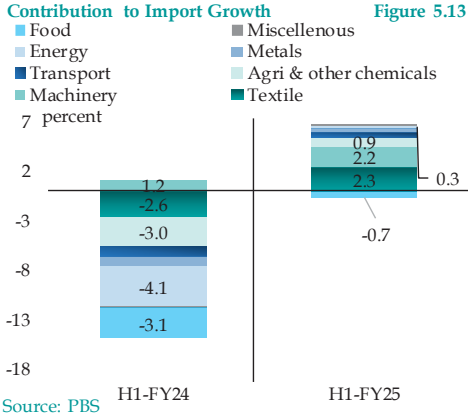
			Change		Volume and Price Effect	
	H1-FY24	H1-FY25	Absolute	Percent	VE	PE
Imports	**26,137.4**	**27,806.2**	**1668.8**	**6.4**	**-**	**-**
Food	**3,957.2**	**3,780.2**	**-1,77.0**	**-4.5**	**-**	**-**
Wheat	397.1	0	-397.1	-	-397.1	0
Tea	336.4	314	-22.4	-6.7	-38.8	16.4
Soybean oil	91.1	124.9	33.7	37.1	45.7	-11.9
Palm oil	1,388.1	1,539.7	151.5	10.9	90	61.6
Dry fruits	38.4	86.3	47.9	124.8	31.9	16.1
Energy	**8,005.8**	**8,085.9**	**80.1**	**1.0**	**-**	**-**
POL	3,193.8	2,970.3	-223.6	-7.0	-267.8	-491.3
Crude	2,611.2	2,690.4	79.2	3.0	421.7	-342.6
LNG	1,853.0	1,889.1	36.1	1.9	-	-
LPG	347.7	535.9	188.3	54.2	-	-
Machinery	**3604.1**	**4170.1**	**566.0**	**15.7**	**-**	**-**
Electrical	1136.2	1491.5	355.3	31.3	-	-
Textile	68.8	105.9	37.1	53.9	-	-
Power generating	209.6	332.2	122.6	58.5	-	-
Textile	**1301.9**	**1,914.5**	**612.6**	**47.1**	-	-
Raw cotton	191.7	488.6	297	154.9	374.6	-77.6
Other textile items	347.7	596.7	249	71.6	-	-
Agro chemical	**4,240.5**	**4,487.6**	**247.1**	5.8	-	-
Fertilizer manufactured	314.9	440.3	125.4	39.8	66.4	59.0
Others	**460.5**	**491.6**	**31.2**	**6.8**	**-**	**-**
Rubber tyres	43.6	80.1	36.3	83.3	54.1	-17.8

Source: PBS

Energy imports increased slightly

In H1-FY25, imports of crude oil, liquefied natural gas (LNG) and liquefied petroleum gas (LPG) increased, while imports of petroleum products registered a slight decline. The rise in LPG imports reflects its growing demand as an alternate fuel for domestic and commercial use, especially as domestic natural gas production continues to decline. Recently, due to this rise in demand, LPG infrastructure also attracted substantial investment in capacity enhancement.[23]

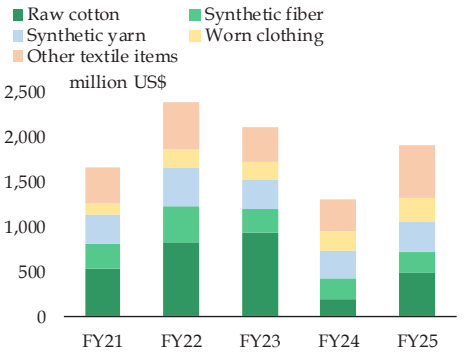
Contribution to Import Growth **Figure 5.13**



Source: PBS

[23] An investment amounting to Rs 6.6 billion was made in LPG's infrastructure. Source: PACRA (2024).

Textile Imports in H1 **Figure 5.14**

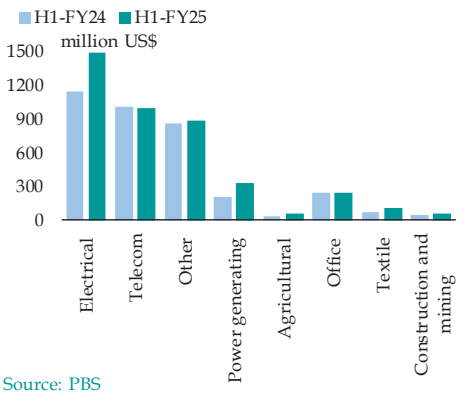


Source: PBS

Food imports declined

The decline was mainly due to lower imports of wheat and other food items.[24] However, the imports of soybean seeds increased due to volume effect.[25] It was particularly pronounced in the last two months of H1-FY25, after the government allowed import of genetically modified soybean seeds in October 2024.

Machinery Imports **Figure 5.15**



Source: PBS

Palm oil imports also increased during H1-FY25, driven by both higher volume and prices. Global palm oil prices rose due to lower production in Indonesia and Malaysia, while domestic demand increased from industries like pharmaceuticals, soap, cooking oil and confectionary items which contributed to the volume growth **(Chapter 2)**.

Textile imports increased, reflecting lower domestic cotton production

Increase in import of raw cotton was the direct result of the decline in domestic cotton production and a rebound in apparel exports. This also led to an increase in domestic prices of yarn, resulting in higher yarn imports (**Figure 5.14**).

Machinery imports saw a broad-based increase

Imports of machinery saw a broad-based growth of 15.7 percent in H1-FY25 (**Figure 5.15**). The import of machinery is driven by activity in some of the large industries (especially textile); rising solarization (increase in imports of solar panels and batteries) to address power outages and benefit from lower cost; schemes to mechanize agriculture sector.[26]

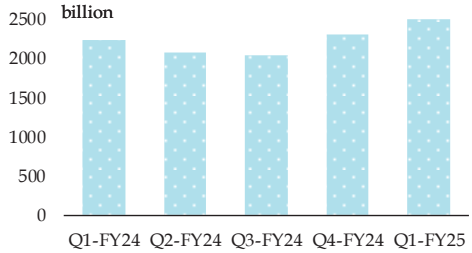
Imports of transport group picked up

Within transport sector, imports of SKD/CKD gained momentum with the ease in FX constraints and start of local

[24] All other food items constitute around 26.8 percent of the total food imports.
[25] Prices of soybean seeds declined in international markets mainly due to higher production in South America, particularly Argentina.
[26] Enhanced credit facility for solarisation of tube wells; laser land levellers; solar based cold storage and high efficiency irrigation system for water management; and distribution of 53 implements. Source: FAO

Global Revenue Passenger Kilometre (RPK)*

Figure 5.16

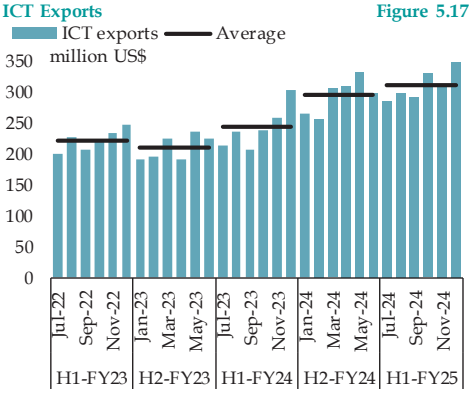


*RPKs is a measure of the volume of passengers carried by an airline; it is used as measure of travel demand. RPK = number of revenue passengers * distance traveled

Source: IATA

ICT Exports

Figure 5.17



Source: SBP

assembly of electric vehicles. The improved FX position also facilitated the increase in CBUs with the clearance of backlog at ports. Moreover, domestic production and sales have also increased in almost all transport categories, with auto financing playing a positive role.[27]

Trade in Services

The trade in services account recorded a slightly lower deficit in H1-FY25 compared to last year. The improvement was supported by higher exports of ICT services, which was partly offset by increase in imports of services **(Table 5.6)**. The rise in services imports was led by payments for air transport, travel, and technical services related to trade and other businesses.

Increase in air transport payments was attributed to rise in international passenger travel (via foreign carriers) and elevated airfares (**Figure 5.16**).[28] Similarly, growth in import payments for travel was mainly attributed to increased education and religious travel, indicated by a higher number of people performing Umrah compared to last year.[29]

On the other hand, exports of ICT services maintained the upward trajectory, registering a 28.1 percent growth in H1-FY25 (**Figure 5.17)**. The growth was supported by policy measures introduced by the SBP and the government. These measures included the introduction of a new equity investment category for IT firms and allowing IT companies to invest in multiple foreign entities without jurisdictional limits. Moreover, the SBP raised the retention limit for Exporters' Specialized Foreign Currency Accounts (ESFCA) from 35 to 50 percent, enabling exporting firms to reinvest more earnings into their operations abroad. Meanwhile, stable exchange rate incentivized IT

[27] Auto-financing posted an increase of Rs 5.0 billion against net retirement of Rs 42.5 billion in H1-FY24.
[28] Average cost of one-way fare increased by 2 percent in 2024 compared to a decline around 8 percent last year
[29] General Authority for Statistics, Saudi Arabia. Available at: www.stats.gov.sa/en/statistics-tabs/-/categories/124334?tab=436312&category=124334, Accessed on: February 06, 2025

Trade in Services **Table 5.6**

million US$

			H1		Change in H1-FY25 over H1-FY24	
	FY23	FY24	FY24	FY25	Absolute	Percent
Services balance	**-1,043.2**	**-3,111.6**	**-1,538.0**	**-1,500.3**	**37.7**	**-**
Exports	**7,595.4**	**7,687.3**	**3,680.9**	**4,085.4**	**404.5**	**11.0**
Transport: of which	926.6	767.4	373.7	460.2	86.5	23.1
Sea freight	143.8	61.6	26.6	54.4	27.8	104.3
Air passengers	415.1	445.2	211.5	200.9	-10.6	-5.0
Travel: of which	971.5	758.1	365.0	358.5	-6.5	-1.8
Education exp.	11.6	21.3	11.4	9.6	-1.8	-16.2
Other (personal)	946.4	701.6	339.1	333.6	-5.5	-1.6
ICT Services: of which	2,596.8	3,223.2	1,455.6	1,865.0	409.4	28.1
Software consultancy services	760.2	870.6	405.6	549.9	144.3	35.6
Other computer services	730.4	1,140.0	454.3	733.2	278.9	61.4
Computer software	598.1	631.9	311.3	295.2	-16.1	-5.2
Call centers	229.8	263.7	120.0	155.1	35.1	29.3
Telecommunications services	264.4	299.2	158.6	112.9	-45.7	-28.8
Imports	**8,638.0**	**10,798.9**	**5,218.9**	**5,585.7**	**366.8**	**7.0**
Transport: of which	4,058.1	4,676.1	2,423.6	2,409.7	-13.9	-0.6
Sea freight	2,632.5	2,642.9	1,455.1	1,125.0	-330.0	-22.7
Air passengers	892.5	1,295.1	649.4	777.7	128.3	19.8
Travel: of which	1,877.1	2,266.9	1,021.0	1,153.0	132.0	12.9
Education exp.	359.3	519.6	292.9	344.7	51.8	17.7
Other (personal)	1,501.0	1,069.8	607.5	687.1	79.6	13.1

Note: The data are as per BPM6 (EBOPS-2010) classification aligned with MSITS-2010 classification.
Source: SBP

exporters to repatriate a larger share of their proceeds to Pakistan.

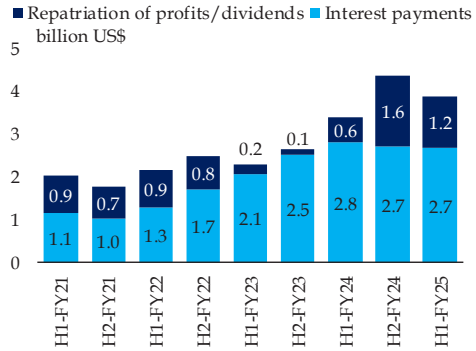
In addition, Pakistani IT firms' active engagement in international platforms further pushed ICT exports. These included recognition of Pakistan as Tech Destination of the Year 2024 by GITEX Global in Dubai Fair; participation in London Tech Week and the Pak-US Tech Investment Conference at Stanford University, which showcased the country's innovative capabilities and attracted global investors.[30] Furthermore, the accomplishment of winning 10 awards at the Asia Pacific ICT Alliance in Brunei Darussalam underlined Pakistan's growing reputation in the global IT ecosystem.[31]

Primary Income

The deficit in primary income account widened by US$ 493 million to US$ 4.5 billion in H1-FY25. This increase is primarily attributed to higher repatriation of profits and dividends, as interest payments declined marginally (**Figure 5.18**).

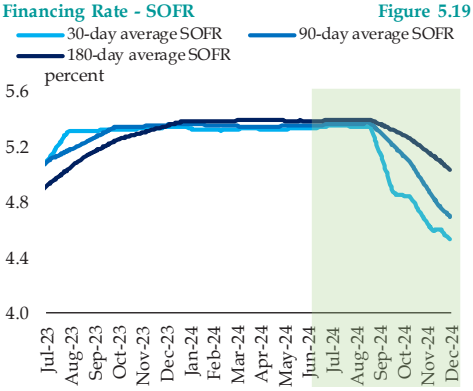
[30] PSEB (2024). Pakistan Named as Tech Destination of the Year, Pakistan Software Export Board, Available at: www.techdestination.com/wp-content/uploads/2025/01/Pakistan-Recognized-as-the-Tech-Destination-of-the-Year-1.pdf, Accessed on: February 06, 2025; https://techdestination.com/pak-us-tech-investment-conference/; https://techdestination.com/wp-content/uploads/2025/01/QUARTERLY-NEWSLETTER-4.pdf
[31] APICTA (2024). APICTA Awards 2024 List of Recipients, Asia Pacific ICT Alliance Awards, Available at: www.apicta.org/apicta-2024-brunei/, Accessed on: February 10, 2025

Primary Income Payments: Major Components **Figure 5.18**



Source: SBP

Financing Rate - SOFR **Figure 5.19**



Source: Fed New York

The payments under repatriation of profits and dividends picked-up pace with the improvement in external account during H1-FY25. Food sector remained the major contributor to these outflows, followed by financial business and power sector.

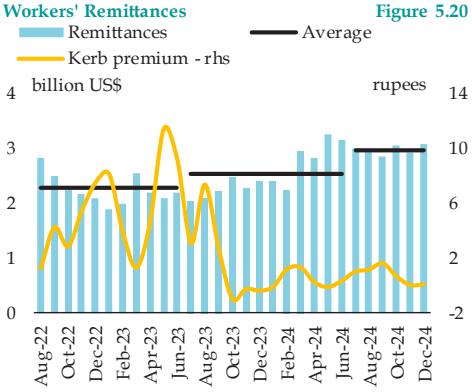
Interest payments fell by US$ 141 million in H1-FY25 compared to same period last year. This decline could be traced to decreasing global interest rates, as reflected by trends in Secured Overnight Financing Rate (SOFR) since September 2024 (**Figure 5.19**).[32]

Secondary Income

Within the secondary income account, almost entire improvement emanated from workers' remittances, which have been rising consecutively for the last 15 months in YoY terms. Cumulatively, remittances grew by 32.8 percent in H1-FY25 over same period last year (**Figure 5.20**). This growth was supported by various policy initiatives as well as favorable conditions in both the host and domestic economies. As a result, there was a broad-based increase in inflows from all major remitting corridors.

The policy measures introduced last year have been showing results, with the impact becoming more pronounced in H1-FY25.[33] As a result, kerb premium decreased, which helped attract remittances through

Workers' Remittances **Figure 5.20**

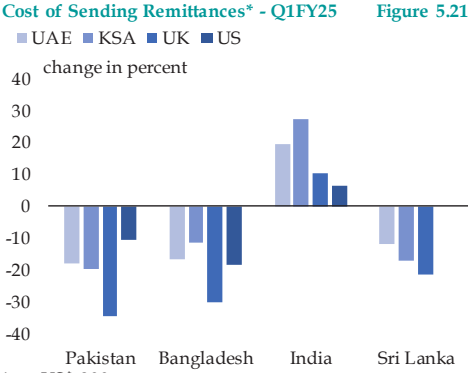


Source: SBP

[32] SOFR is a broad measure of the cost of overnight borrowing collateralized by U.S. Treasury securities in the repurchase agreement (repo) market.

[33] These measures included: i) disbursements of inward home remittances by exchange companies as sub-agent of banks; ii) closure of B-category exchange companies; and, iii) crackdown on illegal trading of forex.

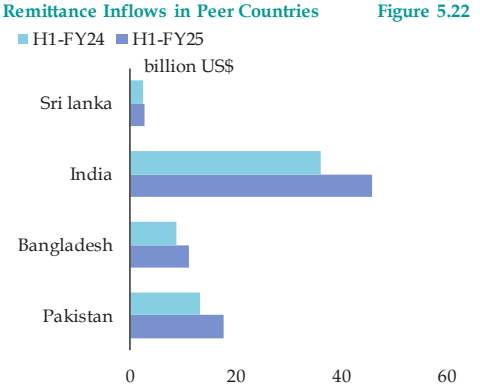
Cost of Sending Remittances* - Q1FY25 **Figure 5.21**



*per US$ 200

Source: WB

Remittance Inflows in Peer Countries **Figure 5.22**



Source: tradingeconomics

formal channels. To build on these measures, the SBP further incentivized the banks and exchange companies by introducing incremental T.T charges.[34,35]

In addition, strong economic activity in host countries, supported by new infrastructure projects, enhanced the demand for labor in the gulf region.[36] For instance, Saudi Arabia's mega construction and transportation projects created employment opportunities for emigrants. Consequently, the number of workers going abroad from Pakistan (as well as Bangladesh and Sri Lanka) has been on rise in recent years.

In addition, improved labour market dynamics and declining inflation in advanced economies such as the US, UK and EU increased savings, are boosting remittances from these regions.[37] Meanwhile, the cost of sending remittances from these countries declined significantly, which further helped to improve the inflows (**Figure 5.21**). It is worth mentioning that a similar trend in remittances was visible in peer countries as well (**Figure 5.22**).

5.4 Financial Account

The financial account recorded lower net inflows of US$ 0.5 billion in H1-FY25, compared to net inflow of US$ 5.0 billion in the corresponding period of last year. This was largely because of lower-than-committed disbursement of official loans

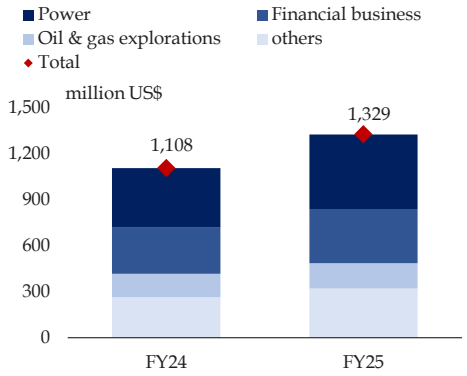
[34] Now banks receive a fixed reimbursement of SAR 20 for transaction of US$ 100 or higher. Furthermore, a variable component of SAR 8 per incremental transaction is provided for maximum of 10 percent or US$ 100 million growth in remittances over the last year, and SAR 7 per incremental transaction for growth exceeding the thresholds. (Source: EPD circular Letter No. 09 of 2024).

[35] In case of exchange companies, a fixed rate of PKR 2 against US$ 1 surrendered and variable rates of PKR 3 per US dollar for up to 5 percent growth or US$ 25 million increase from previous year, and PKR 4 per US dollar for growth exceeding these thresholds. (Source: EPD circular Letter No. 10 of 2024).

[36] WB (2025). Global Economic prospects, World Bank, Washington DC.

[37] USDL (2025). The Employment Situation— February 2025, US Department of Labour, Available at: www.bls.gov/news.release/pdf/empsit.pdf, Accessed on: March 10, 2025

Net Foreign Direct Investment in H1 **Figure 5.23**



Source: SBP

and higher amortization of external debt. Alternatively, private inflows saw an uptick. Notwithstanding the slight improvement, there are several factors at play that are holding back private inflows (**Box 5.2**).

Foreign Direct Investment in Pakistan

Net foreign direct investment (FDI) increased in H1-FY25. Although an improvement from the last year, sector-wise data shows that it remains concentrated in power (hydel and coal), financial business (banks including microfinance and investment banks), and oil and gas exploration (**Figure 5.23**).

A major part of investment in the power sector came from China as work on coal and hydel based power projects picked up pace in the wake of improved energy generation mix. In addition, there were inflows in transmission and distribution segment of the power sector. This was followed by FDI inflows in different financial institutions sourced from the Middle East, UK, and US.

FDI in oil and gas exploration during H1-FY25 mainly originated from Hong Kong, which owns a high-growth upstream energy company. Some inflows in domestic oil exploration and refinery companies were also seen from Hungary, Malta, Lebanon, and UK.

Besides these usual FDI-attracting sectors, China also made greenfield investment in its Pakistani chapter of multinational home appliances and consumer electronics company. There was also a greenfield inflow in a rubber and tire company from the UAE for developing a manufacturing facility in the Sindh.

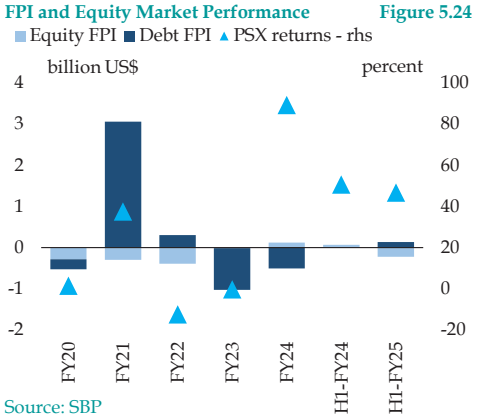
Foreign Portfolio Investment

Net foreign portfolio investment (FPI) saw an outflow of US$ 70 million in H1-FY25, compared to an inflow in the corresponding period of last year. However, there was a contrasting trend within its major components (**Figure 5.24**).

The equity market recorded net outflows during H1-FY25, against inflows in the same period last year. As per the National Clearing Company of Pakistan Limited (NCCPL), foreign investors sold US$ 186.8 million worth of holding in, fertilizer, oil & gas exploration, food, OMCs, power, banks and cement sectors. This was despite a promising equity market return of around 47 percent in H1-FY25.[38] The benchmark 100-index soared to new height due to a

[38] The KSE-100 index increased from 78,445 in end-June to 115,126 by end-December 2024.

FPI and Equity Market Performance **Figure 5.24**



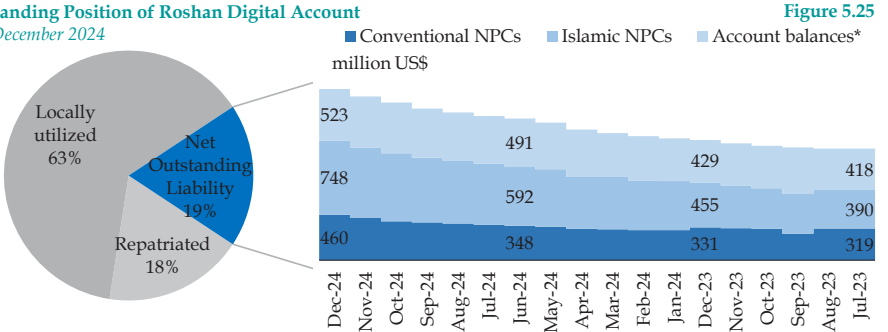
Source: SBP

host of factors, such as: signing of a new IMF-EFF program; rating upgrade by Fitch to CCC+; increased weightage of 5 percent in MSCI with the addition of new scrips;[39] improved overall macroeconomic outlook; and sustained global monetary easing. Foreign investors were net sellers as they booked profits given higher stock market returns during H1-FY25.

Conversely, domestic debt market attracted net inflows in H1-FY25. The investments were mostly in short-term government securities (MTBs) and Naya Pakistan Certificates (NPCs) via Roshan Digital Accounts (RDA). The consistent increase in RDA inflows is driven by relatively higher returns, tax benefits, smooth repatriation, and Sharia-compliant options. In addition, besides diaspora's demand for secure and profitable investments, successful global marketing and awareness campaigns also played a key role in driving growth.

As of end December 2024, the net repatriable liabilities under RDAs rose to $1,731 million, indicating the overseas Pakistanis' interest in the domestic economy. This constitutes around 19 percent of overall RDA funds, which can be repatriated, consumed, or invested in Pakistan. Approximately 63 percent of the total RDA inflows have been utilized in

Outstanding Position of Roshan Digital Account **Figure 5.25**
as of December 2024



*including Roshan equity investments and other liabilities (outstanding position in government securities like T-bills, Sukuk, real estate, mutual funds, etc. but exclude NPCs)
Source: SBP

[39] Total number of companies in frontier markets index increased from 20 to 21 while in Small Cap index it improved from 56 to 67.

local economy, and are no more an obligation, while the remaining 18 percent has already been repatriated (**Figure 5.25**).

FX Loans and Liabilities

There was a net repayment of official external loans of around US$ 1.1 billion during H1-FY25, compared to a net incurrence of loans and liabilities worth US$ 3.4 billion in the same period last year. This was because of increase in amortization of external debt, while disbursements from multilateral and bilateral sources remained lower than last year (**Figure 5.26**).

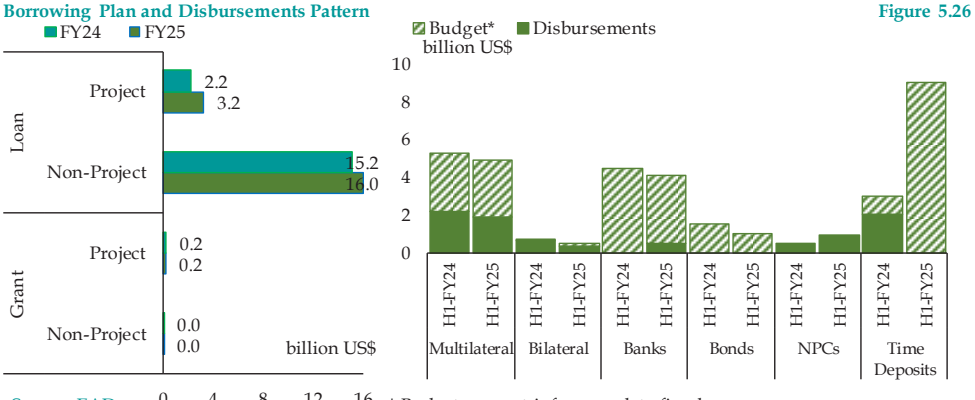
Most of the disbursements (~ 50 percent) during H1-FY25 consisted of program loans from multilateral creditors. Specifically, ADB disbursed US$ 500 million under 'Climate and Disaster Resilience Enhancement Program' to enhance Pakistan's resilience to disasters triggered by natural hazards and the impact of climate change.

Around US$ 226 million were disbursed jointly by ADB, IDA, and IDB for housing reconstruction and rehabilitation projects in flood-affected areas of Sindh. ITFC also provided US$ 240 million to be utilized by PSO, PARCO, and PLL for import of crude oil, refined petroleum products, and LNG.

There were inflows of around US$ 125 million in power sector from ADB, AIIB, and IBRD for improving transmission, distribution, and evacuation of power programs. For health, IDB and France provided funds of more than US$ 100 million for polio eradication and resilience programs. Similarly, IDA disbursed US$ 25 million under the umbrella of 'National Health Support Program' for effective quality family planning services in Punjab.

Among other bilateral loans, China disbursed a sum of approximately US$ 100 million for Pakistan's first multi-mission satellite (PakSat-MM1), which became operational in October 2024. This high-power satellite is meant to play a pivotal role in the socio-economic uplift of the

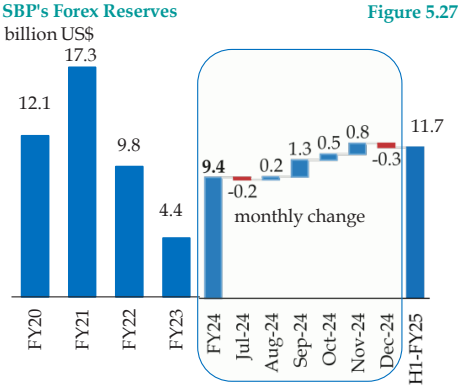
Borrowing Plan and Disbursements Pattern — **Figure 5.26**



Source: EAD

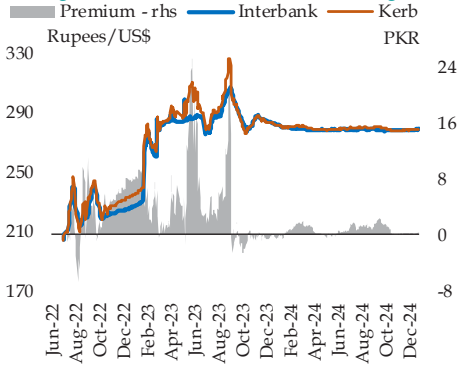
* Budget amount is for complete fiscal year.

SBP's Forex Reserves **Figure 5.27**



Source: SBP

Exchange Rate and Kerb Premium **Figure 5.28**



Source: SBP

country by providing internet connectivity in remote areas of Pakistan. Above all, the country received first tranche amounting to US$ 1.0 billion from IMF after securing a 37-month Extended Fund Facility during the period.

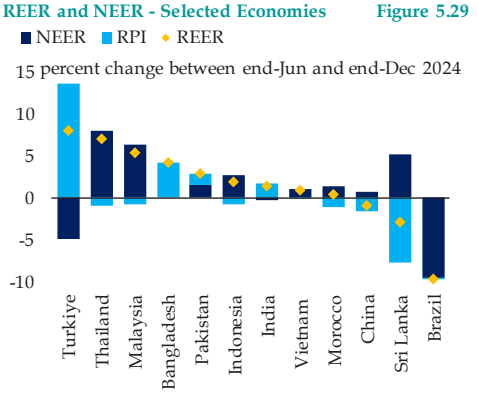
5.5 Foreign Exchange Reserves and Exchange Rate

The country's foreign exchange (FX) reserves continued to strengthen in H1-FY25, primarily on account of build-up in SBP's liquid reserves. Specifically, the favorable current account balance provided the SBP an opportunity to purchase US$ 5.0 billion from the interbank market during H1-FY25. It is worth highlighting that these purchases were primarily aimed at strengthening country's external buffers, besides meeting external obligations. In addition, the inflows from multilateral sources, including IMF, also supported SBP reserves.

As of end-December 2024, the SBP reserves rose to US$ 11.7 billion from US$ 9.4 billion at end-June 2024 (**Figure 5.27**). Resultantly, the import coverage ratio improved to 2.1 months' from 1.6 months' at end-June 2024. In addition, the SBP reduced its outstanding position of forward/swap book by another US$ 455 million, further improving the quality of forex reserves compared to end-June 2024 position.

These developments have had a positive spillover in foreign exchange market. The exchange rate of Pak rupee against USD remained broadly stable around PKR 278/US$ through H1-FY25. The kerb premium also remained negligible. There was, however, a brief period of uncertainty

REER and NEER - Selected Economies **Figure 5.29**



Source: Haver Analytics

during Q1-FY25 due to the delay in approval of IMF program amidst gap in external financing arrangements. The kerb premium somewhat increased during this period but eventually alleviated after the IMF Board approved a $7 billion Extended Fund Facility (EFF) for Pakistan on September 25, 2024 (**Figure 5.28**).

Pakistan's real effective exchange rate (REER) index rose from 100 at end-June to 103.7 by end-December 2024. This REER appreciation was driven by higher domestic inflation compared to its trading partners, reflected in higher relative price index (RPI). In the countries where RPI had increased, NEER depreciated to maintain its competitiveness. In contrast, Pakistan's NEER witnessed a marginal appreciation in line with improvements in the external account (**Figure 5.29**)

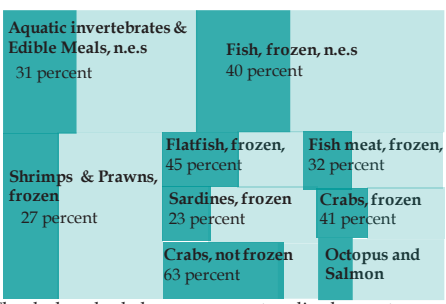
Box 5.1: Tapping the Trade Potential of Fisheries through Aquaculture[40]*

Pakistan is a maritime country with an Exclusive Economic Zone (EEZ) of about 240,000 sq. km.[41] The vast EEZ has immense potential to increase export receipts, particularly from its partially tapped fisheries sector (**Figure 5.1.1**). Pakistan's diversification frontier indicates a high likelihood of developing competitiveness in fisheries export through value addition and improvement in its complexity rank (**Figure 5.1.2**).

The main reasons for not being able to fully exploit the fisheries' export potential include compliance gaps, and traditional processing and preservation methods. [i] Lack of modern fishing vessels also limit productivity as it increases the cost per kg of fish due to low catch volumes. Against this, Pakistan's fish export unit prices remain significantly lower than regional peers, which is indicative of lower value-addition. Moreover, most of the marine catch is concentrated within EEZ I (*12 nautical miles from the coast*), leading to overfishing and depletion of high value species like shrimp. The country's EEZ II (*35-200 nautical miles*) also remains underutilized.[42]

Besides addressing the aforementioned challenges and its underutilized maritime zone, Pakistan should also prioritize production of fisheries through aquaculture. Pakistan accounts for less than 0.1 percent of total global aquaculture production and has utilized only 1 percent of its available water resources for aquaculture, though Asian economies contribute around 92 percent to the total global aquaculture production (**Table 5.1.1**). [ii] Other economies have made strategic investments in aquaculture products where they possessed a competitive advantage. For instance, India has invested in shrimp aquaculture, which is the largest

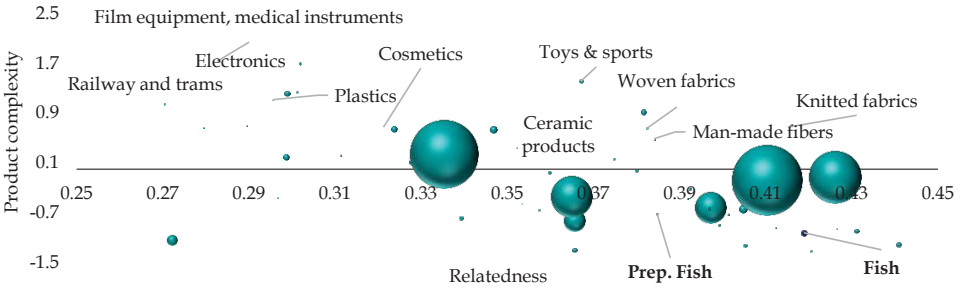
Export Potential of Fisheries **Figure 5.1.1**



The darker shaded area represent realised export potential while the lighter shaded areas represent unrealised export potential in the specific product.
Source: ITC Trade Map

[40] Aquaculture is the breeding, rearing, and harvesting of fish, shellfish, algae, and other organisms in all types of water bodies.
[41] An area of the ocean, (200 nautical miles), beyond a nation's territorial sea, where it has jurisdiction over its resources.
[42] FAO website: www.fao.org/4/Y4849E/y4849e0a.htm accessed on January 13, 2025

Pakistan's Export Diversification Frontier **Figure 5.1.2**



This shows the relationship between a product's technological complexity and its "relatedness" (a measure of how feasible it is to develop competitiveness in that product given Pakistan's current export basket) to other, higher complexity, potential products. The size of each scatter point indicates a product's relative trade value.
Source: Observatory Economic Complexity

contributor of its fisheries' exports.[43] Similarly, Chile has created a competitive edge in salmon production. [iii]

Likewise, Bangladesh's fish production through aquaculture is about 16 times higher than Pakistan's, despite similarities in fish fauna and geological features between Bangladesh and Pakistan, where the former has in fact a lower surface area of water bodies (**Table 5.1.1**).

In Pakistan, feasibility studies indicate that saline inland aquaculture, particularly in the country's abundant saline and brackish waterbodies, holds significant potential, especially for high value species like shrimp, dangri, crab and tilapia. [iv]

Though Pakistan has initiated limited inland aquaculture[44], it lacks a comprehensive inland aquaculture strategy. Currently, provincial departments are making interventions in silos and without addressing underlying cross-sectoral issues such as gaps in seed availability, technical expertise, aquaculture stock assessment, and limited sampling of areas, which limits the effectiveness of these efforts. [v]

To expand aquaculture production, specialized market intelligence system may be established with the support of technical research teams. These teams may conduct an in-depth strategic market analysis, which will help identify export opportunities. In addition, Pakistan should explore emerging sub-sectors within the aquaculture, such as marine biodiversity-based products. For instance, the

Aquaculture Production **Table 5.1.1**

	Surface Area of Inland Water Bodies	Coastline Length	Aquaculture Production		Aqua Production Per Hectare
	000 hectares	Km	(000 tons)		
			2015	2022	2022
China	175,310	14,500	43,748	52,884	0.3
India	314,070	7,000	5,341	10,230	0.0
Bangladesh	1,746	580	2060	2731	1.6
Thailand	223	3,219	921	1001	4.5
Vietnam	2,116	3,444	3462	5160	2.4
Pakistan	**2,522**	**1,046**	**151**	**165**	**0.1**
Malaysia	180	4,700	507	574	3.2

Sources: CIA FactSheet, and FAO

[43] Marine Products Exports Development Authority website
[44] Inland Aquaculture refers to farming or culture of aquatic animals and plants using inland (i.e. non-coastal) sources of saline waterbodies like groundwater, canals, ponds, reservoirs.

nutraceutical[45] global market size was valued at US$ 438 billion in 2023, and is projected to reach US$ 620 billion in 2030. This includes products like algae-derived compounds, which are increasingly being used in food, feed and packaging industries.

The growing demand for algae-based biodegradable and anti-bacterial packaging also presents a sustainable export opportunity. Seaweeds, such as kombu and nori, hold culinary, pharmaceutical, cosmetics and biofuel applications and Pakistan can easily tap into this sector as coastal belts are conducive for seaweed culture. The demand for marine-based collagen is rapidly increasing within the cosmetics and skincare industries, which also presents Pakistan with a significant opportunity to tap into this growing market. Pakistan is well-positioned to enter the export of such products, given its comparatively better readiness for such products on the export diversification matrix. [vi] By venturing into such high-growth and sustainable sub-sectors, Pakistan can diversify its exports, reduce its reliance on traditional markets, and align its exports with the shifting global demand patterns.

* *The contribution of Ana Khattak is acknowledged in writing this box*

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Box 5.2: Impediments to Foreign Private Investment in Pakistan*

Foreign private investment comprises of Foreign Portfolio Investment (FPI) and Foreign Direct Investment (FDI). FPI is non-residents' purchase of liquid financial assets (stocks, bonds, debt securities, dividends, and mutual funds) that are relatively easy to trade. [i] However, FPI is usually associated with increased market volatility, speculative attacks and sudden stops.[46] Accordingly, emerging economies, like Pakistan, prefer to attract FDI, which is of long-term and developmental nature. [ii]

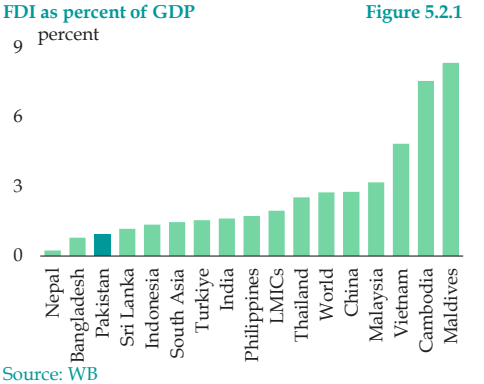
FDI offers numerous advantages such as providing much-needed capital, facilitating infrastructure development, and creating job opportunities in host countries. FDI often brings advanced technologies and expertise that enhance productivity and force competition in the domestic market. Additionally, these investments can provide local companies with access to international markets and bring diversification in the economy.

FDI in Pakistan continues to trail behind the regional countries (**Figure 5.2.1**), despite a sizable market, strategic location, and untapped potential across various sectors. In Pakistan, FDI has remained at about

[45] It is broad umbrella term used to describe any product derived from food sources related to aquaculture.
[46] Stulz, R. M. (1999). Globalization, Corporate Finance, and the Cost of Capital. *Journal of Applied Corporate Finance*, Vol.12, No.3.

1.0 percent of GDP per year (on average) in the last decade, which is less than half of the EMDEs average of 2.7 percent on average, per year. In addition, a significantly large share of FDI inflows to Pakistan in recent decades is concentrated in power generation, banking, telecommunications and fast moving consumer goods (FMCGs). The focus of all such inflows is towards catering to domestic demand rather than boosting exports. Similarly, other private inflows (banks and other private sector) remained weak and did not grow in relation to GDP or increasing requirements to sustain higher level of development. Resultantly, the ability to finance even moderate level of CAD to GDP ratio i.e. around 2 to 3 percent of GDP, has worsened overtime.

FDI as percent of GDP **Figure 5.2.1**



Source: WB

The relevant literature points to several factors inhibiting investment flows to Pakistan.[47] The critical among these are summarized as follows:

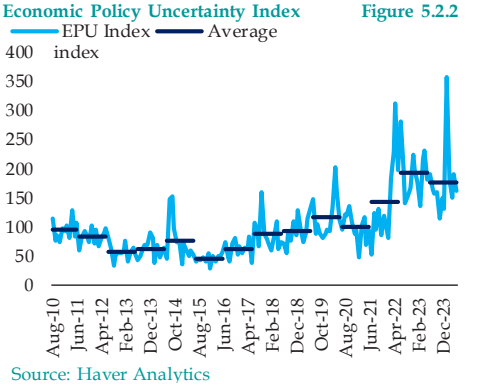
Political and economic instability: Frequent changes in government and policies discourage investors seeking long-term interests in the economy. This is particularly reflected by prevailing high economic policy uncertainty (**Figure 5.2.2**). Moreover, any disruption in economic reform process due to political transition also weakens investor confidence (Hanif, 2000). [iii]

Earlier studies in this regard have highlighted that overall ease of doing business in Pakistan remains a challenge, specifically due to difficulties in registering businesses, securing permits, and enforcement of contracts and intellectual property rights. Additionally, high cost of complying with local regulations discourage foreign companies from entering the Pakistani markets (Ashfaque 1997). [iv]

High taxation: Pakistan's high tax rates, especially the corporate income tax compared to peer countries, along with frequent changes in tax policies, create uncertainty and deter long-term planning (**Figure 5.2.3**). Additionally, the absence of tax incentives for foreign investors in critical sectors reduces the country's competitiveness in global markets. [v]

Lack of adequate infrastructure: Pakistan's transport, energy, and communication networks are underdeveloped, hindering industrial growth and operational efficiency. Inefficiencies at ports and in logistics also affect export competitiveness. Similarly, Pakistan also ranks low on digital infrastructure vis-a-vis peer countries (**Table 5.2.1**).[48]

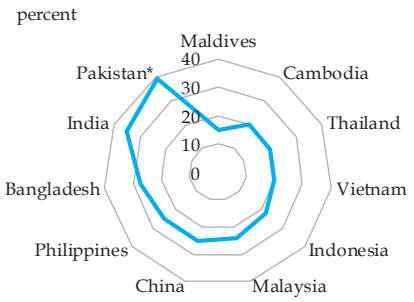
Economic Policy Uncertainty Index **Figure 5.2.2**



Source: Haver Analytics

[47] There are several factors under this head including political instability, security concerns, regulatory challenges, and inadequate infrastructure, which collectively create uncertainty for investors.
[48] Source: www.events.development.asia/system/files/materials/2024/11/202411-digital-infrastructure.pdf

Corporate Taxes **Figure 5.2.3**



*including up to 10 percent super tax

Sources: MoF, PWC, and tradingeconomics

ICT Rankings: Selected Economies **Table 5.2.1**

index

	Thailand	Sri Lanka	India	Bangladesh	Nepal	Myanmar	Pakistan	Total countries
Network readiness index 2023	42	80	60	91	114	-	90	134
ICT development index 2023	39	112	-	130	-	123	142	169
GSMA mobile connectivity 2023	53	113	84	122	119	129	137	173
UNDESA E-Govt development index 2024	52	98	97	100	119	138	136	193
Economist inclusive internet index 2022	40	59	50	64	-	69	79	100
UNDESA telecom infrastructure index 2024	38	95	135	123	101	122	149	193

Source: Development Asia

Besides the aforementioned factors, security situation, legal system, property rights, and law & order situation are other crucial factors in attracting inward Foreign Direct Investment (FDI). According to the Overseas Investors Chamber of Commerce & Industry's (OICCI) Perception and Investment Surveys, investors regarded security and contract enforcement as major reasons behind the decline in foreign investment in Pakistan.[49] Addressing these issues is essential to attract foreign investment in the country.

** The contribution of Ravi Kumar is acknowledged in writing this box*

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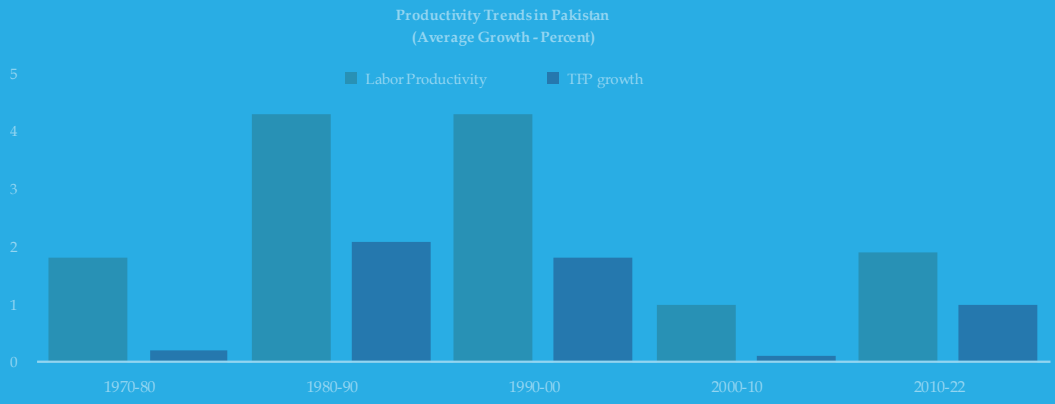
[49] This is a comprehensive survey, conducted biennially, covering investment conditions, regulatory landscape, business challenges, and other factors that assist or hinder ease of doing business, in comparison to comparable regional countries.

6

Pakistan's Low Competitiveness: A Case for Investing in Productivity

Productivity growth lies at the heart of achieving long-term economic competitiveness. Pakistan's persistently weak and falling productivity growth has severely constrained its ability to achieve sustained economic growth and compete in international markets. Compared to peer economies, Pakistan has been lagging behind in both headline indicators – labour productivity and total factor productivity – and sectoral indicators, such as water, agriculture and energy productivity. The country trails noticeably behind its regional and income level peers, ranking below or close to low-income countries across various measures and drivers of productivity. This chapter examines the macroeconomic constraints that have hindered Pakistan's competitiveness, including low investment, limited access to credit, distortionary tax and trade policies, and historical exchange rate misalignment. Additionally, it also explores main structural challenges to productivity growth that impedes Pakistan's ability to transition towards a more competitive economy. While some attempts have been made to boost Pakistan's competitiveness, these attempts have focused on unsustainable measures – such as reliance on subsidies and tax exemptions – and thus have been unable to deliver long-term gains. Achieving sustainable improvements in competitiveness requires a fundamental shift from an input-driven to an efficiency-driven growth model, i.e. productivity growth. This transition necessitates addressing the aforementioned macroeconomic challenges, as well as investment in human capital, strong institutions, research and development, and robust physical and digital infrastructure. Fostering an efficiency-based economy demands a strong institutional focus on productivity and a coordinated government approach to boost productivity across sectors.



6 Pakistan's Low Competitiveness: A Case for Investing in Productivity

6.1 Introduction

Pakistan's economy has been caught in boom-bust cycles for more than five decades, with recurring episodes of high inflation and external account pressures. Historically, these cycles comprised three to six years of relatively high growth followed by a crisis —particularly balance of payments crisis—that necessitated urgent stabilisation measures. These measures were often supported by relatively quick and easy access to external financing from multilateral and bilateral creditors. In recent decades, however, the frequency of boom-bust cycles has increased with the boom periods getting shorter. Moreover, access to external support has become challenging, warranting implementation of deep-rooted and long-pending structural reforms to address the underlying issues.[1]

One of the key underlying issues facing Pakistan's economy is weak competitiveness. From a macroeconomic perspective, this is reflected in consistently declining exports (as a percent of GDP), low foreign direct investment (FDI), and overall insufficient integration with global value chains (GVC). From a micro perspective, this is reflected in low quality of products, higher unit cost of production, inability to create brands in international markets, and other ancillary indicators.[2]

Whilst precise definitions, measurements and determinants of economic competitiveness remain elusive in literature,[3] it is broadly understood to be achieved through (a) low costs in international markets, and (b) productivity growth. These may be referred to as the '*low road*' and the '*high road*' to achieving competitiveness, respectively.

The main distinction between the two approaches revolves around long-term sustainability. The *low road*— achieved through subsidies on utilities, export rebates, undervalued exchange rate, and other ways of gaining cost-competitiveness—can benefit exports in the short to medium-term. However, it is productivity growth which is the biggest structural driver of competitiveness that boosts an economy's ability to continue to export competitively, attract FDI, and sustain economic growth.[4]

An important dimension to consider here is that while the *low road* offers quick gains, it is inherently unsustainable. For instance, barring some exceptions, subsidies either burden government coffers or disincentivise firms from pursuing

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[1] Lopez-Calix, J. & Touqeer, I. (2013); Pasha, H. (2023); IMF (2024a); MoF (2019); SBP (2021a); WB (2019); SBP (2024a)
[2] Pirzada et al. (2024); Siddique, O. (2022); APO (2023); Amjad, R. & Awais, N. (2016); Mustafa, G. & Hussain, S. (2023); Husain, I. (2024)
[3] Competitiveness is a complex, multidimensional, and relative concept. Literature suggests that a variety of indicators may be used to analyse competiveness, including product quality, balance of trade, technology indicators, export market share, profitability, growth rate, exchange rate, savings rate, investment rate, national culture, entrepreneurship. A common underlying theme to these is that competitiveness involves the ability to expand exports of goods and services. Source: Chaudhuri, S. & Sougata, R. (1997); Bhawsar, P. & Chattopadhyay, U. (2015); Wignaraja, G. & Joiner, D. (2004); Razafimahefa, I.F. & Hamori, S. (2007).
[4] OECD (2011).; Razafimahefa, I.F. & Hamori, S. (2007); Stenborg et al. (2021); Muellbauer, J. (1986).

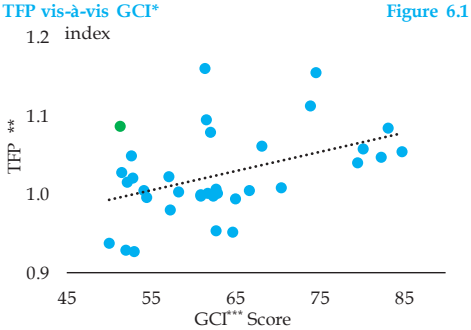
innovation and efficiency (Heuvelen, 2023). Similarly, solely relying on exchange rate undervaluation to compensate for high cost of production, lack of innovation, low product quality, etc. could be counterproductive. While exchange rate undervaluation does promote economic growth and raise export prospects in the short to medium run, its effect on growth becomes negative, with an insignificant impact on exports in the long run (Haddad & Pancaro, 2010).

Owing to these reasons, competitiveness has become synonymous with productivity and productivity growth. For instance, Krugman (1996, 2001) observes that true competitiveness is measured by productivity. Similarly, in the European Union, productivity growth is considered a major determinant and only relevant measure of national competitiveness, and hence key for guaranteeing competitiveness.[5]

Moreover, in line with endogenous growth theories, the global benchmark indices on competitiveness —such as Global Competitiveness Index (GCI)— mainly track the long-term drivers of productivity,[6] particularly total factor productivity (TFP) that reflects how efficiently production inputs (capital and labour) are employed to produce output.[7] For EMDEs —that have not yet achieved the productivity growth frontier — improvements in these drivers of productivity are positively correlated with the GCI **(Figure 6.1).**[8]

TFP vis-à-vis GCI*

Figure 6.1



*Selected Asian economies; **average (2015 to 2019); ***latest available data (2019); green dot represents Pakistan

Sources: WEF and APO Productivity Database 2024

The long-term drivers of productivity mainly include technology; human capital; market competition; economic policies; regulatory and legal systems; physical and ICT infrastructure; tax financed public investments; as well as the quality of political and economic institutions. In addition, research and development (R&D) and innovation; financial sector development; lowering of tariffs/non-tariffs barriers to cross-border trade and investment; and reduction in the size of

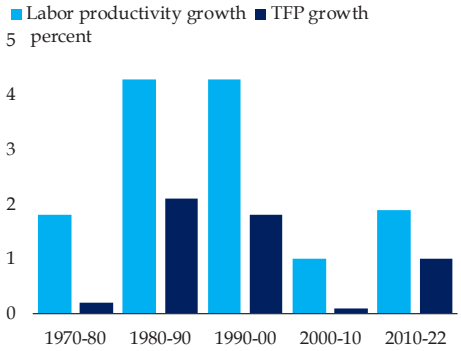
[5] Chaudhuri, S. & Sougata, R. (1997); Dresch et al. (2018); OECD (2011); Grifell-Tatje et al. (2018); Schwab, K. & Sala-i-Martin, X. (2013); European Commission (2020); Siller et al. (2021); Stenborg et al. (2021).
[6] World Economic Forum's GCI and International Institute for Management Development's World Competitiveness Rankings are most renowned indices on competiveness. Both track archetypical TFP drivers for competiveness.
[7] Endogenous growth theory explains long-term economic growth as resulting from internal economic activities that create new technical knowledge. TFP measures the combined efficiency of capital and labour, capturing the effects of technological progress, innovation, and other factors beyond input accumulation.
[8] GCI data is available up to 2019. However, it is useful for analyses because it remains the most widely used benchmark with comprehensive coverage to measure competitiveness.

informal economy also promote productivity growth.[9]

In Pakistan, several attempts have been made in the past to increase exports and attract FDI to kick start economic growth. With some exceptions, most such attempts have been based on the *low road* model discussed above, coupled with the protection of domestic industries on the premise of infant industry. However, these approaches have not delivered desirable outcomes; nor have foreign aid, grants, loans, privatisation and other windfall or external endowments sustainably driven long-term growth prospects (Khan & Kim, 1999).

A host of other countries have also followed the *low road* to achieving competitiveness in the past. But they have done so with simultaneous and prime focus on productivity growth to achieve and sustain competitiveness in the long run. These include China, Japan, South Korea, and other East Asian economies (Kapoor, 2021). By comparison, as the remaining sections of the chapter show, Pakistan has been unable to pursue and achieve high productivity growth. In fact,

Productivity Trends in Pakistan (Average Growth) **Figure 6.2**



Source: Nomura, K. & Ho, M. (2024)

the country's productivity growth has been on a declining trend **(Figure 6.2)**, even though productivity has featured in the government's broad economic policy frameworks since at least late 1990s.

The rest of the chapter is organised as follows. Using the growth accounting framework, **Section 6.2** takes a look at broad trends in Pakistan's headline productivity indicators.[10] This is followed by review of Pakistan's performance in archetypical macroeconomic determinants (**Section 6.3**), and structural challenges to productivity in Pakistan (**Section 6.4**).[11]

[9] Romer, P.M. (1986); Lucas, R.E. (1988); Mankiw, N.G. et al. (1992); Bloom, N. & Reenen, J.V. (2007); Easterly, W. & Levine, R. (2001); Barro, R. (1990); Barro, R. & Sala-i-Martin, X. (1992); Acemoglu, D. et al. (2001); Acemoglu, D. et al. (2004); Banks, G. (2015); Hsieh, C.T. (2015); OECD (2015a); OECD (2015b). This is not an exhaustive list as empirical work on productivity is vast and still growing. Some other notable factors that drive productivity and hence help grow economic competitiveness include organizational management practices, cost of doing business; and natural resource endowments. Source: Grifell-Tatje et al. (2018)

[10] Growth accounting is more about measuring technical change than its explanation, whereas productivity trends are typically analysed over long-term. Notwithstanding these limitations and academic debates over its accurate estimates, the concept of productivity, especially TFP, remains extremely important. Source: Mahadevan, R. (2004); Stiroh, K.J. (2001).

[11] The interactive nature of macroeconomic and structural factors makes clear demarcation almost impossible. Hence, some inter-related factors may be discussed more than once across the various sections/sub-sections of this chapter. E.g., given its proximate relationship with macroeconomics, investment is mainly discussed in Section 6.3. However, other sections/sub-sections, such as R&D and infrastructure, also touch upon the subject in passing where necessary.

Section 6.5 summarises key insights and offers broad recommendations.

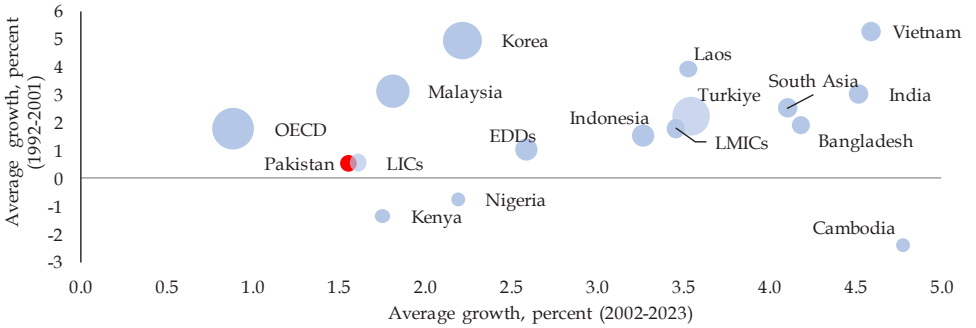
6.2 Trends in Pakistan's Productivity

Long-term productivity trends in Pakistan have been dismal, limiting the country's economic competitiveness over the last few decades. While there have been some episodes of productivity improvements, limited structural transformation, low capital deepening, and weak TFP growth have contributed to an overall productivity downtrend. This has led to increased reliance on input-driven growth model, which is expensive and inherently unsustainable (NPO, n.d). This section first takes a look at labour productivity and TFP as key measures of productivity that explain technical changes to GDP growth,[12] followed by a discussion on some sector-specific productivity indicators.

Labour Productivity

Measured as change in GDP per worker,[13] Pakistan's labour productivity (LP) growth remains one of the lowest among peer economies. Whilst average annual growth in GDP per worker in the last two decades increased by about 1.0 percentage point over the average growth in the preceding decade, it still remains low compared to peer economies by income —lower middle income countries (LMIC)—and by demography —Early Demographic Dividend (EDD). It is also lower than productivity growth in low income countries (LIC) **(Figure 6.3)**.[14]

GDP Per Worker (Constant 2021 PPP$ terms) **Figure 6.3**



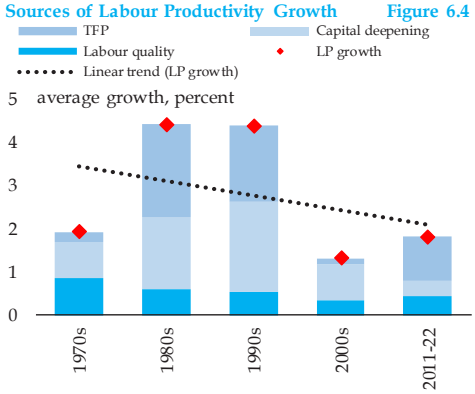
Note: Size of bubble refers to GDP/worker as of 2023; China is an outlier with 7.9% and 9.4% average annual growth in 2002-23 and 1992-2001, respectively.
Source: SBP staff calculations based on World Bank data

[12] The section primarily uses APO Productivity Database 2024 (with data up to 2022) to analyse Pakistan's productivity trends and compare them with South and East Asian economies. APO provides a comprehensive set of variables and region-specific insights that are more relevant to Pakistan than other global datasets. Additionally, the APO Productivity Report helps validate findings and benchmark results against regional averages.

[13] GDP per worker is a straightforward, standardised and widely accepted headline metric for understanding productivity. There is an extensive cross country, regional and income group data available for this variable, which makes it ideal for broad comparison.

[14] This figure is based on World Bank data, which may not necessarily exactly match labour productivity data reported by other sources such as APO or UNU-WIDER. These differences emerge from differences in methodologies.

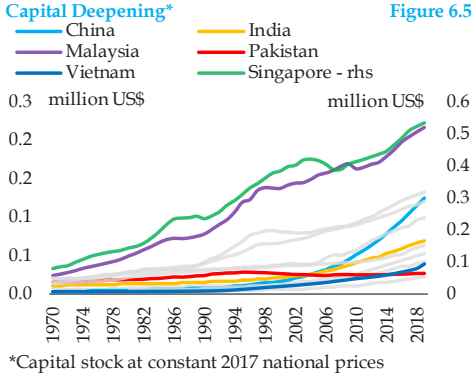
Sources of Labour Productivity Growth **Figure 6.4**



Source: APO Productivity Database 2024

Despite its recent improvement, the long-term decline in labour productivity remains concerning. The decomposition of Pakistan's long-term labour productivity growth suggests that these trends are largely attributable to weak labour quality, insufficient capital deepening— i.e. capital available per worker—and falling TFP **(Figure 6.4).** Labour quality in Pakistan accounted for 21 percent of the improvement in labour productivity during 2000-2022, compared to 61 percent in ASEAN economies.[15]

Capital Deepening* **Figure 6.5**



*Capital stock at constant 2017 national prices (in 2017 US$) per person employed

Source: Penn World Data 10.01

Moreover, growth in capital deepening accounted for 38 percent of Pakistan's labour productivity growth in the last two decades, compared to 52 percent and 59 percent in East Asia and South Asia, respectively. This reflects Pakistan's low capital accumulation **(Figure 6.5)**, which is insufficient to improve labour productivity through investment in modern machinery, infrastructure, and technology.[16]

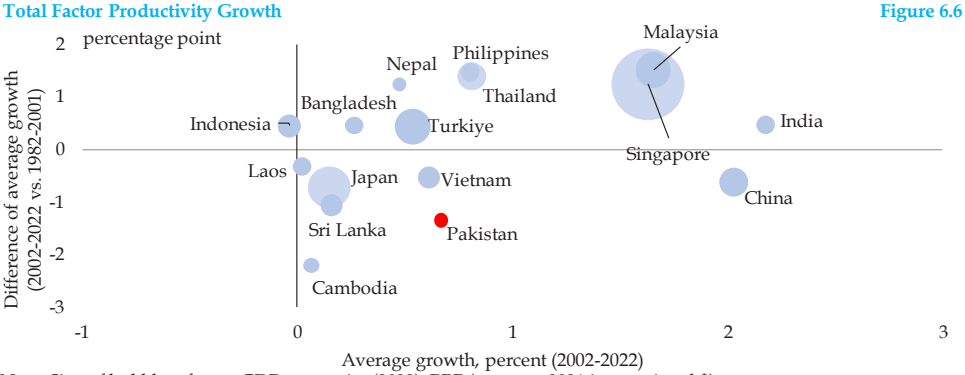
In this regard, Pakistan is similar to some other populous economies that organised production along the lines of labour intensive industries—rather than capital intensive industries —due to abundant supply of low-skilled labour. However, Pakistan's productivity has remained relatively weak even in the labour-intensive sectors such as agriculture, slowing the pace of structural transformation. This transformation—driven by productivity improvements—is fundamental to modern economies, as it improves resource allocation across the economy, both between sectors and within firms **(Box 6.1)**.[17]

Total Factor Productivity

Pakistan's highest TFP growth was during the 1980s. This was driven by the gradual reversal of nationalisation policies of the preceding decade; initiation of market-

[15] Nomura, K. & Ho, M. (2024)
[16] Nomura, K. & Ho, M. (2024); APO (2023)
[17] ibid

Total Factor Productivity Growth **Figure 6.6**



Note: Size of bubble refers to GDP per capita (2022), PPP (constant 2021 international $)
Source: SBP staff calculations based on APO Productivity Database 2024

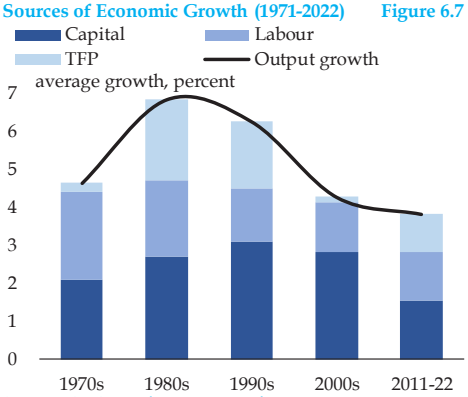
oriented reforms; and the lagged impact of the green revolution of 1960s and large public sector investments of the 1970s. However, TFP growth witnessed a decline in the subsequent two decades. During the 2010s, TFP's contribution to growth increased as a result of various institutional reforms as well as increased investment in human capital, digital and physical infrastructure introduced in the preceding decade (Anjum & Sgro, 2017; Siddique, 2022). However, TFP growth has remained volatile and on a downward trend due to slow pace of reforms amid frequent changes in government, policy inconsistencies, and governance inefficiencies (Siddique, 2022).

Pakistan's average annual TFP growth in the recent two decades (2002-2022) has been lower than several peer economies, and has also declined when compared to the average growth of preceding two decades, i.e. 1982-2001 **(Figure 6.6)**. For instance, while Pakistan's TFP growth in the recent decade is better than that of Bangladesh, the pace of TFP growth is declining in Pakistan compared to that in Bangladesh.

As a result, TFP's contribution to economic growth has been consistently low, which points to the view that Pakistan's economic growth has been input-driven rather than efficiency-driven **(Figure 6.7** and **6.8).** In particular, notwithstanding Pakistan's low level of capital deepening, major contribution to the country's economic growth has come from capital input instead of TFP. This reliance on investment in capital goods to generate economic growth without an accompanying improvement in labour quality and input efficiency is an expensive growth model.[18]

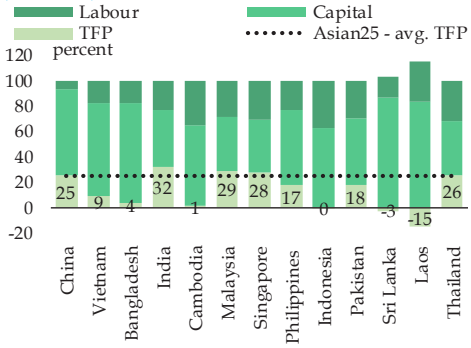
[18] High-growth countries with low initial per capita income tend to rely on capital accumulation for economic growth, especially at the early and middle stages of economic growth and development. Later, as an economy matures, the TFP and labour quality improvement play a larger role in economic growth. This transformation of moving away from capital and labour input-driven growth to TFP-driven growth has been absent in Pakistan for more than five decades. (Nomura, K. & Ho, M. (2024))

Sources of Economic Growth (1971-2022) **Figure 6.7**



Source: APO Productivity Database 2024

Contribution to Economic Growth (2000-2022) **Figure 6.8**



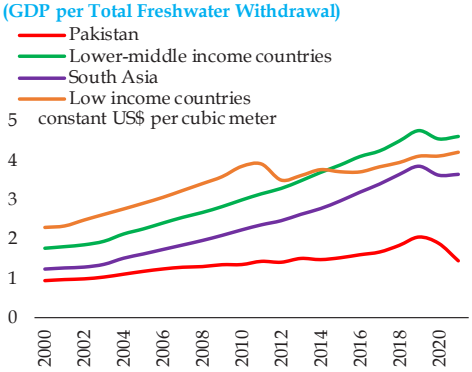
Source: APO Productivity Database 2024

Recent empirical evidence (Faraz et al, 2023) also shows that even export-oriented sectors that receive subsidies and other preferential treatments have exhibited negative or weak TFP growth over the 2010-2020 period. These sectors include textile spinning, textile weaving, leather, sports goods, sugar and pharmaceuticals. Even the textile composite sector has been found to have low TFP growth. In light of Pakistan's falling exports (in terms of GDP), these findings reiterate an important lesson: as discussed in **Section 6.1**, the *low road* of economic competitiveness alone does not drive export growth in the long run. While detailed exposition of the drivers of TFP growth will feature in **Sections 6.3** & **6.4**, literature suggests a host of factors behind these trends. Amongst these, education, institutional quality, private sector credit, and R&D show strong association with TFP in Pakistan (**Box 6.2**).

Sectoral Indicators of Productivity

The trends in Pakistan's aggregate indicators of productivity, discussed in the preceding sub-section, are also evident in various sectoral productivity indicators. For instance, Pakistan's water productivity —GDP per unit of freshwater withdrawal —has remained consistently lower than South Asian, LMIC and LIC averages, highlighting inefficient water use in agriculture and industry **(Figure 6.9)**. These trends reflect Pakistan's heavy reliance on flood irrigation, poor water conservation practices, and outdated infrastructure (Nasreen & Ashraf, 2020). It also reflects the policy of under-pricing

Water Productivity (GDP per Total Freshwater Withdrawal) **Figure 6.9**



Source: WB

Yields of Top 10 Crops and Livestock Producing Countries in 2022 **Table 6.1**

	Cotton[a]	Wheat[a]	Rice[a]	Sugarcane[a]	Milk[b]	Meat[b]
Minimum*	1.1	2.8	3	60.4	636	130
Maximum*	6	7.6	7.1	95	10,668	370
Average	3.4	4.4	4.5	76.3	3,684	245
Pakistan's yield	1.1	2.9	3.7	66.7	1,544	130
Pakistan's rank in production	5th	7th	10th	5th	3rd	10th

[a]tonnes per hectare; [b]kilograms per animal *Country with lowest/highest yield

Source: FAO

water that is preventing efficient crop allocation and hence competitive crop pricing (SBP, 2024a).

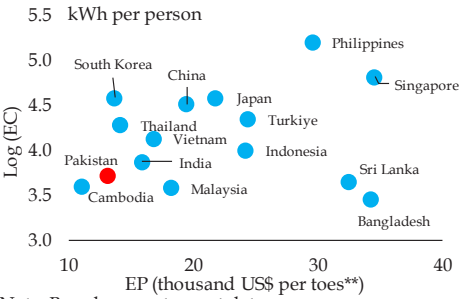
Similarly, although Pakistan is ranked among the top ten global producers of some of the world's major agriculture commodities —cotton, wheat, rice, sugarcane, milk, and meat —their yield remains well below the average of top ten producers in the world **(Table 6.1).** This indicates that Pakistan's high agriculture production volumes are primarily driven by extensive land use and herd size rather than productivity gains (Khan et al, 2021).

Likewise, Pakistan's energy productivity (EP) is among the lowest in the region **(Figure 6.10)**. Even when compared to countries with similar energy consumption per capita (EC), such as India, Malaysia, and Sri Lanka, Pakistan lags behind in EP.[19] This underperformance stems from an overall lack of policy focus on energy efficiency in generation, distribution and consumption, as well as elevated energy cost which reduces affordability. The latter is due to multiple factors, including outdated infrastructure, which manifests in high transmission and distribution losses; inefficient energy mix; and a distorted power policy.[20]

Firm-level Productivity

Low productivity levels are also visible at the firm level, across sectors and regardless of firms' age and size. For example, old

Energy Productivity (EP)* and Energy Consumption per Capita (EC) **Figure 6.10**



Note: Based on most recent data

*GDP at constant prices (using the 2017 PPP) per final energy consumption; **toes: tonnes of oil equivalent

Sources: Nomura, K. & Ho, M. (2024) and Our World in Data

[19] The difference in EC and EP can be explained by the structure of an economy and the level of energy efficiency. Countries with an advanced industrial sector relative to agriculture sector (such as South Korea, China, and Japan) tend to have high EC and low EP, relative to countries that have relatively higher share of agriculture sector (such as Bangladesh and Sri Lanka). Without improving energy efficiency, economies with large industrial base have low EP compared to economies that have high agriculture or service sectors. Source: IEA (2022)

[20] NEPRA (2024); SBP (2022); Ali, I. (2013); Pakistan's energy policy has historically prioritised power generation over demand-side management, leaving energy efficiency as low priority agenda. However, the establishment of NEECA in 2016 marked a shift, leading to National Energy Efficiency & Conservation (NEEC) Policy 2023. Source: NEECA (2023)

Pakistani firms —operating for around 40 years —are about as productive as younger firms that have existed for 10 years. By comparison, older firms in Mexico and India are up to 40 percent more productive than younger firms.[21] However, notwithstanding the various macroeconomic and structural challenges (**Section 6.3** & **6.4**) that impair productivity in Pakistan, research suggests that some domestic firms are more productive than others. Research on firms in Pakistan offers three key reasons behind varying degrees of firm productivity.

First, exporting firms are significantly more productive than non-exporting ones – this is true for all sectors and locations alike. In a sample of 'never exporters', 'latent exporters' and 'systematic exporters',[22] latent exporters were found to be around 26 percent more productive than never exporters whereas systematic exporters were up to 21 percent more productive than latent exporters (WB, 2022). Similarly, firms successfully integrated with GVCs are more productive; a 10 percent rise in GVC participation boosts firm productivity by 1.7 percent (Zeshan, 2023).

Second, firms that use technologies close to the technology frontier have been found to have higher productivity. However, such firms are mostly large exporting firms that have necessary economies of scale (Ahmed, 2023). Medium and high-tech firms have higher TFP and labour productivity, evident across several exporting sectors, including glove and denim. By comparison, smaller and less formal exporting firms are significantly less productive. Moreover, firms that adopted technologies in selected segments have relatively lower productivity compared to firms that adopted firm-wide technological changes (Firdousi, 2016; Chaudhry & Faran, 2016).

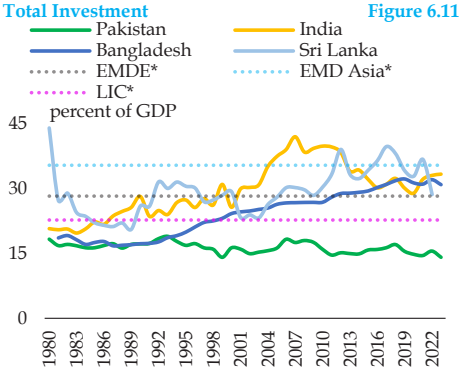
Third, differences in management practices across firms also account for differences in their productivity levels. For instance, Wadho & Chaudhry (2018) find that organizational innovation in manufacturing firms in Pakistan is the largest contributor to labour productivity growth, followed by process innovation. This echoes Choudhary et al. (2018) and Bloom et al. (2016) who find that adoption of structured management by firms[23] is limited and varies amongst plant managers, leading to differences in productivity markers.

6.3 Macroeconomic Determinants of Productivity

A review of cross-country studies reveals that investment, credit, taxation, trade and capital flows, and exchange rate policy are important macro determinants of productivity, where given their interlinkages, a misalignment, a distortion or a shortfall in one determinant impacts another. This section sheds light on the dynamics of these determinants in the

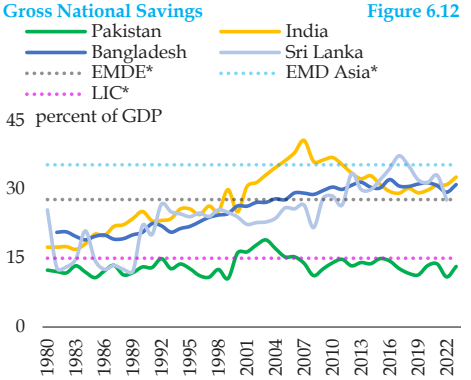
[21] Ahmed, W. (2023); WB (2021).
[22] Latent exporters are those who may start to export soon, and systematic exporters are those who always export.
[23] Structured management refers to management through pre-defined organizational policies with measurable targets, such as an employees' performance management system, or employee rotation plan. (Bloom et al, 2017).

Total Investment **Figure 6.11**



*period average
Source: IMF

Gross National Savings **Figure 6.12**



*period average
Source: IMF

context of productivity growth in Pakistan, and hence competitiveness.

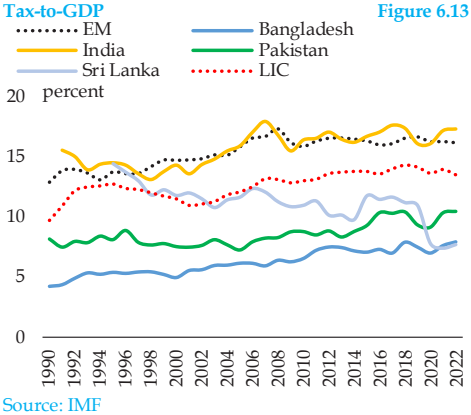
Low Investment

In much of developing Asia, countries have aggressively increased investments to 'catch-up' with more productive, rapidly growing economies. These investments, broadly include expenditures on tangible assets (such as infrastructure and manufacturing plants), education, innovation and R&D that help drive labour productivity through capital deepening, as well as TFP growth.[24]

The catch-up through high investments has been found to be driven by large increases in domestic saving rates, in poor countries in general, and East Asia in particular. However, in some of the countries with low domestic savings, foreign capital flows, such as FDI and external loans, can somewhat compensate for low domestic savings, and accelerate economic growth, which can then translate into higher savings.[25]

In Pakistan, investment has been consistently low with a decreasing trend in investment-to-GDP ratio since the early 1990s **(Figure 6.11)**. This mainly stems from an alarmingly low saving rate that has also been declining over the last two decades, amid a persistently high dependency ratio and population growth

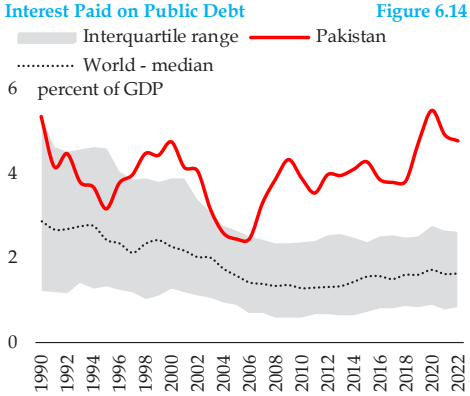
Tax-to-GDP **Figure 6.13**



Source: IMF

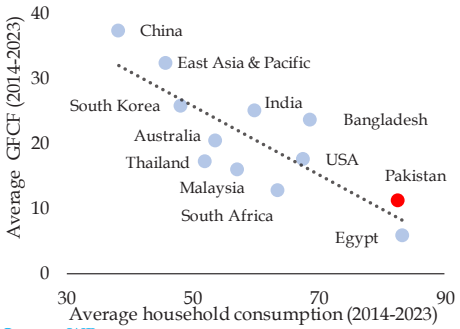
[24] Isaksson, A. (2007); Dabla-Norris, et al. (2013); Stiroh, K. J. (2001); SBP (2019)
[25] Razafimahefa, I. F. & Hamori, S. (2007); Kumar, A. et al. (2020); Dabla-Norris, et al. (2013); Aghion, P. et al. (2006).

Interest Paid on Public Debt **Figure 6.14**



Source: IMF

Household Consumption and Private Sector Fixed Capital Formation (Percent of GDP) **Figure 6.15**



Source: WB

(SBP, 2022) **(Figure 6.12)**. Consequently, Pakistan is stuck in a 'low-saving-low-investment' trap,[26] which is eroding efficiency and productive capacity of the economy.

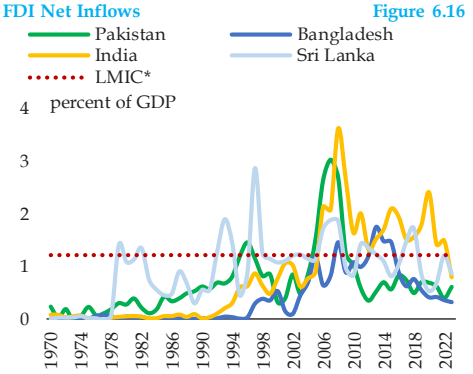
On a disaggregated level, public sector investment is constrained by low public revenue, particularly low tax collection, and rigid expenditure. The former remains much below the average of emerging markets **(Figure 6.13)**. The latter is a result of the high share of pre-committed expenditures— such as interest payments, salaries, pensions, and government operating expenditures **(Figure 6.14)** (WB, 2023a)— which leaves less room for productivity enhancing expenditure.

On the other hand, private sector investment has been affected by a host of cyclical and structural challenges. These include recurring macroeconomic imbalances and instability leading to low GDP growth, high inflation, credit constraints, poor investment environment, and infrastructure bottlenecks (SBP, 2019). The unpredictability of state policy, coupled with political instability and security concerns, has also lowered investment appetite. These challenges are reflected in Pakistan's high levels of household consumption and low private savings, resulting in low capital formation **(Figure 6.15).**[27]

Unlike the experience of some developing economies, Pakistan's low domestic savings has not been sufficiently compensated by FDI. The country's FDI remains lower than peer economies **(Figure 6.16)**, owing to a host of inhibiting factors **(Box 5.2)**. This is even after the mega investment plans under China-Pakistan Economic Corridor as part of the Chinese One Belt One Road (OBOR). Growth in total Chinese FDI inflows after the launch of OBOR in 2014 is lower in

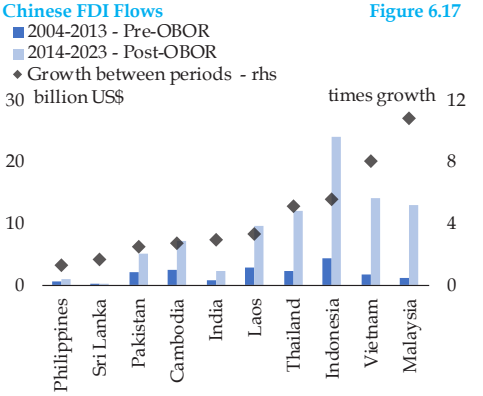
[26] The trap is vicious in the sense that a country's inability to mobilise savings to invest in higher productivity impacts economic growth prospects, which constrains household and business incomes, and, in turn, reduces savings further.
[27] SBP (2019); WB (2022a)

FDI Net Inflows **Figure 6.16**



*period average
Source: WB

Chinese FDI Flows **Figure 6.17**



Source: UNCTAD

Pakistan compared to peer economies in South and South East Asia **(Figure 6.17)**.

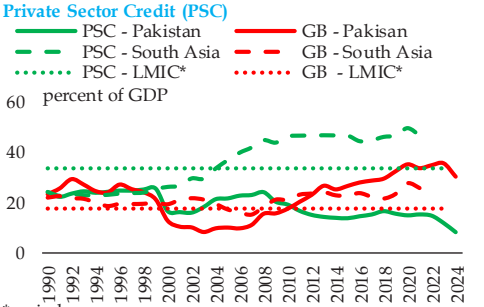
Credit Constraints

A transition to high productivity growth is not possible in the presence of credit constraints that reduce aggregate productivity through various channels. It inhibits firms' entry into the market and technology adoption decisions. It also distorts the returns on investment across sectors leading to a misallocation of capital. And it potentially creates firms' bias for tangible assets that can serve as collateral even when intangible assets may offer better returns to capital (Grifell-Tatjé, 2018).

In Pakistan, credit constraints have been ranked as the second biggest business obstacle, as per the World Bank Enterprise Survey of 2022. Despite various government schemes that offer subsidised credit to facilitate exports and investment, private sector credit remains low due to a number of structural challenges.

Historically, the government has been a dominant borrower from the local banking system **(Figure 6.18)**. This has led to the crowding out of the private sector.[28] Lending to the government also ends up being relatively less productive, as most of it is spent on current expenditures rather than developmental expenditure that can

Government Borrowing (GB) and Private Sector Credit (PSC) **Figure 6.18**



*period average
Note: Claims on central government used as proxy for GB; data for South Asia unavailable after 2021
Source: Haver Analytics

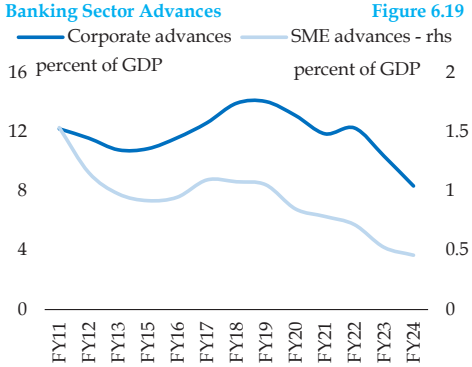
[28] IMF (2024b); Zaheer, S. et al. (2017)

enhance productivity and crowd-in private sector (Hussain, 2009).

The presence of a dominant borrower skews incentives of the banking sector. With banking profits growing easily on the back of high government borrowing, banks have little incentive to lend to the private sector beyond their existing customers. The composition of loans shows that banks mostly favour corporations that enjoy established banking relations rather than SMEs (**Figure 6.19**). Moreover, credit flow is mainly concentrated in working capital loans rather than fixed investment. This limits the prospects of productivity growth given the latter's importance for capacity expansion and new technology.[29]

Furthermore, subsidised bank credit is often extended towards 'zombie' firms.[30]

Banking Sector Advances **Figure 6.19**



Note: data for FY14 unavailable
Source: SBP

For example, the share of inefficient and often loss-making state-owned enterprises in bank lending to the non-government sector averaged 15 percent during FY14-FY23. Zombie firms also include family-owned domestic firms in specific sectors, which mainly benefit from export credit schemes to targeted sectors and relationship banking. This leads to credit misallocation to unproductive firms in the public and private sector.[31]

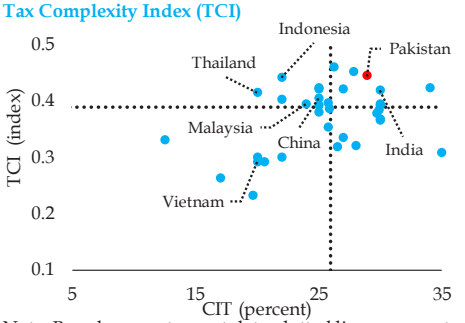
Besides the aforementioned factors, a range of challenges also constrain private sector credit. These include: (a) weak collateral, and reliance on tangible assets as collateral; (b) a history of judicial delays in banking courts; (c) information asymmetries that have made commercial banks generally averse to lending, especially to new and small borrowers; (d) low levels of financial inclusion; and (e) underdeveloped financial markets. These challenges are exacerbated by high currency in circulation and the presence of a large informal economy **(Box 3.1)**.[32]

Tax Policy Distortions

Tax policy distortions —that emanate from various sources including high tax burden, complexity of taxes, an overreliance on withholding taxes, etc.— are known to increase tax evasion and incentivise informality, which in turn impairs productivity through several channels. Tax

[29] WB (2022a); Defever, F et al. (2020)
[30] Zombie firms are firms that benefit from subsidised bank credit without which they may not be able to compete or perhaps even survive, and are thus restricted from exit while constraining the growth of more productive incumbent firms that do not have access to subsidized credit and raising barriers to entry for new firms. This reduces productivity though low investment and TFP growth. Source: Grifell-Tatjé, E. et al. (2018)
[31] SBP (2024b); WB (2022b)
[32] SBP (2015); Lopez-Calix, J. & Touqeer, I. (2013); Hyder, K. et al. (2013)

Corporate Income Tax (CIT) and Tax Complexity Index (TCI) **Figure 6.20**



Note: Based on most recent data; dotted line represents median values of a basket of 35 AEs and EMDEs
Sources: USAid and www.taxcomplexity.org

evading firms benefit from an implicit subsidy, leading to unfair competition that drives out productive firms from the market. This reduces firms' incentives for innovation and investment. As a result, firms remain stuck in a low productivity trap,[33] whereas the economy suffers from lower private sector investment.[34]

Moreover, public revenues also suffer, whereas banks remain shy of lending to informal firms, even when they try to come out of the shadow economy and invest in feasible projects. Incentives to evade taxes also create the appeal for relatively unproductive, dead capital investments.[35]

In this context, Pakistan's tax policy distortions present a major challenge to productivity growth, despite a variety of incentives for various types of greenfield investment projects. The country's overall tax rates are amongst the highest in the region, in both direct and indirect taxes. In fact, Pakistan is amongst the few countries that have both high corporate income tax rate as well as high level of tax complexity (Khalid & Nasir, 2020) **(Figure 6.20)**.[36]

Literature also shows that taxes on existing taxpayers have reached a point where raising rates will not yield more revenue due to Laffer Curve effects; further increases will likely lead to slower economic activity, tax evasion, and informality (Mehmood et al, 2022; Irfan et al, 2019). Additionally, tax compliance is extremely complex with excessive use of withholding taxes. The high use of withholding tax shifts collection responsibility and costs to collection agents, harms business climate, and can be regressive in some forms (WB, 2023a). These issues lead to higher underreporting and retards productivity.

Tax policy distortions, which in part stem from low tax revenues, create the need for ad-hoc revenue measures. A signature example of the effect of these distortions on productivity is tax policy's impact on trade. The imposition of para-tariffs —i.e. regulatory duty and additional customs duty— that were the result of short term revenue considerations have harmed long term export and productivity growth. Similarly, the growth of real estate investments in Pakistan, with largely under recorded transaction values, is another example of the effect of tax evasion

[33] Evading firms are generally less productive, with some estimates of a productivity gap of 25 to 50 percent. Source: Dabla-Norris, E. et al. (2019)
[34] Bobbio, E. (2016); Dabla-Norris, E. et al. (2019)
[35] Ibid
[36] The tax complexity index ranges from 0 (not complex) to 1 (extremely complex).

and informality (Afghan, 2023). The diversion of resources towards such sectors has heavy opportunity costs, as they take away investment from productive sectors.

Trade Policy Distortions

Trade and FDI raise productivity through several channels, including enhanced competition, knowledge transfers, and increase in effective market size. For instance, the phenomenon of "learning by exporting," whereby exporting firms learn from exposure to international markets, increases firm productivity and competitiveness. Similarly, GVC integration —that leads to greater exports and FDI —enhances productivity, and has helped the convergence of productivity of developing countries with advanced economies, where China and Vietnam serve as vivid examples.[37]

These relationships are also evident in Pakistan, where exporters have been found to be 20 percent more productive than domestic-oriented firms. Similarly, research suggests that productive firms in Pakistan have attracted FDI, whereas the acquisition by foreign buyers has led to about 12 percent increase in productivity. However, such productive exporting firms are an exception rather than the norm in Pakistan (WB, 2022).

As discussed in **Box 6.1**, Pakistan lags behind peer countries in the GVC in terms of backward linkages. The country's trade to GDP is also substantially lower than peer countries. It averaged 29 percent between 2000-2023, compared to an average of 42 percent, 50 percent, and 55 percent in South Asia, LICs, and LMICs, respectively (WB, 2023b). This can be rooted in the country's import substitution industrialisation policies (ISI) that aimed to substitute imports and favoured restrictions on trade. As global trade evolved, ISI was replaced with trade liberalisation, albeit in a stop-and-go manner.[38]

Pakistan's tariff liberalisation has yet to be fully realised as tariff reforms have been inconsistent.[39] This is evidenced by Pakistan's poor performance on metrics, such as trade openness, tariff rates and tariff complexity.[40] Pakistan's tariff policy is characterised by high, cascaded and complex tariffs, which create an anti-export bias that reinforces inward orientation (WB, 2024a).[41]

The anti-export bias functions through two channels: input and output. The input channel refers to the impact of high tariffs on input goods (e.g. intermediate and capital goods) used by firms. Along with cost implications, higher input prices shift firms' preferences away from better technology and higher quality inputs. This

[37] WB (2022b); Sahoo, K.P. et al. (2022); SBP (2020)
[38] Zeeshan, M. (2023); Husain, I. (2018)
[39] Commerce Division, Ministry of Commerce & Textile (2019)
[40] In GCI 2019, Pakistan ranked 138th out of 141 economies in trade openness, 139th in trade tariff rates, and 49th in tariff complexity.
[41] See also policy note on "Anti-export bias" in the forthcoming SBP report on "Structural Challenges to Exports".

can affect downstream firm productivity, impacting the whole supply chain. Increased upstream duties are estimated to explain 85 percent of the average productivity decline between 2012-2020.[42]

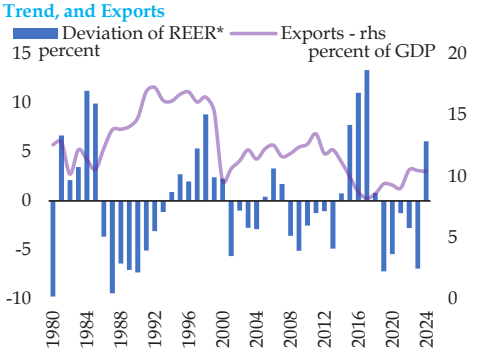
The output channel, with high tariffs on finished goods, creates abnormal profits in local markets, incentivising firms to prioritise domestic sales over exports. This protectionism dampens competition and encourages rent-seeking behaviour by firms that lobby for protectionism instead of focusing on productivity and quality. These incentives have impacted FDI as well, which has historically been concentrated in highly protected and inward-oriented sectors. For example, greater foreign presence is in the highly protected automobile sector and lowest in the export-oriented textile sector.[43]

Historical Exchange Rate Misalignment

Literature suggests that an over-valued exchange rate has two negative implications. First, it contributes to weak exports, as it increases export prices. Second, it increases the incentives to invest in unproductive non-tradable sectors that slows the pace of structural transformation (**Box 6.1**). By contrast, an undervalued real exchange rate can increase the relative profitability of the tradable sector. Undervalued exchange rate also facilitates resource allocation from unproductive sectors to more productive, tradable sectors. This is why some developing countries actively pursue a competitive exchange rate policy —i.e. an undervalued exchange rate —to boost exports through cost competiveness and economic growth whilst simultaneously addressing constraints to productivity (Haddad & Pancaro, 2010; Rodrik, 2008).

Historically, Pakistan has not even consistently pursued an under-valued exchange rate to boost exports. Instead, most years have seen an over-valued exchange rate (Jehan & Irshad, 2020) (**Figure 6.21)** that has compromised cost competitiveness and led to chronic underinvestment in productive sectors of the economy, reducing productivity growth. This exchange rate policy has been found to have undermined Pakistan's competiveness with exports falling faster after PKR appreciations as opposed to increases after depreciations (WB, 2021). However, Pakistan's recent transition to market determined exchange rate policy is favourable for competitiveness and

Deviation of REER from its Long Term Trend, and Exports **Figure 6.21**



*Values above/below 0 indicate over/under valuation
Source: SBP Staff Calculations based on IMF, SBP, PBS

[42] WB (2020); WB (2021); WB (2022b)
[43] WB (2022b); Qadir, U. (2020)

productivity when compared to a largely overvalued exchange rate in the past.

6.4 Structural Challenges to Productivity in Pakistan

As discussed in **Section 6.1**, several structural factors influence productivity growth in an economy, where human capital; institutions; innovation and R&D; and physical and digital infrastructure are of particular importance. These factors are not only fundamental drivers of long-term productivity on their own, but also play a crucial role in shaping the macroeconomic environment, enabling exports, access to credit, attracting investment, and enhancing GVC integration. This section sheds light on these structural factors, where Pakistan has faced persistent deficiencies. To explore these challenges, each of the following subsections first discusses the channels through which these factors impact productivity, followed by an assessment of their current state in Pakistan.

Human Capital

A high quality human capital base is a key pre-requisite for productivity growth. This is because it supports technology adoption; fuels innovation; augments the impact of capital deepening; helps strengthen institutions; and thereby contributes to growth in both labour productivity and TFP.[44] Whilst education is widely understood as the biggest driver of human capital growth, improvements in health conditions and female labour force participation also play an instrumental role in improving educational outcomes and overall productivity growth.

There is a consensus in literature that primary education is most important for development of human capital and increasing labour productivity. Although tertiary education is generally considered to have a large impact on an economy's innovative capabilities, primary education is needed to adopt and imitate technologies required for low to medium value added assembly line operations.[45] For instance, South Korea's efforts to fully enrol the population in primary education during 1960s was fundamental to its economic success, a model followed by several 'Asian Tigers' through state interventions in primary education.[46] Primary education is also the first step towards achieving high levels of secondary or tertiary enrolments.

Pakistan, however, has not yet successfully advanced in taking that first step towards achieving human capital accumulation. The country is substantially behind most LMICs that have progressed with improvements in gross enrolment ratio (GER)[47] of primary education. Pakistan's primary GER is also lower than the

[44] Topel, R. (1999); Sweetman, A. (2002); Wei, Z. & Hao, R. (2011).
[45] Several EMDEs have built their economies on low-medium value added assembly line production (such as China and Vietnam) before transitioning to high value added innovation-led growth. Source: Cirera et al. (2021)
[46] Colclough, C. (1982); Grifell-Tatjé et al. (2018); IMF (2024c)
[47] GER for primary school is calculated by dividing the number of students enrolled in primary education by the population of the age group that officially corresponds to primary education. GER can exceed 100 percent mainly due to the inclusion of over-aged and under-aged students (because of early or late school entrance).

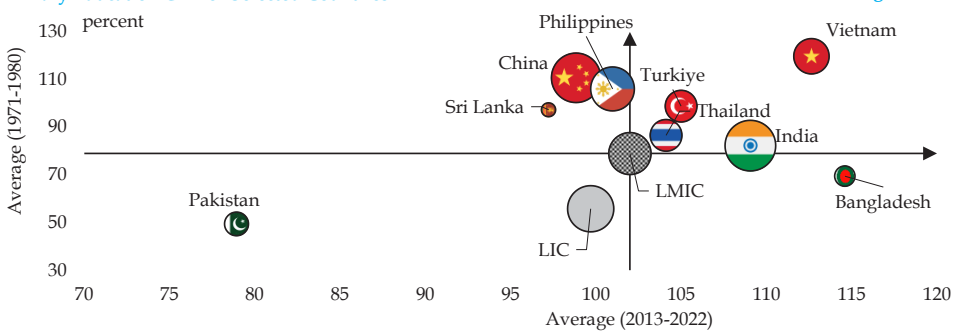
average of LICs **(Figure 6.22).** Three main reasons account for this trend. First, the governance of education system is weak that manifests in several ways, such as ghost schools and teachers, and low proportion of trained teachers. Second, Pakistan's expenditure on education, both as a percentage of total expenditure and of GDP, is lower than several peer economies (IMF, 2024a).

Third, and a major underlying reason, is that until recently universal education was not clearly spelled out as a national priority. Pakistan announced the universal right to education (RTE) as late as 2010, through a constitutional amendment. Following the devolution of education in 2010, RTE laws were passed at the provincial level 2013 onwards.[48] By comparison, India's constitution gave universal RTE in 1950, re-emphasised through universal education policy in 1986, and RTE act in 2009, whereas Bangladesh passed RTE act in 1990.[49]

Even after announcing the universal RTE, Pakistan's progress in primary enrolments has been relatively slow. For instance, Pakistan's GER rose 10 percentage points in fifteen years since the passing of RTE — from 74.5 percent in 2010 to 84 percent in 2024. In contrast, Bangladesh's GER had risen 22 percentage points in fifteen years since the RTE —from 78 percent in 1990 to 100 percent in 2005 (WB, n.d.).

In terms of secondary and tertiary education, Pakistan's position appears to be even worse, compared to peer economies. The country's secondary and tertiary enrolments in 2022 were at the level where secondary and tertiary enrolments of South Korea was in 1970s **(Figure 6.23)**.[50] This makes Pakistan

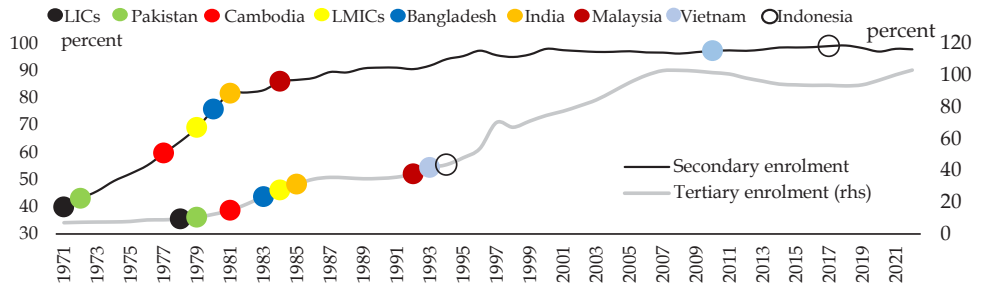
Primary Education GER of Selected Countries **Figure 6.22**



Note: size of the bubble indicates education expenditure (percent of GDP) for 2022;
Source: Haver Analytics

[48] Section 25-A of the constitution of Pakistan ensures that every citizen between the ages of five and sixteen has access to free and compulsory education.
[49] Saha, S. R. & Saha, S. (2024); UNICEF (n.d).
[50] There are a few regional high income economies that have 100 or near hundred secondary and tertiary enrolment ratios. These include Japan, Singapore and South Korea. However, South Korea has been selected here as proxy given its successful transformation, and frequent comparison with Pakistan in economic discourse.

Trends in Secondary and Tertiary Education GER in South Korea and Current Enrolment Level of Selected Asian Economies in 2022 **Figure 6.23**



Note: Circles plotted on the trend line show the year in which South Korea achieved the current level of enrolment by selected economies
Source: Haver Analytics

secondary and tertiary enrolment much closer to LICs rather than its peer economies (LMIC).

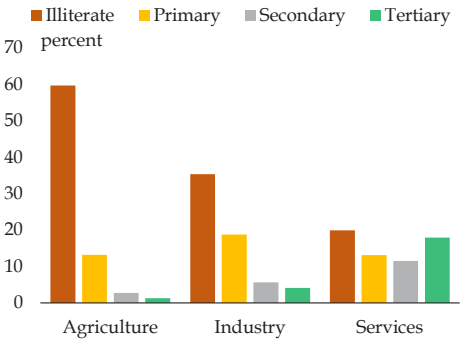
Similarly, although some studies suggest that improvements in education and employee training has had a positive impact on labour productivity in Pakistan (Gul et al, 2022; Nazli, 2004), others, such as Khan (2005) show a negative or weak relationship, which is often attributed to low quality of education. Over the past few decades, science as a subject has been ignored, whereas a majority of Pakistani youth have been found to lack fundamental critical thinking and reasoning skills, even at the university level (Lodhi, 2024).

One of the reasons behind Pakistan's poor education outcomes is the large gender gap. The primary education GER for females has averaged at 73 percent compared to 86 percent for males over the last ten years, markedly lower than LMIC and South Asian averages of 102 and 106 percent, respectively.[51] This, together with cultural barriers, gender stereotypes, lack of safe and accessible transport, and childcare facilities are major reasons behind Pakistan's low level of female labour force participation (FLFP). For instance, in 2023, Pakistan's FLFP (22.7 percent) was lower than both South Asia (28.0 percent) and LMIC (34.1 percent).[52] In light of FPLP's positive impact on productivity (Ostry et al, 2018), high gender gap in education and low FLFP remains a major constraint to Pakistan's productivity growth.

These human capital constraints are holding back Pakistan from breaking out of the low productivity trap, and transition to making high value products (Amjad et al, 2005). A majority of labour force across agriculture, industry and services sectors lack even primary education **(Figure 6.24).** Among those who are educated, most have low levels of skills, in part due to poor

[51] 10-year average taken from 2013 to 2022 (Source: WB)
[52] Female labour force as percent of the total labour force (Source: World Bank)

State of Formal Education in Pakistan's Employed Labour (2021) **Figure 6.24**



Source: PBS

education system, and under-developed vocational training systems in public and private sectors. For instance, two of Pakistan's leading export-oriented sectors, apparel and medical equipment sectors, have mostly low skilled workers, which is found to be a major constraint to the sectors' ability to produce higher value added goods and tap higher global market share.[53] In part, this is also because private sector offers limited training opportunities. According to the World Bank Enterprise Surveys 2022, only 5.9 percent firms offer formal training as against the global average of 31.2 percent.

Pakistan's health indicators also significantly lag behind its regional peers. Public spending on health is one of the lowest in the region, contributing to poor outcomes on some of the most critical health indicators, such as stunting, infant mortality, diabetes malaria, and life expectancy at birth **(Table 6.2)**. Considering that the state of a population's health impacts TFP growth and labour productivity through several channels[54] — such as education, savings, investment,

Health Indicators of Pakistan vis-à-vis Selected Regional Economies (2022) **Table 6.2**

Country	Infant mortality[a]	Life expectancy at birth[b]	Malaria* incidence[c]	Diabetes** prevalence[d***]	Stunting[e****]	Public health spending[f***]
South Korea	2.4	82.7	0.1	6.8	0.9	5.7
China	4.8	78.6	0.0	10..6	4.8	2.9
Sri Lanka	5.6	76.6	0.0	11.3	17.3	1.9
Malaysia	6.7	76.3	0.0	19.0	21.2	2.5
Thailand	7.0	79.7	0.5	9.7	12.4	3.6
Turkiye	8.3	78.5	0.0	14.5	6.0	3.6
Vietnam	16.2	74.6	0.0	6.1	19.5	2.0
Indonesia	18.1	68.3	4.2	10.6	30.8	2.2
Bangladesh	24.1	73.7	1.2	14.2	23.6	0.4
India	25.5	67.7	2.6	9.6	35.5	1.1
Pakistan	51.0	66.4	11.5	30.8	37.6	0.8
LMIC	33.7	67.2	51.3	10.7	N/A	1.4
LIC	45.7	63.0	185.1	6.8	N/A	1.2

a: per 1,000 live births; b: years; c: per 1,000 people; d: percent of population ages 20-79; e: percent of children under age 5 that are undernourished; f: percent of GDP

*taken as proxy for preventable parasitic diseases; ** taken as proxy for life-threatening chronic diseases; ***data available as of 2021; ****based on the latest available data that varies from 2016-2022; N/A: Not Available

Sources: WB and WHO

[53] Frederick et al. (2019); Hamrick, D. & Bamber, P. (2019)

[54] Tompa, E. (2002); Lenneman et al. (2011); Bloom, D. & Canning, D. (2003); Savedoff, W. D. & Schultz, T. P. (2000)

Key Governance Indicators* in Selected Transition Economies**

Table 6.3

	GE		PV		RL		RQ		GNI/capita
	2000	2023	2000	2023	2000	2023	2000	2023	Growth (x)
Pakistan	-0.49	-0.58	-1.10	-1.93	-1.00	-0.86	-0.77	-0.90	3.1
India	-0.19	0.48	-1.00	-0.64	0.35	0.19	-0.16	-0.14	5.8
Bangladesh	-0.61	-0.70	-0.73	-0.91	-0.99	-0.50	-0.94	-0.91	7.0
Vietnam	-0.39	0.13	0.41	-0.04	-0.35	-0.09	-0.64	-0.38	10.5
Cambodia	-0.90	-0.31	-0.78	0.04	-1.08	-0.82	-0.16	-0.68	8.2
Indonesia	-0.37	0.58	-2.00	-0.40	-0.70	-0.15	-0.26	0.30	8.5
Kenya	-0.62	-0.30	-1.07	-0.94	-0.92	-0.33	-0.39	-0.39	4.9
LICs	-1.13	-1.24	-1.03	-1.43	-1.13	-1.15	-1.04	-1.10	2.9
LMICs	-0.53	-0.63	-0.56	-0.50	-0.55	-0.63	-0.59	-0.66	4.4
UMICs	-0.39	-0.24	-0.29	-0.26	-0.50	-0.39	-0.34	-0.27	6.0

Note: *Productivity-relevant indicators; scores in range -2.5 (weak) to +2.5 (strong)
**Economies that have transitioned from low-income countries to low middle income

GE: Government Effectiveness
PV: Political Stability and Absence of Violence/Terrorism
RL: Rule of Law
RQ: Regulatory Quality
LICs: Low Income Countries
LMICs: Lower Middle-Income Countries
UMICs: Upper Middle-Income Countries

Colour code: Improved since 2000 | Worsened since 2000

Sources: WGI and WB

and demography[55] —Pakistan's below par health indicators constrain the prospects of high productivity growth.

Institutional Environment

Institutions play a vital role in raising labour and capital productivity, and TFP.[56] As a deep determinant of productivity, institutions enhance the growth and effectiveness of other drivers of productivity, such as capital deepening, and innovation. In this context, the weakening institutional quality in Pakistan has been found to be responsible for several productivity-reducing challenges: from ghost schools that affect human capital to unproductive public investment in infrastructure, and weak property rights that impair innovation.[57]

The country's institutional challenges are reflected in deteriorating governance indicators over the last two decades, including government effectiveness, political stability, and regulatory quality **(Table 6.3)**. As a result, Pakistan has had the slowest pace of growth in income compared to its peers. This is also reflected in the high cost of sludge —that refers to excessive regulations, such as duplicative paperwork and time spent on getting registrations, licenses, certificates, and other permits, which negatively impact the

[55] Individuals with a longer life expectancy are likely to invest more in education (given the higher return on investment); and save more for retirement, which leads to greater accumulation of physical capital. Further, improvement in the survival and health of children may provide incentives for reduced fertility and result in increased labour-force participation. (Tompa, E. (2002))

[56] Broadly conceived as formal or informal humanly devised constraints that structure political, economic and social interactions; institutions come in a wide variety, including policies, governance and rule of law, culture and informal norms. However, this section only touches upon on some of the main facets of institutions and their state in Pakistan: North, D.C. (1991); Grifell-Tatje, E. (2018).

[57] Ginarte, J.C. & Park, W.G. (1997).; Isaksson, A. (2007); WB (2024b); Grifell-Tatje, E. (2018); Husain, I. (2022); Ahmed, V. (2019).

time and cost of doing business in the country.[58]

Similarly, whilst relational contracts can help reduce frictions, excessive reliance on relational contracts in Pakistan's commerce does not encourage FDI. Literature suggests that countries with strong judicial systems have a comparative advantage in producing and exporting goods that are more 'contract intensive'.[59] However, in Pakistan where the average time for a commercial dispute settlement takes about five years,[60] foreign investors do not always have access to or desire to rely on relational contracts as recourse to contractual non-performance in the face of weak judicial system and a general lack of legal recourse. This is particularly discouraging for foreign investors that are relatively new to the country, or seeking to invest in contract intensive manufacturing as part of GVCs.[61]

Another facet of weak institution in the country is policy uncertainty. Economic policy uncertainty has been found to have significant and negative effects on productivity, given its impact on hiring and training of human capital by firms as well as investments in new projects. In light of this, policy inconsistencies and uncertainties across various sectors and cross-sectional policy matters—including agriculture, energy, taxation, and trade—does not bode well for the country's productivity. For instance, frequent changes to tax policy and uncertainty over energy tariffs and availability impairs business decisions. In addition, elevated political uncertainty in the country also has a bearing on economic policies.[62]

The absence of strong economic institutions that promote competition — critical for driving innovation and efficiency—is another major challenge in Pakistan affecting the country's productivity. Insufficient competition in the economy stems from four major sources. First, as discussed in **Section 6.3**, with high import tariffs Pakistani firms are largely protected from global competition. Second, the prevalence of Statutory Regulatory Orders (SROs) that benefits the few politically connected businesses in a non-transparent manner has also discouraged fair competition.[63]

Third, the presence of a large informal economy, marked by tax evasion and a weak quality and standardisation frameworks hurts competition. The latter constraints the prospects of achieving necessary economies of scale to produce exportable quality products at competitive prices. Fourth, firms' dependence on subsidies that are not linked to productivity growth also discourages competition. As a result of these factors,

[58] PIDE (2021-2024)
[59] The production of sophisticated, high value-added products is usually contract-intensive. This is fundamentally due to the complex production processes involved, technical product specifications, rigorous quality control, and stringent regulatory requirements.
[60] The South Asian average is around three years. Source: World Bank
[61] Choudhary, A. & Jain, A.K. (2022); Nunn, N. & Trefler, D. (2014); OICCI (2019);
[62] Li et al. (2021); Bloom, N. (2009); Gulen, H. & Ion, M. (2016); Nawaz et al. (2021).
[63] Backus, M. (2019). Holmes, T.J. & Schmitz, J.A. (2010); WB (2022b).

firms do not have an incentive to seek productivity growth to achieve their desired profits.[64]

The absence of competition checks reallocation of resources, which inhibits structural transformation. In addition to lack of incentive to seek efficiency, government interventions, market restrictive practices, and a general lack of policy direction, such as in power and transport, also hurt productivity and cost competitiveness.

One of the major underlying problems to the multifaceted challenges to Pakistan's institutional environment is the lack of institutional focus on productivity. A review of Pakistan's various sectoral and cross-sectoral policies reveals three key insights **(Appendix A** for details**)**. First, even though several policy documents broadly acknowledge the importance and need to increase productivity in the country, only a few seem to focus on all the major macroeconomic and structural challenges to productivity growth. Second, the direction for measurement of productivity is by and large wanting in these policies. This is contrary to economic phronesis that periodic measurement is necessary for tracking direction and speed of economic performance.

Third, no institution seems to be leading the agenda of productivity. Whilst there is no doubt that productivity growth requires whole-of-government approach rather than a single body, there needs to be a leading institution that anchors and drives the agenda (Garcia et al, 2023). In this regard, the drafting of the country's landmark National Productivity Masterplan by National Productivity Organization (NPO) is a positive step. However, its mandate needs to be reconsidered.

The role of the NPO – originally set up in 1961 - appears to be minimal with limited activities, such as creating awareness and conducting productivity-related training and workshops. Unlike Malaysia Productivity Corporation (MPC, 2025), the NPO does not have a central role in leading reforms across governments' productivity, regulatory/sectoral policies and practices. Similarly, unlike Australia's Productivity Commission (PC, 2025), the NPO has not been empowered to provide an independent analytical review of laws and sectoral policies from the perspective of productivity and make recommendations to federal and provincial governments. Nor does the government engage the NPO through formal public inquiries on its policy matters. Moreover, unlike international best practices, neither the NPO nor the Pakistan Bureau of Statistics measures various metrics of productivity **(Table 6.4)**.

Innovation and R&D

Innovation and R&D contributes significantly to productivity and competitiveness by fostering technological advancements, creating knowledge, enhancing skills, and improving processes.[65] In Pakistan, however, the

[64] WB (2022b); Kuehn, Z. (2007); Swann, G.M.P. (2000).
[65] Bravo-Ortega, C., & Garcia-Marin, A. (2008)

Official Productivity Measurements* **Table 6.4**

Economy	Measure	Since	Frequency	Organization
USA	LP†	1947	Quarterly, Annual	US Bureau of Labour Statistics
	TFP†	1987	Annual	
UK	LP	1960	Quarterly, Annual	Office for National Statistics
	CP†	1994	Quarterly	
		1970	Annual	
	TFP†	1994	Quarterly	
		1970	Annual	
Canada	LP†	2000	Quarterly	Statistics Canada
	CP, LP, TFP†	1961	Annual	
South Africa	CP, LP, TFP	1970	Annual	Productivity SA
Philippines	LP†	1991	Annual	Philippine Statistics Authority
Indonesia	LP†	2001	Annual	Central Bureau of Statistics
Malaysia	LP†	2017	Quarterly	Department of Statistics Malaysia
Thailand	LP†	2001	Quarterly	Bank of Thailand
		2021	Monthly	
	TFP†	2021	Annual	Office of Industrial Economics

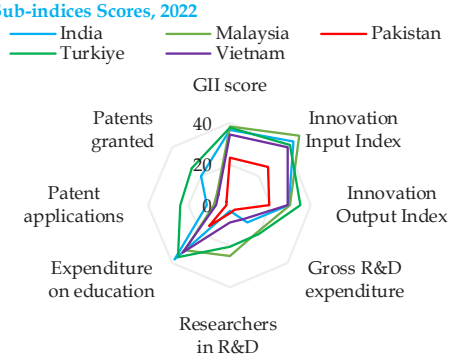
Note: LP: Labour Productivity; CP: Capital Productivity; TFP: Total Factor Productivity
*This list is not exhaustive. Many countries publish quarterly GDP statistics along with quarterly labour force surveys, which allows them to formally measure labour productivity. †Includes sectoral measures
Sources: Respective organisations' websites

potential for innovation to boost productivity remains largely untapped.

Pakistan's national innovation ecosystem is in its early stages of development compared to other countries (Haq et al, 2014). The country is ranked 91st out of 133 countries on the 2024 Global Innovation Index, and is among the lowest across various innovation metrics **(Figure 6.25).** One key factor contributing to this low ranking is Pakistan's public R&D spending, which has declined from 0.64 percent of GDP in 2007 to just 0.16 in 2021, lagging behind innovation leaders **(Figure 6.26).**

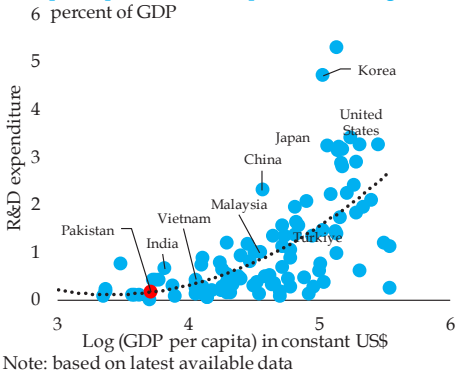
These limitations in innovation input translate into weak innovation output. For instance, in patents - a key innovation output - Pakistan's performance remains notably low, with fewer than 1,000 patents

Global Innovation Index and Sub-indices Scores, 2022 **Figure 6.25**



Source: WIPO

GDP per Capita and R&D Expenditure **Figure 6.26**



Note: based on latest available data
Source: WB

World Bank Enterprise Surveys 2022: R&D and Innovation in Firms **Table 6.5**

percent of firms

	Pakistan	South Asia Average	Global Average
That introduced a **new product/service** over last 3 years	3.3	15.4	31.8
Whose new product/service is also **new to the main market**	0	36.4	64.4
That introduced a **process innovation** over last 3 years	1.5	14.7	22.2
That **spend on R&D** in the last fiscal years	2.3	6.8	17.9
That introduced a **new product/service and process** over last 3 years, and **spent on R&D** over last fiscal year (excluding small firms)	0.1	3.5	7.7
With an internationally-recognised **quality certification**	19.6	11.8	13.5
Using **technology licensed** from foreign companies	4.9	5.2	14.5
Having their **own website**	48.8	42.3	57.7

Source: WB (2022b)

filed in 2021, compared to over 61,500 by India and more than 238,000 by South Korea (WB, n.d.).[66] These findings underscore the need for stronger investment in innovation and R&D to enhance Pakistan's competitiveness. Firm-level data also points in the same direction. Self-reported rates of innovation by Pakistani firms is notably behind regional and global benchmark **(Table 6.5).**

A host of challenges undermine Pakistan's innovation ecosystem. First, there is a widespread rent seeking which enables firms to maximise profits without pursuing innovative products and practices (Mehmood, 2014). Subsidies and protectionist policies have stifled competition, further disincentivising R&D and innovation. Firms often redirect the subsidies intended for innovation towards operational costs or non-productive activities amidst weak enforcement and monitoring mechanisms. Moreover, subsidies reduce competitive pressures, enabling firms to rely on financial support rather than investments in independent R&D efforts (Wadho & Chaudhry, 2018).

This trend is also pronounced in textile sector, which is adequately exposed to the possibility of 'learning by exporting'. The textile sector, which is the biggest recipient of industrial subsidies, primarily uses export subsidies to boost the sales of existing products in current markets as against formal R&D. Textile firms have focused mainly on the acquisition of machinery, equipment, and software, which indicates reliance on embedded technology over formal R&D. This shows a dependence on sustaining existing output rather than fostering innovation or diversifying markets, which is a more efficient utilization of R&D expenditure.[67]

Second, even the firms inclined towards innovation are discouraged due to a weak intellectual property rights regime. In the absence of strong legal protection, and a risk of imitation and intellectual theft, the potential return on R&D investment

[66] WB (n.d.). World Development Indicators, World Bank Group, Washington, D.C.
[67] Defever et al. (2020); Wadho, W. & Chaudhry, A. (2018).

remains low. This lack of protection is particularly detrimental to knowledge-intensive sectors, such as pharmaceuticals, textiles, and IT, where firms often hesitate to allocate resources toward research and product development (HEC, 2022; Aijaz, 2024).[68]

Third, while public sector R&D spending is constrained by low public revenues (**Section 6.3**), the private sector struggles with limited internal funds and external financing. At the one end, government incentives are not tied to R&D and innovation as existing fiscal incentives prioritise technology imports over domestic R&D. For instance, unlike regional peers that offer tax breaks or subsidies for R&D, Pakistan's incentives are not linked with R&D spending. At the other end, firms face credit and other funding constraints that are more pronounced for R&D projects. The financial constraints for innovation and R&D are even more severe for SMEs that have limited access to credit.[69]

Fourth, knowledge linkages in the country are weak. A lack of qualified personnel, insufficient information about new technologies, and limited market insights restrict innovation. The lack of coordination within academia results in disjointed research that fails to provide a unified direction. Moreover, academic research remains disconnected from industry needs due to weak linkages between academia and industry. Consequently, universities are unable to commercialise their research outcomes. Within academia, commercialization policies are either absent or overly restrictive, while the national bodies, mandated with commercialization efforts, such as the Science and Technology Development Corporation, also need to be strengthened.[70]

Fifth, managerial practices in Pakistan are subpar compared to global standards. For instance, Choudhary et al. (2018) find that an average firm in Pakistan scores notably lower than modern management benchmarks across key metrics, including structured management practices; data-driven performance monitoring practices; and incentive-based target setting. Similarly, there is a misalignment of incentives within firms, which slows the diffusion of technology. For example, research on Pakistan's soccer exporting firms by Atkin et al. (2017) shows that employees did not have incentives to reduce waste or adopt new technologies.

Physical and Digital Infrastructure

A well-developed physical and digital infrastructure is critical for increasing productivity at aggregate, sectoral, and firm levels. At the one end, it can reduce costs, and facilitate physical mobility of people and products, integrating an economy with the rest of the world. At the other end, it can foster technological innovation, optimal factor allocation, and

[68] HEC (2022); Aijaz, S. (2024)
[69] Aijaz, S. (2024); P@SHA (2022); FBR (n.d.); Afzal et al. (2012); Wadho, W. & Chaudhry, A. (2018)
[70] Wadho, W. & Chaudhry, A. (2018); Afzal et al. (2012); HEC (2022); Naqvi, I.B (2011).

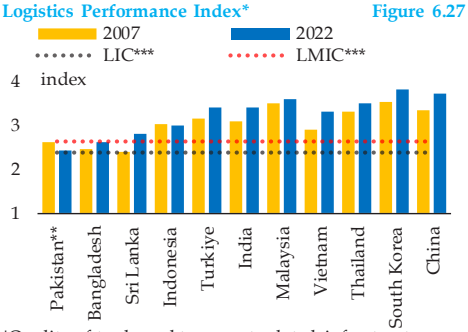
achieve economies of scale.[71] With a focus on public infrastructure,[72] this sub-section takes a look at the state of Pakistan's physical and digital infrastructure, across their key dimensions.

Physical infrastructure

The state of physical infrastructure may be analysed across three key interrelated dimensions: utilities, trade and logistics, and urban infrastructure. These have a bearing on cost of production, distribution and the overall environment needed to attract and retain quality human capital.

In terms of utilities, Pakistan faced tremendous power shortages between 2007 and 2011 (Tao et al, 2022). Recent investments in the power sector have plugged the gap in power generation infrastructure.[73] However, the cost of power has increased over the last few years owing to a host of factors, including distribution inefficiencies, expensive fuel mix and higher capacity payments, whereas power outages remain frequent due to weak transmission and distribution systems. Similarly, the country has begun facing gas shortages since 2008, which is increasingly being plugged through load management, and LNG imports for which the government has set up basic infrastructure. However, the cost of LNG imports remains high due to inadequate pricing and governance challenges (SBP, 2021b and 2024).

Logistics Performance Index* **Figure 6.27**



*Quality of trade and transport-related infrastructure (1=low to 5=high); **latest data for Pakistan was available as of 2018; ***period average

Source: WB

In terms of trade and logistics infrastructure, the country's infrastructure quality is not only lower than peer economies, but is also deteriorating over the years **(Figure 6.27).** Pakistan has an extensive railway network, yet it has struggled to fully leverage its potential as an integral part of the national transport system. This is attributed to chronic under-investment and a clear lack of policy focus. As a result, most of the bulk and container cargo across the country is moved through roads, whereas inter and intra city public transport is also heavily reliant on road transport. This creates inefficiencies in the economy, and adds unnecessary burden on urban infrastructure.

The road logistics sector in Pakistan remains fragmented as well. Most of the

[71] Arif et al. (2021); Laborda, L., & Sotelsek, D. (2019); Jacques-Arvisais, P., & Lapointe, S. (2022); Tang, J. & Zhao, X. (2023).

[72] Although private sector is increasingly involved in infrastructure development (e.g. through public private participation), the role of public sector in infrastructure remains paramount, both in terms of spending and its governance, given huge positive externalities of a reliable infrastructure. Source: WB (2005)

[73] MoF (2024)

logistics and road freight companies operate as owner-operator businesses, with poorly trained drivers. Moreover, the vehicles in use are outdated and fail to meet the required international vehicle certification standards, making them unsuitable for the demands of a modern supply chain. Similarly, in the aviation sector, airports face significant challenges in meeting global supply chain standards mainly due to protectionist policies, high taxes, elevated freight charges, and inadequate cargo facilities at airports.[74]

With regards to port infrastructure, notwithstanding the recent expansions that have reduced the average dwell time for cargo from 11 days to under 6 days, a host of challenges constraint productivity. These include delays in customs clearance; congestions and a lack of efficient rail links; and underdeveloped warehousing and cold-storage facilities, which does not only increase the costs but also result in loss of goods.[75]

Similarly, urban infrastructure – that affects productivity through efficient transportation and communication; and knowledge spillovers amid clustering of firms – has been overburdened due to both poor planning and underinvestment. Issues in accurate estimation of urban population has contributed to inadequate planning, whereas urbanisation trends are concentrated in a few major cities due to large disparities in education, health, and other basic amenities. In addition, poor cost-recovery by publicly owned utilities, including water, sanitation, and waste management, has resulted in a deteriorating urban infrastructure. Insufficient and low quality housing facilities is another constraint to attracting and retaining human capital in areas outside the few highly expensive neighbourhoods in a few major cities (ADB, 2024; Haque, 2015).

Digital infrastructure

The state has a key role in digital infrastructure because of the need to coordinate with multiple stakeholders across the country, governance of digital infrastructure, the sensitive nature of digital public infrastructure (DPI), and its role in accelerating digitalisation by virtue of being one of the largest buyer of ICT goods and services. Among these, DPI is most important since it serves as the building block for digital services, which can spur innovation, competition and productivity. The key components of DPI include: digital identity, digital payments and data sharing, with some expanded definitions including digital post and core government data registries (WB, 2024; OECD, 2024).

DPI is an enabling digital intervention which allows countries to leapfrog peers by accelerating development and productivity growth. This is because DPI reduces search costs, redundancies, and streamlines user experiences and service delivery, whilst increasing interoperability, inclusion, scalability, resilience, and

[74] MoC (2020)
[75] For instance, there is an estimated 40 percent loss of perishable goods due to largely non-existent cold-storage chains at railway stations and airports. Source: MoC (2020)

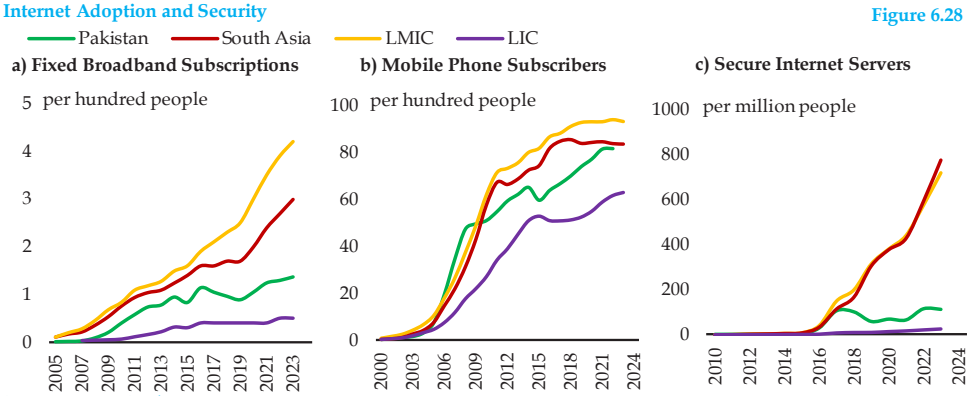
innovation (OECD, 2024). It also enhances the efficiency of the government while allowing the private sector to harness data and infrastructures associated with digital public goods (i.e. from open source DPI).

Pakistan has undertaken many important steps in creating a DPI ecosystem. This progress can be seen through the work on digital identity with biometric verification by NADRA and a digital payment platform in the shape of SBP's RAAST. The Cloud First Policy 2022 (CFP) and Digital Nation Act 2024 (DNA) are also notable developments in this regard.[76] However, it is crucial that the progress seen in digital identity and digital payment is matched in other DPI streams, such as data sharing, to make an interoperable digital environment. Therefore, implementation of CFP, DNA, along with enabling digital infrastructure is of utmost importance, especially to fully capitalise on emerging trends, such as Web 3.0.[77]

There must also be a concurrent effort to enhance digital adoption in the country. Amongst crucial factors to raise adoption are digital literacy, safety, privacy, and trust.[78] In this regard, while mobile phone subscription in Pakistan is comparable to peer economies in the region, it lags behind in terms of internet access and adoption (**Figure 6.28a and Figure 6.28b**). These disparities are worse across rural and female demographics.[79]

DPI is more than simply investing in technology, but rather necessitates building public trust and confidence in systems, especially to be able to expand IT industries. For this to be possible, governments must engage stakeholders, create stringent safeguards for privacy,

Internet Adoption and Security **Figure 6.28**



Source: Haver Analytics

[76] The CFP prioritizes cloud based infrastructure for the public sector whilst the DNA creates a "National Digital Masterplan" to drive digital transformation, with specific provisions for DPI and data exchange.
[77] Web 3.0 represents the next iteration of the World Wide Web based on emerging technology, such as: blockchain, digital currency, artificial intelligence, non-fungible tokens. Source: OICCI (2022).
[78] UNDP (2024); OECD (2024).
[79] P@SHA (2024); PTA (2024)

cybersecurity, and ensure the reliability and predictability of core digital services. Pakistan's poor performance against peer economies in secure internet servers indicates underdeveloped cybersecurity guardrails (**Figure 6.28c**). Similarly, Pakistan's low rank in Speedtest Global Index for broadband (141st out of 151 countries) and mobile internet (99th of 110 countries), amid frequent internet slowdowns and shutdowns, derail the progress on digital adoption and consequently hinders government objectives for a digital nation.

6.5 Final Remarks

Pakistan's consistently low productivity growth over the last few decades is one of the leading causes of the country's recurring boom-bust cycles; weak and unsustainable economic growth; and frequent balance of payments crises. This manifests in all the key indicators of productivity: low labour productivity and TFP growth amid slow structural transformation. It is also quite evident at sectoral level indicators, such as low water and energy productivity, sub-par agricultural yields, and weak productivity at firm level.

This is mainly because Pakistan has been focusing on the *low road* to achieving competitiveness without sufficient focus on the *high road* i.e. productivity growth. For instance, tax cuts are frequently announced to incentivise greenfield investments, yet the overall tax environment remains complex with high effective tax rates that hurts productivity growth. Similarly, there has been excessive policy focus on subsidised loans, electricity and gas without adequate focus on increasing credit penetration, or ensuring cheap and uninterrupted supply of utilities in the long run.

Moreover, compared to its peer economies, Pakistan has under-invested in human capital, innovation and R&D, and infrastructure that are critical drivers of productivity growth. In particular, Pakistan has been unable to improve its human capital due to low enrolment in primary education, which is the first step towards achieving human capital accumulation necessary for technology absorption. Human capital is also constrained by poor state of public health. In addition, the country's institutions remain weak and have in fact worsened over the last two decades. This is in the backdrop of an overall lack of adequate competition, elevated levels of informality and tax evasion, that disincentivises firms from pursuing productivity and efficiency gains, such as innovation and R&D.

As a result, unlike several of its peer countries, Pakistan has been unable to take off and catch up with more productive and rapidly growing economies around the world. In fact, as the foregoing sections show, Pakistan does not only trail behind its regional and income level peers (LMIC), but also notably behind LICs across a wide range of indicators.

To turn this situation around, Pakistan must pursue the path of productivity growth. This would entail wholesale reforms to address the challenges hindering productivity growth, including

credit allocation, taxation, and trade policy. Moreover, a favourable business environment is an essential pre-requisite, particularly for raising investment. In this context, there is a need to realise that diplomacy alone cannot attract FDI. This is evidenced by relatively lower growth in FDI to Pakistan from China between the pre- and post-OBOR periods, compared to peer economies. Productivity holds the key to attracting foreign investors, as does efficient high quality labour, and strong institutions.

With regards to labour, the under development of human capital in Pakistan warrants urgent attention since it does not only affect the country's current level of productivity and economic competitiveness, but also continues to expose it to challenges, going forward. Moreover, the advancements in machine learning and artificial intelligence is expected to lead to obsolescence of low-tech and repetitive administrative roles. These factors together with the growing brain drain in an economy already beset with low levels of graduates and professionals present a formidable challenge to human capital in Pakistan **(Box 2.2).** These challenges necessitate major and urgent investments in education and health to significantly improve the availability and quality of human capital.

Lastly, given the multi-faceted nature of the economic reform agenda that Pakistan needs to follow to ensure productivity growth, there needs to be an acknowledgement of the fact that no single body or institution can achieve the desired goal. Whilst in light of global best practices, the role of a central body, such as National Productivity Organization, is important, the task at hand involves a whole-of-government approach across the three tiers of government, and a concerted effort over a long term horizon.

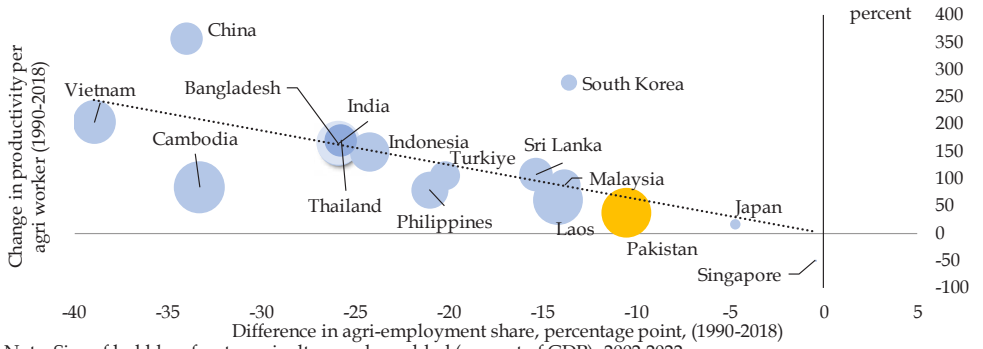
Box 6.1: Drivers of Structural Transformation (ST) in Pakistan[80]*

ST occurs through shifting of labour from agriculture to manufacturing and services, alongside a progression towards more sophisticated, high-tech exports, and advanced manufacturing processes. ST is essentially the reallocation of resources to higher value added and higher productivity uses, driving long-term economic growth. The reasons for Pakistan's sluggish transformation can be found in all three drivers of ST: productivity differentials, globalisation, and demand composition.[81]

Productivity differential: When productivity growth in agriculture—such as through improvements in crop yields—exceeds that of manufacturing and services sectors, it leads to a fall in relative demand for workers in agriculture, and as a result the labour moves towards the latter two sectors. Trends in agricultural productivity; labour migration from agriculture; and composition and nature of the sectors where labour is moving; are some of the key indicators to assess whether or not productivity differential is driving ST in an economy.[82]

[80] This box draws heavily from Sen, K. (2023), given its comprehensive framework on ST. Its insights on sectoral shifts, and productivity dynamics in structurally underdeveloped economies like Pakistan are particularly instructive.
[81] Sharma et al. (2019)
[82] Sen, K. (2023).

Key Measures of Structural Transformation **Figure 6.1.1**

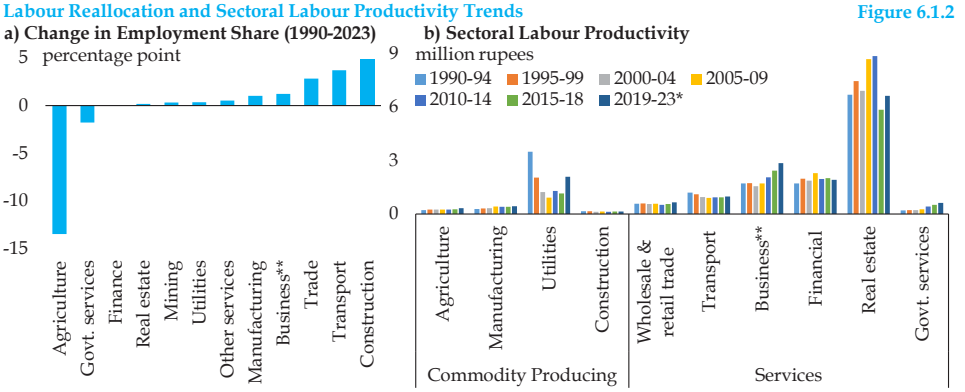


Note: Size of bubble refers to agriculture, value-added (percent of GDP), 2002-2022
Sources: SBP staff calculations based on UNU-WIDER Economic Transformation Database and WDI

In light of this, Pakistan's labour productivity growth is not only constrained due to low within-sector productivity improvements but also due to the labour being stuck in low-productivity sectors (i.e. agriculture), instead of high-growth industries (i.e. manufacturing). Although the share of agriculture in employment in Pakistan has declined since the 1990s, the reduction is modest compared to peer countries **(Figure 6.1.1)**. Agriculture still continues to employ the largest share of Pakistan's workforce. It also remains one of the least productive sector, with minimal per-worker productivity improvements relative to regional counterparts.[83]

Also, wage and productivity differences between agriculture and non-agriculture sectors are not enough to encourage a large worker migration from agriculture to industry. Geographic limitations, loss of social networks, poor social security, and high living costs in urban areas where industries are located are also preventing the migration of farm workers to productive industrial sectors.[84]

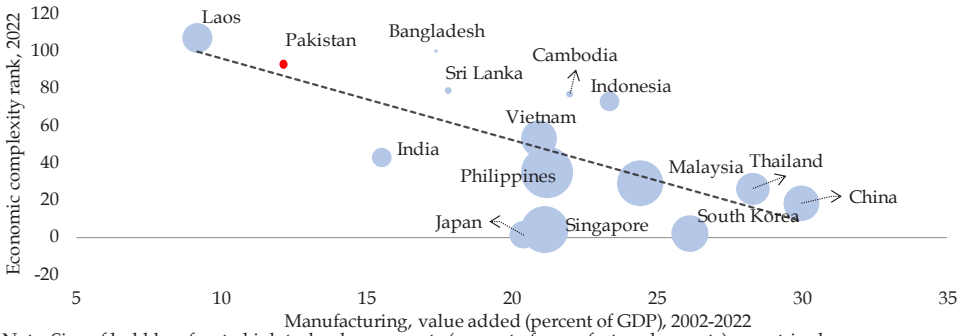
Labour Reallocation and Sectoral Labour Productivity Trends **Figure 6.1.2**



*SBP staff estimation based on value added GDP (UNdata) and sectoral employment (PBS); **Business includes: ICT, professional/scientific activities, and administrative & support activities
Sources: SBP staff calculations based on UNU-WIDER ETD, UNdata, and PBS

[83] The shift in sectoral employment shares over time serves as an indicator of an economy's ST.
[84] Pirzada et al. (2024); Kanwal et al. (2015); NPO (n.d.)

Economic Complexity Rank and Manufacturing Value-added (Percent of GDP) **Figure 6.1.3**



Note: Size of bubble refers to high-technology exports (percent of manufactured exports); countries lower on y-axis are considered more economically complex
Sources: SBP staff calculations based on Atlas of Economic Complexity, and WB

Moreover, labour reallocation between 1990-2018 has largely been directed toward relatively low-productivity sectors. Specifically, labour in Pakistan has predominantly moved toward informal, and non-tradable sectors, such as construction, real estate, transport, and wholesale & retail trade that have relatively limited potential for productivity improvements compared to manufacturing, business services, or financial services **(Figure 6.1.2 a & b)**. By contrast, East Asian economies, like Vietnam and China, have leveraged labour migration from agriculture to high-productivity manufacturing and export-oriented services to drive long term growth.[85]

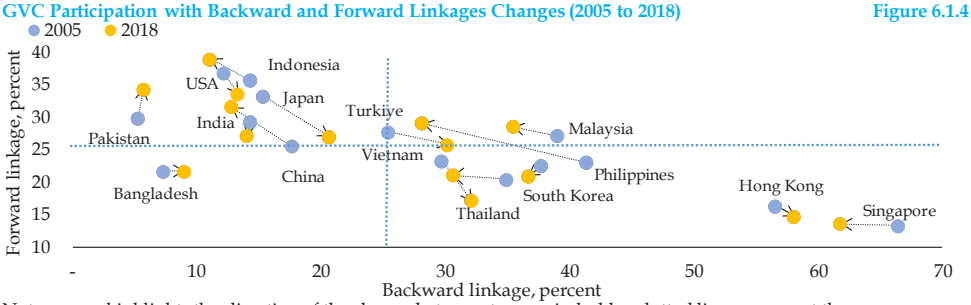
Another sign of Pakistan's struggle with structural transformation is the underperformance of its manufacturing sector. This is characterised by Pakistan's comparatively low share of manufacturing in GDP, low rank in the Economic Complexity Index (ECI)—that tracks products and market diversification of exports— and negligible size of high-technology exports in manufacturing exports **(Figure 6.1.3)**.[86]

Globalization: Globalization —as analysed through trade openness, FDI and GVC participation—can facilitate the movement of workers away from agriculture to labour-intensive and technology-intensive manufacturing and tradable services. This is because manufacturing is the key tradable sector capable of large scale export expansion, followed by services.[87]

Pakistan has had a history of trade policy distortions whereas FDI inflows have remained weak **(See Section 6.3 for details)**. In addition, the country's GVC integration is limited with one of the lowest backward linkages (**Figure 6.1.4)**. While some economies experienced a decline in backward integration between 2005-2018 due to global shocks, lengthening of domestic value chains, and shift towards services-oriented exports,[88] Pakistan's backward integration has remained low during this period due to high trade

[85] Li, Y. & Xing C. (2022); Tisdell, C.A. (2011); Pirzada et al. (2024)
[86] ECI is a good predictor of economic growth. Countries like Pakistan, Sri Lanka and Laos that have lower ECI than their level of GDP/capita would suggest that their economies will grow slower. Such countries have unexploited productive capabilities that hinders their future growth prospects. (Source: Hidalgo, C. & Hausmann, R. (2009)
[87] Sen, K. (2023)
[88] Complex production lines in these economies are sensitive to global shocks, particularly the Global Financial Crises, which disrupted trade and contracted GVC activities. Additionally, the industrial and technological upgradation is changing how GVCs functions, lengthening domestic value chain, allowing more intermediate production stages to be completed within national borders rather than relying on foreign inputs. Similarly, many economies are shifting toward service exports that inherently has lower backward integration compared to manufacturing. (Li et al. (2019)

GVC Participation with Backward and Forward Linkages Changes (2005 to 2018) **Figure 6.1.4**



Note: arrow highlights the direction of the change between two periods; blue dotted lines represent the average forward and backward linkages across all countries for the year 2018. **Backward integration**: Foreign Value Added embodied in a country's exports. **Forward integration**: Domestic Value Added of a country embodied in exports of other countries

Source: SBP staff calculations based on UNCTAD-Eora Global Value Chain Database

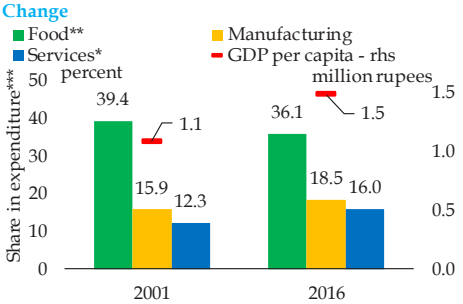
protectionism, weak industrial upgrading, low FDI, lack of export diversification, logistical inefficiencies, and macroeconomic instability.[89]

Low backward integration also indicates that Pakistan's exports mainly rely on domestically produced inputs rather than integrating with the global economy, which accompanies low technology diffusion, and limited scope for productivity gains. Similarly, the country's increasing and above average forward integration mainly reflects its largely raw material or low-value-added exports. Overall, Pakistan has not leveraged GVCs effectively to access cheap intermediate goods, upgrade its industries, and thus remain locked in low-value-added exports, restricting the pace of its ST.

Demand composition: As a driver of ST, demand composition effect rests on the theory that with increases in income there is a fall in demand for agricultural goods (mainly food) and an increase in demand for manufactured goods and services. This results in worker migration from agriculture to manufacturing and services.[90]

In light of this, **Figure 6.1.5** illustrates how expenditure shares on food, services, and manufacturing have evolved between 2001 and 2016 in Pakistan with rising GDP per capita. A key insight is that while food remains the largest expenditure component, its share has declined slightly over time, reflecting Engel's Law, which states that as income increases, the proportion of income spent on food declines. Conversely, as a share of expenditure, Pakistan's household consumption on services has increased more than

Real GDP and Demand Composition Change **Figure 6.1.5**



*services exclude housing; **food includes packaged food items, such as biscuits, and readymade food; ***Based on CPI basket.

Source: SBP staff calculations based on PBS

[89] Pirzada et al. (2024); Frederick, S. & Daly, J. (2020)
[90] Sen, K. (2023).

the increase in spending on manufacturing, which suggests a transformation towards a service-driven rather than manufacturing-led economy.

** The contribution of Abdul Jabbar is acknowledged in writing this box*

Box 6.2: Estimating Determinants of TFP in Pakistan*

Earlier studies on the determinants of TFP in Pakistan[91] have identified several macroeconomic and structural factors, such as, trade openness, infrastructure, innovation, institutions, FDI, human capital, credit to private sector, development expenditures, etc. From these factors, major macroeconomic determinants and structural factors discussed in **Section 6.3 and 6.4** were used as explanatory variables, with TFP as a dependent variable. These were estimated using a Vector Autoregression and linear regression.[92] The regressions were run solely to explore the association of identified macroeconomic determinants and structural factors with TFP. In consideration of data limitations, two regressions have been used to better capture the effects of structural factors: (a) a longer time series from 1981 to 2022 with macro-factors (Regression 1), (b) a shorter time series, from 1997 to 2021, with structural factors (Regression 2). The results are summarised in **Table 6.2.1**.

Summary of Regression Results — Table 6.2.1

Regression 1: 1981-2022	
Variable	**Coefficient**
Education expenditure to GDP (-1)***	2.33
Education expenditure to GDP (-2)**	2.69
FDI to GDP (-2)*	-3.45
Government consumption to GDP (-1) (D)**	0.70
Private sector credit to GDP (-2) (D)*	1.03
Private sector credit to GDP (-3) (D)**	0.32
REER (-1) (D)**	0.09
REER (-3) (D)*	-0.09
Trade openness (-2)*	-0.46
Trade openness (-3)*	0.47
Regression 2: 1997-2021	
Variable	**Coefficient**
Access to electricity (-2)** (D)	0.04
Primary enrolment ratio* (D)	0.34
Government effectiveness index*** (D)	5.02
R&D expenditure to GDP**	2.38

Note: *significant at 1 percent, ** significant at 5 percent, *** significant at 10 percent; (-1) and (-2) indicates lagged values; (D) indicates that the difference has been taken.
Source: SBP Staff Estimates

The results of Regression 1 illustrate the positive effects of education expenditure on TFP, which impacts TFP with lags of up to two years. Similarly, private sector credit also has a lagged positive effect on TFP. However, the estimates show a negative effect of FDI on TFP. This could be due to, as discussed in Section 6.3, inward oriented FDI mostly being market seeking rather than productivity enhancing. This could also signal the lack of absorptive capacity in local markets for FDI, along with inadequate knowledge transfer. General government consumption also has a positive impact on TFP. The real effective exchange rate has a positive effect with a one-year lag but turns negative with a three-year lag. Similarly, trade openness effects TFP negatively after two years but turns positive after three years. The cumulative impact of these two variables is positive.

Estimates from Regression 2 shows that government effectiveness and R&D expenditure have a positive effect on productivity. Greater primary enrolment, which is foundational for human capital development, is also proven to have a positive link with TFP. Finally, infrastructure, proxied through access to electricity, impacts TFP with a lag.

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

[91] Khan, S.U. (2006); Qazi M. A. & Hyder, K. (2007); Siddique, O. (2022); Ali, L. & Akhtar, N. (2024)
[92] Details of methodology in Appendix B

Appendix A

A review of various economic policy documents was conducted to assess whether productivity growth and its key drivers are an explicit policy focus (i.e. they are a key part of the plan), and whether the policy documents offer actionable steps or an overall direction for reforms (i.e. any pathways have been identified). To this end, each of the policies under review[93] was analyzed to answer the following questions:

1. Is productivity growth the main policy goal (central objective) or otherwise a cross cutting theme?
2. Has the policy announced measurable targets for productivity (sectoral or aggregate), or announced any plan to measure productivity?
3. Does the policy identify tax distortions, tax evasion, and/or informality as a major issue and pathways to address the same?
4. Does the policy identify trade policy distortions as a major challenge, and offers a roadmap to address it?
5. Does the policy identify credit constraints as a major challenge, and offers a roadmap to address it?
6. Does the policy explicitly envision to foster competition and identifies pathway to achieve that?
7. Does the policy identify human capital as a constraint, and envisions pathway to improve the quality and supply of human capital?
8. Does the policy identify the challenge of low innovation and R&D in Pakistan, and offers a roadmap to address it?

The following table summarises key findings from the review of policies in light of the aforementioned queries, where productivity or any of its key drivers is construed to be a part of the policy objectives (✓) only if they are explicitly stated as such or if it appears to be a cross cutting theme; merely mentions as passing references is not (✗). Similarly, a policy document is seen as offering a reform plan or a pathway if it offers any specific plan or related measures. For instance, whilst Vision 2010 gives out a direction of removing tax distortions but does not spell out even a broad plan. By comparison Vision 2030, lays out broad action plan that (a) federal government will collect income and corporate taxes, and custom duties, and rest of taxes will be devolved to provincial and/or local governments, (b) documentation will be pursued, (c) tax loopholes would be plugged, and (d) tax reforms will focus on tax culture, weak enforcement of tax laws, narrow tax base, wide spread exemption, unsatisfactory settlement of tax disputes, corrupt and inefficient tax machinery, complex procedures and multiplicity of taxes. Accordingly, both Vision 2010 and Vision 2030 have green ticks (✓) for the Plan to remove tax distortion; however, in terms of Pathways, Vision 2030 has green tick (✓) whereas Vision 2010 is crossed (✗).

[93] These polices may be categorised into meta, meso and micro policies. Meta level policies refer to government documents that offer broad policy guidance across economic, social, political and legal dimensions; these include Vision 2010, Vision 2030, Framework for Economic Growth, Vision 2025 and the recent Uraan Pakistan. Meso level policies refer to cross-sectoral policies, such as trade, industrial or export policies. Micro level refers to sector-specific policies, such as mobile manufacturing policy, seed policy, automobile and so forth.

Summary of Key Policy Documents in Pakistan

Policy		Productivity as main goal or cross-cutting theme	Productivity measurement or targets	Tax distortions	Trade policy distortions	Credit constraints	Competition	Human Capital	Innovation and R&D
Meta level policies									
Vision 2010	Plan	✓	✓	✓	✓	×	✓	✓	✓
	Pathway	×	×	×	×	N/A	×	✓	✓
Vision 2030	Plan	✓	×	✓	✓	×	✓	✓	✓
	Pathway	×	N/A	✓	✓	N/A	×	✓	✓
FEG 2011	Plan	✓	✓	✓	✓	✓	✓	✓	✓
	Pathway	✓	✓	✓	✓	×	✓	✓	✓
Vision 2025	Plan	✓	✓	✓	✓	×	✓	✓	✓
	Pathway	✓	✓	✓	✓	N/A	×	✓	✓
Uraan Pakistan	Plan	✓	✓	✓	×	×	N/A	✓	✓
	Pathway	✓	×	✓	×	N/A	N/A	×	✓
Meso level policies									
STPF 2015-18	Plan	✓	×	×	×	×	×	✓	✓
	Pathway	×	N/A	N/A	N/A	N/A	N/A	✓	✓
STPF 2020-25	Plan	✓	×	✓	✓	×	×	✓	✓
	Pathway	✓	N/A	✓	✓	N/A	N/A	✓	✓
SME Policy 2007	Plan	×	×	×	×	✓	×	✓	×
	Pathway	N/A	N/A	N/A	N/A	✓	N/A	✓	N/A
SME Policy 2021	Plan	×	×	✓	✓	✓	×	✓	×
	Pathway	N/A	N/A	✓	✓	✓	N/A	✓	N/A
Punjab Agri Policy 2018	Plan	✓	×	×	×	✓	✓	×	✓
	Pathway	✓	N/A	N/A	N/A	✓	✓	N/A	✓
Sindh Agri Policy 2018-20	Plan	✓	×	×	×	✓	✓	×	✓
	Pathway	×	N/A	N/A	N/A	✓	✓	N/A	×
KP Industrial Policy 2020-30	Plan	✓	×	×	×	✓	×	✓	×
	Pathway	✓	N/A	N/A	N/A	✓	N/A	✓	N/A
Punjab Industrial Policy 2020	Plan	✓	×	✓	×	✓	×	✓	×
	Pathway	✓	N/A	✓	N/A	✓	N/A	✓	N/A
Micro policies									
National Seed Policy 2024	Plan	✓	×	×	×	×	✓	✓	✓
	Pathway	✓	N/A	N/A	N/A	N/A	×	×	✓
Textile and Apparel Policy 2020-25	Plan	✓	×	×	✓	✓	×	×	×
	Pathway	×	N/A	N/A	✓	×	N/A	N/A	N/A
Mobile Device Manufacturing Policy 2020	Plan	×	×	×	×	×	×	×	×
	Pathway	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
AIDP 2021-26	Plan	×	×	×	✓	×	✓	✓	✓
	Pathway	N/A	N/A	N/A	✓	N/A	✓	✓	✓

Appendix B

Following existing research in Pakistan,[94] the relationship of determinants and structural factors identified in the chapter were regressed against TFP growth.[95] Data for TFP growth was taken from the Asian Productivity Organisation from their APO Productivity Database.[96] Regression 1 was first estimated using Vector Autoregression (VAR) and then a parsimonious regression, using the significant lags from the VAR estimates.[97] Due to the paucity of data, Regression 2 was estimated through an ordinary least square (OLS) regression.

Some variables chosen as proxies have been used in the existing literature in Pakistan, (i.e. trade openness, FDI, education expenditure, private sector credit, government consumption and R&D expenditure) whilst other variables have been used in constructed indices for TFP determinants (such as government effectiveness and primary enrolment). The remaining variables either have been used in international literature (as is the case for REER and savings) or have a direct link to the determinant/factor being proxied (e.g. access to electricity and infrastructure).

The following equations were used for each regression:

Regression1:$TFP = TFP(-1) + TFP\ (-2) + TFP(-3) + Education\ expenditure\ (-1) + Education\ expenditure\ (-2) + Foreign\ Direct\ Investment\ (-2) + D\big(Government\ Final\ Consumption\ (-1)\big) + D\big(Private\ Sector\ Credit\ (-2)\big) + D\big(Private\ Sector\ Credit\ (-3)\big) + D\big(Real\ Effective\ Exchange\ Rate(-1)\big) + D\big(Real\ Effective\ Exchange\ Rate(-3)\big) + Trade\ Openness(-2) + Trade\ Openness\ (-3) + C$

Regression 2: $TFP = Access\ to\ Electricity\ (-2) + D(Primary\ Enrollment) + D(Government\ Effectiveness\ Index) + Research\ and\ Development\ expenditure + Dummy$

The difference was taken for variables which were stationary at the first difference.[98] Where there were missing values in datasets, linear interpolation was used. Additionally, dummy values were created to control for outlier years and data volatility.

[94] Khan, S.U. (2006), Siddique, O. (2022) and Ali, L. & Akhtar, N. (2024)
[95] The challenges of using this methodology stemmed from data unavailability of long time series, and TFP estimation errors due to its derivation from the Solow residual.
[96] Nomura, K. & Ho, M. (2024)
[97] Using the Wald test, insignificant coefficients were removed from the model.
[98] The coefficient of a differenced variable illustrates its impact on the dependent variable in terms of change i.e. the impact of one unit of change (from the previous period) on the change of the dependent variable.

Details of Variables

Name of Variable	Description	Proxy for	Data source
Trade openness	Nominal exports and imports divided by nominal GDP	Trade policy distortions	Haver Analytics, WB and PBS
FDI as a percentage of GDP	FDI as a percent of GDP	Trade policy distortions	Haver Analytics, WB
Real Effective Exchange Rate	Log values of REER	Exchange rate misalignment	Haver Analytics, WB
Government consumption to GDP	Real general government final consumption expenditure as a percentage of real GDP	Low investment	Haver Analytics, WB and PBS
Gross domestic saving to GDP	Nominal gross domestic savings as a percentage of nominal GDP	Low investment	Haver Analytics, WB
Private sector credit to GDP	Proxied from domestic credit to private sector by banks as a percentage of GDP	Credit constraints	Haver Analytics, WB
Education expenditure to GDP*	Total general government expenditure on education as a percentage of GDP	Human capital	WB
Access to electricity	Percentage of population with access to electricity	Physical and Digital Infrastructure	WB
Primary enrolment ratio*	Total enrolment in primary education, as a percentage of the population of official primary education age	Human capital	Haver Analytics, WB
Government effectiveness index*	Index values taken from Worldwide Governance Indicators	Institutional environment	WB
R&D expenditure to GDP*	Nominal research and development expenditure as a percentage of nominal GDP	Innovation and R&D	WB

* linear interpolation applied for missing data

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Annexure A: Data Explanatory Notes

1) **GDP:** In case of an ongoing year, for which actual GDP data for full fiscal year is yet not available, SBP uses the GDP target given in the Annual Plan by the Planning Commission in order to calculate the ratios of different variables with GDP, e.g., fiscal deficit, public debt, current account balance, trade balance, etc. SBP does not use its own projections of GDP to calculate these ratios in order to ensure consistency, as these projections may vary across different quarters of the year, with changing economic conditions. Moreover, different analysts may have their own projections; if everyone uses a unique projected GDP as the denominator, the debate on economic issues would become very confusing. Hence, the use of a common number helps in meaningful debate on economic issues, and the number given by the Planning Commission better serves this purpose.

2) **Inflation:** There are three numbers that are usually used for measuring inflation: (i) period average inflation; (ii) YoY or *yearly* inflation; and (iii) MoM or *monthly* inflation. Period average inflation refers to the percent change of the *average* CPI (national, urban, or rural) from July to a given month of the year over the corresponding period last year. YoY inflation is percent change in the CPI of a given month over the same month last year; and monthly inflation is percent change of CPI of a given month over the previous month. The formulae for these definitions of inflation are given below:

$$\text{Period average inflation} = \left(\frac{\sum_{i=0}^{t-1} I_{t-i}}{\sum_{i=0}^{t-1} I_{t-12-i}} - 1 \right) \times 100$$

$$\text{YoY inflation} = \left(\frac{I_t}{I_{t-12}} - 1 \right) \times 100$$

$$\text{Monthly inflation} = \left(\frac{I_t}{I_{t-1}} - 1 \right) \times 100$$

Where I_t is consumer price index in t^{th} month of a year. The CPI can be national, urban or rural.

For detailed information on the methodology, please see:
www.pbs.gov.pk/sites/default/files/price_statistics/methodology_price.pdf

3) **Change in debt stock vs financing of fiscal deficit:** The change in stock of gross public debt does not correspond with the fiscal financing data provided by the Ministry of Finance. This is because of multiple factors, including: (i) the stock of debt takes into account the gross value of government borrowing, whereas financing is calculated by adjusting the government borrowing with its deposits held with the banking system; (ii) changes in the stock of debt also occur due to movements in exchange rates, both PKR and other currencies against US Dollar, which affect the rupee value of external debt.

4) **Government borrowing:** Government borrowing from the banking system has different forms and every form has its own features and implications, as discussed here:

   (a) Government borrowing for budgetary support:

   Borrowing from State Bank: According to Section 9C (1) of the SBP Act (as amended up to 28 January, 2022), the SBP "shall not extend any direct credits to or guarantee any obligations of the Government, or any government owned entity or any other public entity." According to this amendment, borrowing from State Bank shows the stock of government securities held by SBP, after the re-profiling of stock of Market Related Treasury Bills (MRTBs) into PIBs since June 2019. The change in net borrowings from SBP mainly reflects change in stock of government securities, changes in government (central and provincial) deposits with the SBP, and accrued profits on government securities, etc.

   Borrowing from scheduled banks: This is mainly through (i) fortnightly auction of 3, 6 and 12-month Market Treasury Bills (MTBs); (ii) monthly auction of 2, 3, 5, 10, 15, 20 and 30 year fixed rate Pakistan Investment Bonds (PIBs); (iii) fortnightly auctions of 2, 3, 5, 10 year floating rate PIBs; (iv) Sukuk and (v) Bai Muajjal of Sukuk (on deferred payment basis). However, provincial governments are not allowed to borrow directly from scheduled banks for deficit financing.

   (b) *Commodity finance:* Both federal and provincial governments borrow from scheduled banks through respective institutions to finance their purchases of commodities e.g., wheat, sugar, etc.

5) **Differences in different data sources:** SBP data for a number of variables, such as government borrowing, foreign trade, etc. – often do not match with the information provided by MoF and PBS. This is because of differences in data definitions, coverage, etc. Some of the typical cases are discussed below.

   (a) **Financing of budget deficit (numbers reported by MoF vs SBP):** There is often a discrepancy in the financing numbers provided by MoF in its quarterly tables of fiscal operations and those reported by the SBP in its monetary survey. This is because MoF reports government bank borrowing on a cash basis, while SBP's monetary survey is compiled on an accrual basis, i.e., by taking into account accrued interest payments on T-bills.

   (b) **Foreign trade (SBP vs PBS):** The trade figures reported by SBP in the *balance of payments* do not match with the data published by Pakistan Bureau of Statistics. This is because the trade statistics compiled by the SBP are based on actual receipts and payments of foreign exchange by banks, whereas the PBS records data on the physical movement of goods (customs record).

List of Abbreviations

A		
	ADB	Asian Development Bank
	ADR	Advances to Deposit Ratio
	AEs	Advanced Economies
	AIDP	Auto Industry Development Policy
	AIIB	Asian Infrastructure Investment Bank.
	AJK	Azad Jammu Kashmir
	AMA	Asaan Mobile Account
	APCMA	All Pakistan Cement Manufacturers Association
	APICTA	Asia Pacific ICT Alliance
	APTMA	All Pakistan Textile Mills Association
	APO	Asian Productivity Organization
	ASEAN	Association of Southeast Asian Nations
	ATM	Automated Teller Machine
B		
	B2B	Business-to-Business
	B2G	Business-to-Government
	BCS	Business Confidence Survey
	BEOE	Bureau of Emigration and Oversees Employment
	BISP	Benazir Income Support Program
	BOP	Balance of Payments
	BOS	Bureau of Statistics
	bpd	Barrels per Day
	BPM	The Balance of Payments Manual
	BPRD	Banking Policy & Regulation Department
	bps	basis points
C		
	CAB	Current Account Balance
	CAD	Current Account Deficit
	CAGR	Compound Annual Growth Rate
	CBU	Completely Built Unit
	CCP	Competition Commission of Pakistan
	CEO	Chief Executive Officer
	CFP	Cloud First Policy
	CIA	Central Intelligence Agency
	CiC	Currency in Circulation
	CIT	Corporate Income Tax
	CKD	Completely Knocked Down
	CO2	Carbon Dioxide

	CP	Capital Productivity
	CPEC	China Pakistan Economic Corridor
	CPI	Consumer Price Index
	CRS	Crop Reporting Service
D		
	DAP	Diammonium Phosphate
	DB	Defined Benefit
	DC	Defined Contribution
	DC	District of Columbia
	DIII	Digital Information Infrastructure Initiative
	DIP	Domestic Interest Payments
	DNA	Digital Nation Act
	DPI	Digital Public Infrastructure
E		
	EAD	Economic Affairs Division
	EC	Energy Consumption per Capita
	ECB	European Central Bank
	ECC	Economic Coordination Committee
	ECI	Economic Complexity Index
	EDD	Early Demographic Dividend
	EDS	External Debt Service
	EE	Exports Earnings
	EEZ	Exclusive Economic Zone
	EFF	Extended Fund Facility
	EFS	Export Facilitation Scheme
	EIA	Energy Information Administration
	EMs	Emerging Markets
	EMDEs	Emerging Market and Developing Economies
	EP	Energy Productivity
	EPD	Exchange Policy Department
	EPU	Economic Policy Uncertainty
	ESFCA	Exporter Specialized Foreign Currency Account
	ETD	Economic Transformation Database
	EU	European Union
F		
	FAO	Food and Agriculture Organization
	FBR	Federal Board of Revenue
	FCA	The Federal Committee on Agriculture
	FCA	Fuel Charge Adjustment

	FDI	Foreign Direct Investment
	FED	Federal Excise Duty
	FEE	Foreign Exchange Earnings
	FEED	Front End Engineering Design
	FEG	Framework for Economic Growth
	FLFP	Female Labor Force Participation
	FMCG	Fast-Moving Consumer Goods
	FMPAC	Fertilizer Manufacturers of Pakistan Advisory Council
	FPI	Foreign Portfolio Investment
	FTSE	Financial Times Stock Exchange
	FX	Foreign Exchange
	FY	Fiscal Year
G		
	GB	Gilgit Baltistan
	GB	Government Borrowing
	GCI	Global Competitiveness Index
	GDP	Gross Domestic Product
	GE	Government Effectiveness
	GER	Gross Enrolment Ratio
	GFCF	Gross Fixed Capital Formation
	GFLEC	Global Financial Literacy Excellence Center
	GII	Global Innovation Index
	GITEX	Gulf Information Technology Exhibition
	GNI	Gross National Income
	GoP	Government of Pakistan
	GSMA	Global System for Mobile Communications Association
	GSTS	General Sales Tax on Services
	GVA	Gross Value Added
	GVC	Global Value Chain
H		
	H1	First Half
	H2	Second Half
	ha.	hectare
	HEC	Higher Education Commission
	HSD	High Speed Diesel
I		
	IATA	International Air Transport Association
	IBIs	Islamic Banking Institutions
	IBRD	International Bank for Reconstruction and Development

	ICAP	Institute of Chartered Accountants of Pakistan
	ICT	Information and Communication Technology
	IDA	International Development Association
	IDB	Islamic Development Bank
	IEA	International Energy Agency
	IGC	International Growth Centre
	ILO	International Labor Organization
	IMF	International Monetary Fund
	IRSA	Indus River System Authority
	ISI	Import Substitution Industrialization
	IT	Information Technology
	ITC	International Trade Centre
	ITFC	International Islamic Trade Finance Corporation
K		
	KP/KPK	Khyber Pakhtunkhwa
	KSA	Kingdom of Saudi Arabia
	kWh	Kilowatt-Hour
L		
	LED	Light Emitting Diode
	LIC	Low Income Countries
	LMIC	Lower Middle Income Countries
	LNG	Liquefied Natural Gas
	LP	Labor Productivity
	LPG	Liquefied Petroleum Gas
	LSM	Large Scale Manufacturing
	LTFF	Long-Term Financing Facility
M		
	M2	Broad Money
	MAF	Million Acre Feet
	MDR	Minimum Deposit Rate
	mm	millimeter
	MMF	Man-Made Fiber
	MNC	Multinational Company
	MNFSR	Ministry of National Food Security & Research
	MoF	Ministry of Finance
	MoI&P	Ministry of Industries & Production
	MoPDSI	Ministry of Planning, Development & Special Initiatives
	MPC	Monetary Policy Committee
	MPC	Malaysia Productivity Corporation

	MSCI	Morgan Stanley Capital International
	MSP	Minimum Support Price
	MT	Metric Ton
	MTB	Market Treasury Bills
	MW	Megawatt
N		
	NADRA	National Database and Registration Authority
	NCCPL	National Clearing Company of Pakistan Limited
	NCPI	National Consumer Price Index
	NDA	Net Domestic Assets
	NEECA	National Energy Efficiency and Conservation Authority
	NEER	Nominal Effective Exchange Rate
	NEPRA	National Electric Power Regulatory Authority
	NFA	Net Foreign Assets
	NFC	National Finance Commission
	NFDC	National Fertilizer Development Centre
	NFIS	National Financial Inclusion Strategy
	NFNE	Non-Food Non-Energy
	Nos	Numbers
	NPC	Naya Pakistan Certificate
	NPO	National Productivity Organization
	NSS	National Saving Scheme
	NTR	Non-Tax Revenues
O		
	OBOR	One Belt One Road
	OCAC	Oil Companies Advisory Council
	OECD	Organization for Economic Cooperation and Development
	OICCI	Overseas Investors Chamber of Commerce and Industry
	OIN	Other Items (net)
	OLS	Ordinary Least Squares
	OMC	Oil Marketing Company
	OMO	Open Market Operation
P		
	P@SHA	Pakistan Software Houses Association
	PACRA	Pakistan Credit Rating Agency Limited
	PAMA	Pakistan Automotive Manufactures Association
	PARCO	Pak-Arab Refinery Company Limited
	PBC	Pakistan Business Council
	PBS	Pakistan Bureau of Statistics

	PC	Productivity Commission
	PDL	Petroleum Development Levy
	PE	Price Effect
	PEC	Pakistan Engineering Council
	PED	Public External Debt
	PEDL	Public External Debt and Liabilities
	PFLs	Pakistan Investment Bonds - Floating
	PIA	Pakistan International Airlines
	PIBs	Pakistan Investment Bonds
	PIDE	Pakistan Institute of Development Economics
	PKR	Pakistani Rupee
	PLL	Pakistan LNG Ltd
	PMD	Pakistan Meteorological Department
	PMI	Purchasing Managers' Index
	PNSC	Pakistan National Shipping Corporation
	POL	Petroleum, Oil, and Lubricants
	POS	Point of Sales
	PPP	Power Purchase Price
	PPP	Purchasing Power Parity
	PRL	Pakistan Refinery Limited
	PSBs	Private Sector Businesses
	PSC	Private Sector Credit
	PSDP	Public Sector Development Program
	PSEB	Pakistan Software Export Board
	PSEs	Public Sector Enterprises
	PSO	Pakistan State Oil
	PSX	Pakistan Stock Exchange
	PTA	Pakistan Telecommunication Authority
	PV	Political Stability and Absence of Violence/Terrorism
	PwC	PricewaterhouseCoopers
Q		
	Q1	First Quarter
	Q2	Second Quarter
	Q3	Third Quarter
	Q4	Fourth Quarter
	QTA	Quarterly Tariff Adjustment
	R&D	Research and Development
R		
	RDA	Roshan Digital Account

	REER	Real Effective Exchange Rate
	REUP	Refinery Expansion and Upgradation Project
	RFO	Residual Fuel Oil
	RHS	Right Hand Side
	RL	Rule of Law
	RLNG	Re-Gasified Liquefied Natural Gas
	ROA	Return on Asset
	ROE	Return on Equity
	RPI	Relative Price Index
	RPK	Revenue Passenger Kilometre
	RQ	Regulatory Quality
	RTE	Right to Education
S		
	SA	South Africa
	SAR	Saudi Arab Riyaal
	SBA	Stand-By Arrangement
	SBP	State Bank of Pakistan
	SKD	Semi Knocked Down
	SME	Small and Medium-Sized Enterprises
	SOFR	Secured Overnight Financing Rate
	Sq M	Square Meter
	SRO	Statutory Regulatory Order
	SSM	Small Scale Manufacturing
	ST	Structural Transformation
	STEPD	Short-term External Public Debt
	STPF	Strategic Trade Policy Framework
T		
	T.T.	Telegraphic Transfer
	T-bills	Treasury Bills
	TCI	Tax Complexity Index
	TDAP	Trade Development Authority of Pakistan
	TEDL	Total External Debt and Liabilities
	TFP	Total Factor Productivity
U		
	UAE	United Arab Emirates
	UK	United Kingdom
	UMIC	Upper Middle Income Countries
	UNCTAD	United Nations Conference on Trade and Development
	UNDESA	United Nations Department of Economic and Social Affairs

	UNDP	United Nations Development Programme
	UNICEF	United Nations Children's Fund
	UNU-WIDER	United Nations University World Institute for Development Economics Research
	US$	United States Dollar
	US/USA	United States of America
	USAID	United States Agency for International Development
	USDA	United States Department of Agriculture
	USDL	United States Department of Labour
V		
	VE	Volume Effect
	VF	Vertical Farming
	VIS	Vital Information Services (Pvt.) Limited
	VAR	Vector Autoregression
W		
	W&G	Women and Girls
	WALR	Weighted Average Lending Rate
	WAONR	Weighted Average Overnight Rate
	WB	World Bank
	WEF	World Economic Forum
	WGI	World Governance Indicators
	WHO	World Health Organization
	WHT	Withholding Tax
	WIPO	World Intellectual Property Organization
	WPI	Wholesale Price Index
Y		
	YoY	Year on Year
	YTD	Year to Date