

STATE OF THE ECONOMY: GETTING BACK INTO THE FAST LANE

The global economy exhibited steady yet uneven growth across regions in 2024. A notable trend was the slowdown in global manufacturing, especially in Europe and parts of Asia, due to supply chain disruptions and weak external demand. In contrast, the services sector performed better, supporting growth in many economies. Inflationary pressures eased in most economies. However, services inflation has remained persistent. Although commodity prices have stabilised, the risk of synchronised price increases persists. With growth varying across economies and last-mile disinflation proving sticky, central banks may chart varying paths of monetary easing. This will lead to uncertainty over future policy rates and inflation trajectories. This apart, geopolitical tensions, ongoing conflicts, and trade policy risks continue to pose significant challenges to global economic stability.

In this global context, India displayed steady economic growth. As per the first advance estimates of national accounts, India's real GDP is estimated to grow by 6.4 per cent in FY25. Growth in the first half of FY25 was supported by agriculture and services, with rural demand improving on the back of record Kharif production and favourable agricultural conditions. The manufacturing sector faced pressures due to weak global demand and domestic seasonal conditions. Private consumption remained stable, reflecting steady domestic demand. Fiscal discipline and strong external balance supported by a services trade surplus and healthy remittance growth contributed to macroeconomic stability. Together, these factors provided a solid foundation for sustained growth amid external uncertainties.

Looking ahead, India's economic prospects for FY26 are balanced. Headwinds to growth include elevated geopolitical and trade uncertainties and possible commodity price shocks. Domestically, the translation of order books of private capital goods sector into sustained investment pick-up, improvements in consumer confidence, and corporate wage pick-up will be key to promoting growth. Rural demand backed by a rebound in agricultural production, an anticipated easing of food inflation and a stable macro-economic environment provide an upside to near-term growth. Overall, India will need to improve its global competitiveness through grassroots-level structural reforms and deregulation to reinforce its medium-term growth potential.

INTRODUCTION

1.1 Global economic conditions are shaped by changing growth dynamics, fluctuating commodity prices, and evolving monetary policies, which influence domestic inflation, trade balances, and capital flows. At present, this interconnectedness is complicated by unusual levels of geopolitical tensions, supply chain disruptions, and climate-related shocks. Against this background, this chapter is organised broadly into four sections. The first section outlines the global economic scenario comprehensively, highlighting growth and inflation trends, policy stances, and key emerging risks and uncertainties. The second section focuses on the domestic macroeconomic situation, examining developments from the demand and supply sides. The third section delves into the emerging trends in public finances, inflation, external sector, financial markets and employment. The concluding section presents the prospects and outlook for growth in the presence of global headwinds while capitalising on domestic growth drivers.

GLOBAL ECONOMIC SCENARIO

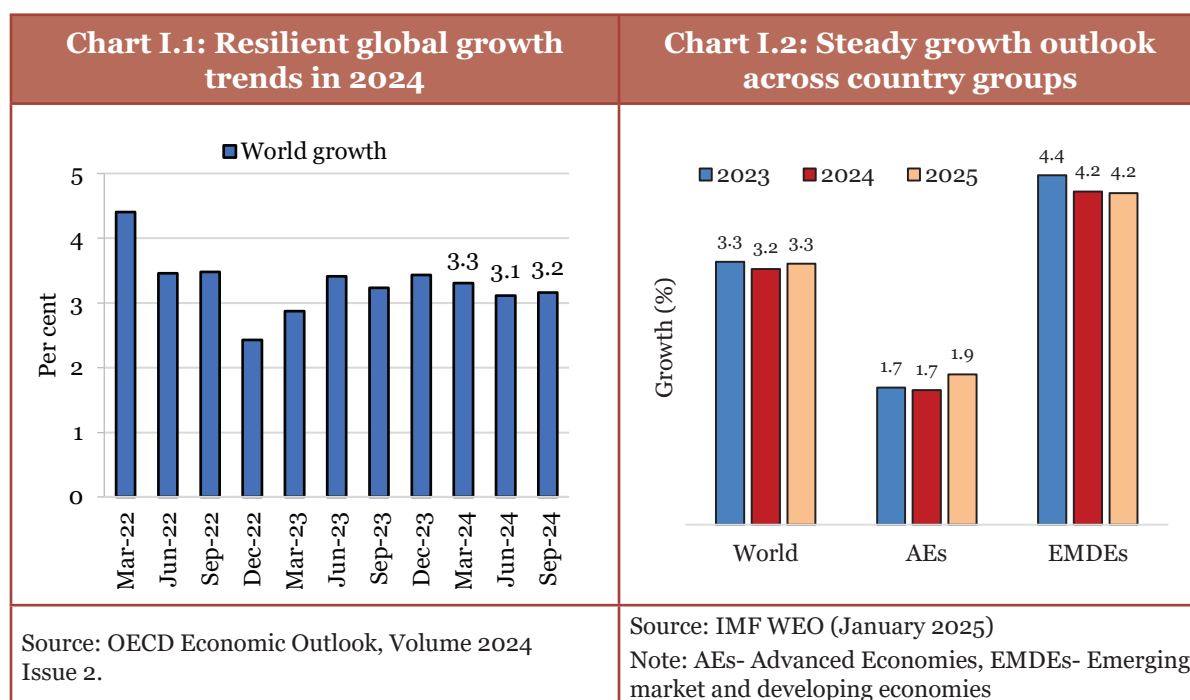
Steady global growth and varied regional dynamics

1.2 Globally, 2024 has been an eventful year. The year witnessed unprecedented electoral activity on the political front, with more than half of the global population voting in major elections across countries. Meanwhile, adverse developments like the Russia-Ukraine conflict and the Israel-Hamas conflict increased regional instability. These events impacted energy and food security, leading to higher prices and rising inflation. Cyberattacks also became more frequent and severe, with growing human and financial consequences due to the increasing digitisation of critical infrastructure.¹ Geopolitical tensions, have reshaped global trade. Geopolitical risks and policy uncertainty, especially around trade policies, have also contributed to increased volatility in global financial markets.²

1.3 Nonetheless, global economic growth has remained fairly moderate. The global economy grew by 3.3 per cent in 2023. The International Monetary Fund (IMF) has projected growth of 3.2 per cent and 3.3 per cent for 2024 and 2025, respectively. Over the next five years, global growth is expected to average around 3.2 per cent, which is modest by historical standards. While the overall global outlook remains steady, growth varies across different regions.

1 S&P Global. (n.d.). Geopolitical risk. S&P Global. <https://tinyurl.com/2yrnnmsp>.

2 Reserve Bank of India. (2024). Press release: Minutes of the Monetary Policy Committee Meeting, December 4 to 6, 2024. https://www.rbi.org.in/Scripts/BS_PressReleaseDisplay.aspx?prid=59347.



1.4 Despite higher interest rates, advanced economies (AEs) witnessed stable growth in the first half of 2024. This was on account of moderating inflation and sustained employment and consumption.³ However, the growth outlook differs between the United States (US) and the Euro Area. Growth in the US is expected to remain strong at 2.8 per cent in 2024 and may decline slightly in 2025, reflecting a moderation in consumption and exports.⁴

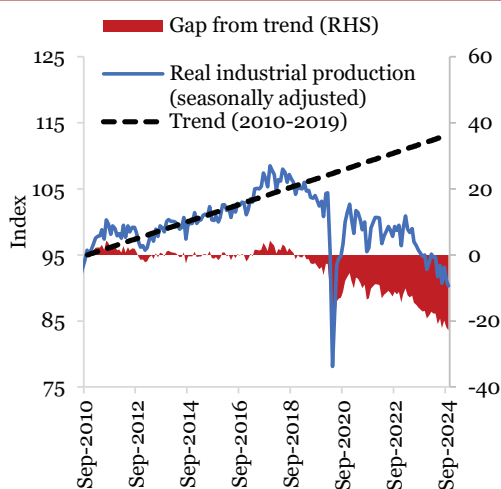
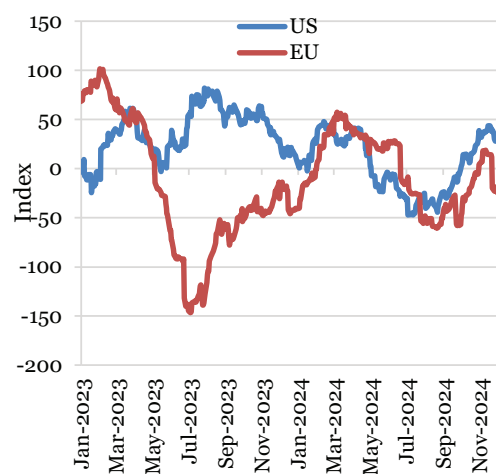
1.5 In the Euro area, growth is expected to improve from 0.4 per cent in 2023 to 0.8 per cent in 2024 and further to 1.0 per cent in 2025 on the back of improving services activity. However, growth outcomes in Europe have been varied. Some countries like Spain, France, Poland, and the United Kingdom have benefitted from the strength of their services sector. Meanwhile, manufacturing-intensive countries like Germany and Austria are being weighed down by weak demand.⁵ Germany's structural weaknesses, particularly in manufacturing (Chart I.3), have been noticeable, contributing to the slackness in Europe's manufacturing. Political developments in France and Germany are also adding to policy uncertainty in Europe's major economies.

1.6 The divergence of the growth trajectories of Europe and the US can also be seen in Citi Economic Surprises indices for these countries (Chart I.4). These indices compare actual data releases with analyst expectations. A value above zero indicates the data

3 Euromonitor International. (2024). Global economic outlook: Q3 2024. Euromonitor International. <https://www.euromonitor.com/article/global-economic-outlook-q3-2024>.

4 International Monetary Fund. (2024). Regional economic outlook: Western Hemisphere, October 2024. <https://tinyurl.com/2ep72n66>.

5 International Monetary Fund. (2024). Regional economic outlook: Europe, October 2024. <https://tinyurl.com/2s377x4z>.

Chart I.3: Structural weakness in the German economy**Chart I.4: Citi Economic Surprise Indices indicating unexpected resilience of the US**

Source: Bloomberg

was stronger than analyst expectations, while a negative value indicates weaker actual data compared to expectations. Between January 2023 and November 2024, data for the US economy continued to present more 'positive' surprises than the EU, compared to the analyst estimates.

1.7 Within Asia, Japan's growth was hindered by domestic supply disruptions in the early part of the year, while China's growth weakened after the first quarter, affected by sluggish private consumption and investment, alongside challenges in the real estate sector.⁶

Services sector growth steady; manufacturing faces challenges

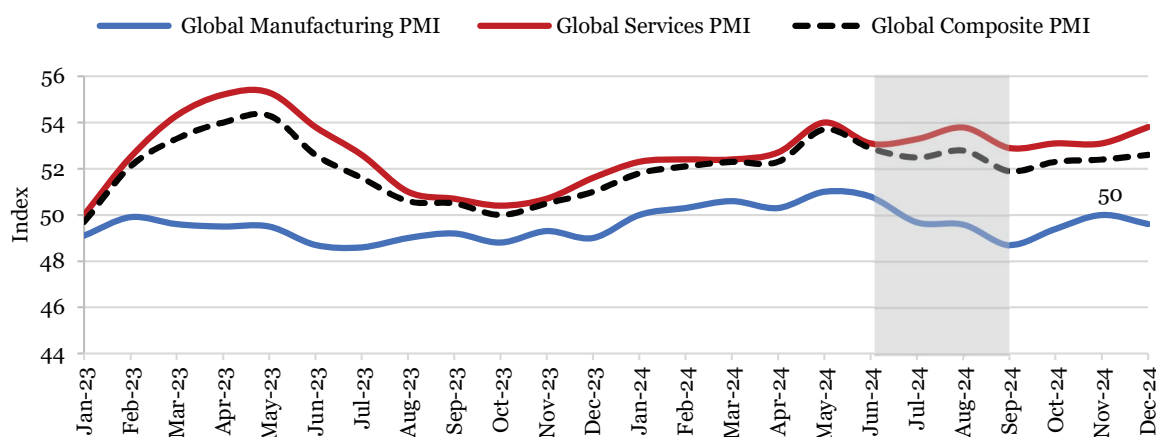
1.8 The global composite Purchasing Managers' Index (PMI) has stayed in the expansion zone for the fourteenth month in a row (as of December 2024). The services sector continues to show strength while manufacturing PMI indicated contraction.⁷

1.9 In 2024, the global manufacturing PMI started strong, moving into expansion for the first time since mid-2023 and remained so through the first half of the year. By July 2024, weaker conditions pushed the PMI back into contraction. Following four months of gradual declines, the global manufacturing sector stabilised in November with an index value of 50.0, indicating no overall change in operating conditions.⁸ Output growth in consumer and intermediate goods offset a downturn in investment goods. Increased production was attributed to stabilising new order intakes and the clearance of backlogs of work.

6 International Monetary Fund. (2024, October 31). Regional economic outlook for Asia and the Pacific. October 2024. <https://tinyurl.com/ycka65ub>.

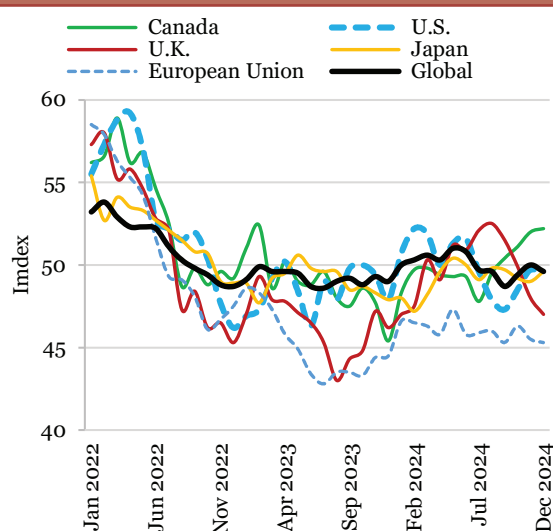
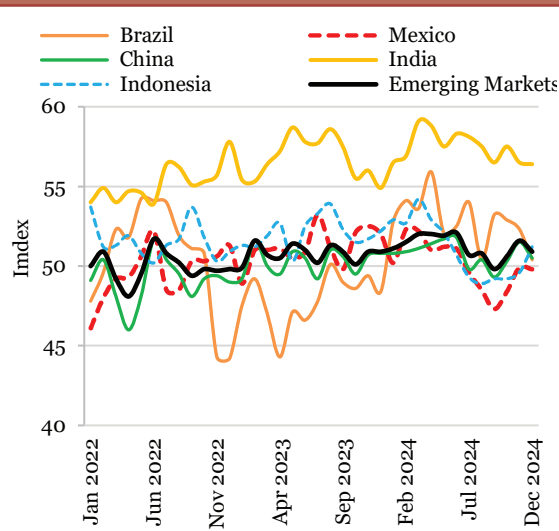
7 S&P Global. (2025, January 6). Global growth accelerates as solid service sector expansion offsets manufacturing weakness. <https://tinyurl.com/mr3pkjmh>.

8 S & P Global. Global manufacturing PMI highlights. <https://tinyurl.com/bddkyr27>.

Chart I.5: Global manufacturing stabilises in November 2024

Source: Bloomberg

1.10 Production trends varied widely across regions in December (Chart I.6 and I.7). Production rose in 13 of the 30 nations for which December PMI data were available. The Eurozone saw the steepest contractions, led by France, Germany, and Austria. North America showed mixed results, with Canada's growth offset by declines in the US and Mexico. India reported the strongest expansion of output. The outlook for global manufacturing also remained subdued in December, with business sentiment dipping to a three-month low.⁹

Chart I.6: PMI manufacturing in advanced economies**Chart I.7: PMI manufacturing in emerging market economies**

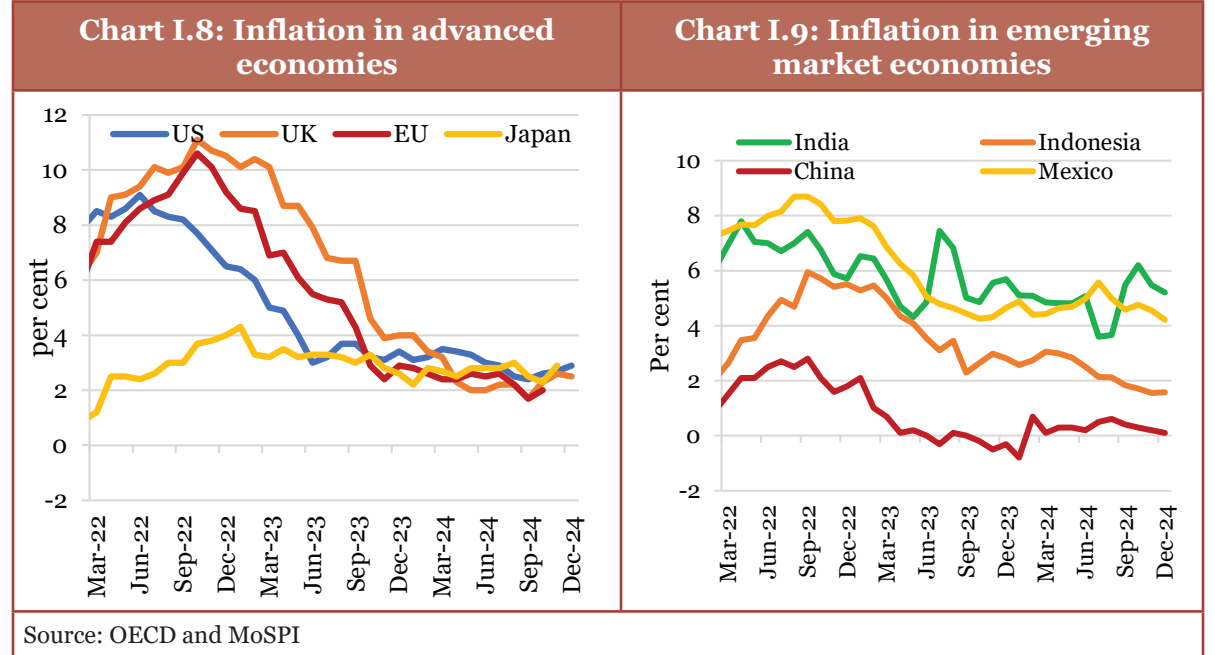
Source: Bloomberg

⁹ S&P Global. (2025, January 2). J.P.Morgan Global Manufacturing PMI: Global manufacturing contracts at end of 2024. <https://tinyurl.com/yn3a2fnm>.

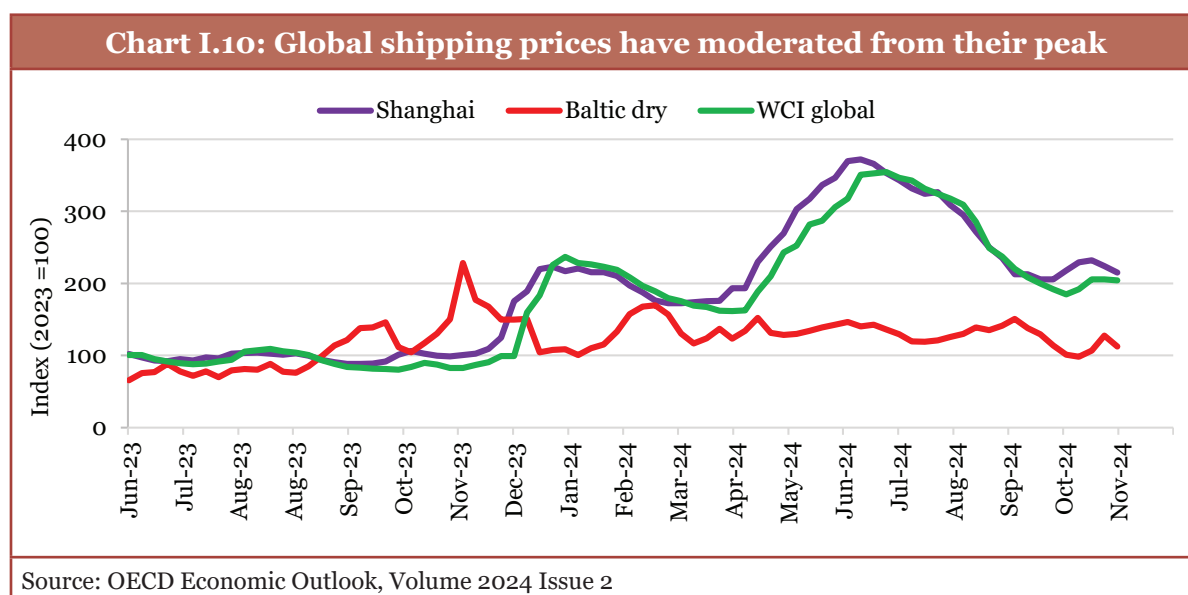
1.11 On the global services front, the global Services PMI Business Activity Index rose to a four-month high of 53.8 in December. This signals expansion for the twenty-third consecutive month. Expansion was recorded across business, consumer, and financial services. Financial services experienced the fastest pace of expansion.

Inflationary pressures ease, but risks of synchronised price pressures persist

1.12 Inflation rates across economies have trended downward steadily, approaching central bank target levels. This has been the result of tighter monetary policy regimes across the globe and supply chains adapting to higher levels of economic uncertainty. As a consequence, price pressures eased in 2023 due to a reduction in fuel prices. In 2024, it was attributed to a broad-based reduction in goods inflation.



1.13 However, disinflation seems to have slowed due to the persistence of services inflation, while core goods inflation has fallen to negligible levels. The IMF World Economic Outlook (WEO) October 2024 reasons that this is on account of higher nominal wage growth as compared to pre-pandemic trends. The report notes that there are early signs that these pressures are abating, thereby aiding the disinflation process.



1.14 However, recent disruptions in global shipping have pushed goods prices up. These events have also pressurised the global supply chains. This is reflected in higher levels of the Global Supply Chain Pressure Index (GSCPI) in the quarter ending September 2024. Chart I.10 shows that while container freight rates normalised in 2023, they experienced a significant surge in 2024. This was due to stronger demand, shipping route disruptions in the Red Sea, and delays at the Panama Canal, all of which have partially sustained inflationary pressures.¹⁰

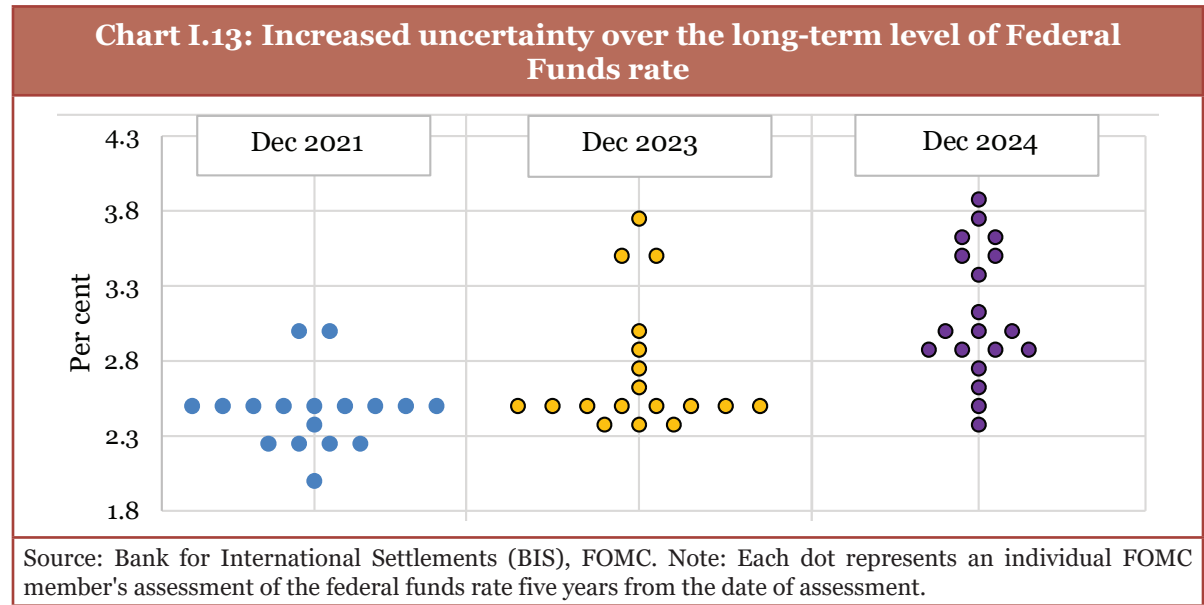
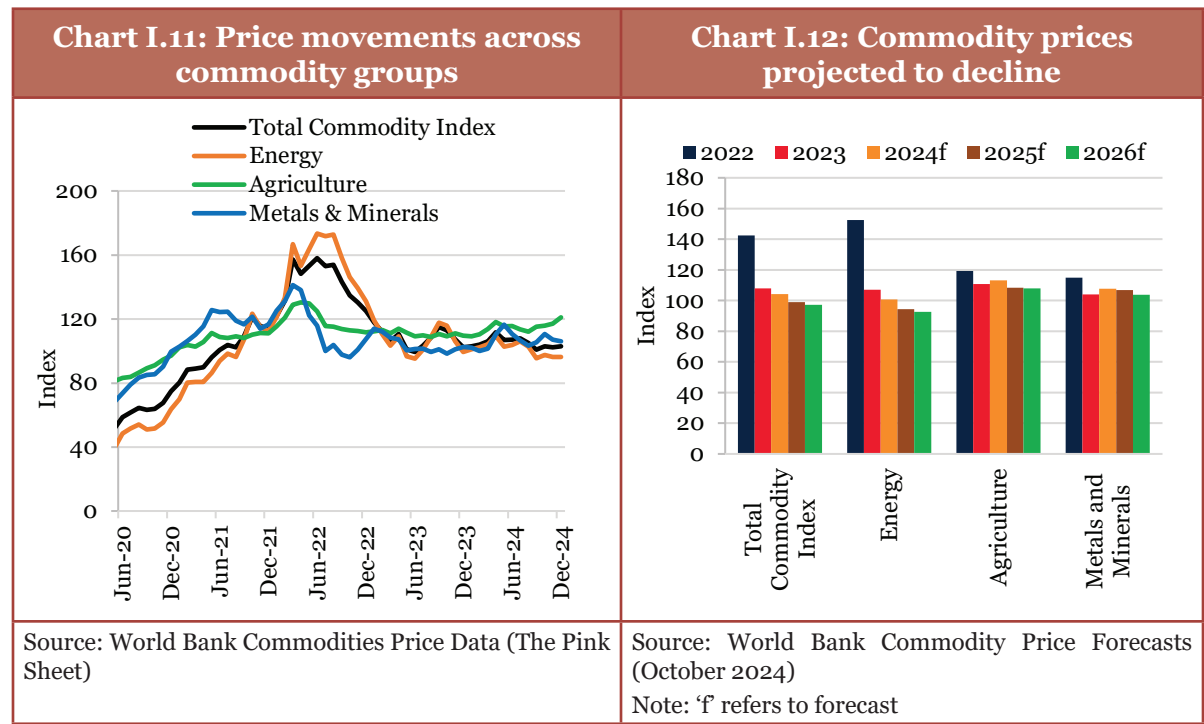
1.15 The risk to inflation from increases in commodity prices seems limited in 2025-2026. After softening in 2024, commodity prices are expected to decline moderately (Chart I.12). While this easing is a positive sign, the risk of synchronised price increases remains, especially during periods of global economic stress. Although recent shocks like geopolitical conflicts and extreme weather have caused price fluctuations, their impact has largely subsided, leading to more varied commodity prices. However, escalating tensions continue to pose a risk of synchronised price increases, undermining the effectiveness of inflation mitigation.¹¹

Easing monetary policy stances amidst divergent expectations

1.16 Taking advantage of the steep decline in inflation, major central banks have implemented a policy pivot to lower policy rates. Given the differentials in the trajectories of economic activity across countries, the pace of policy rate reduction is bound to differ. There is also uncertainty regarding the levels of the year-ahead and terminal policy rates across economies at the end of the current monetary easing cycle.

¹⁰ United Nations Conference on Trade and Development (UNCTAD). (2024). Trade and Development Report 2024. (Page 51) <https://tinyurl.com/2c7tjrxu>.

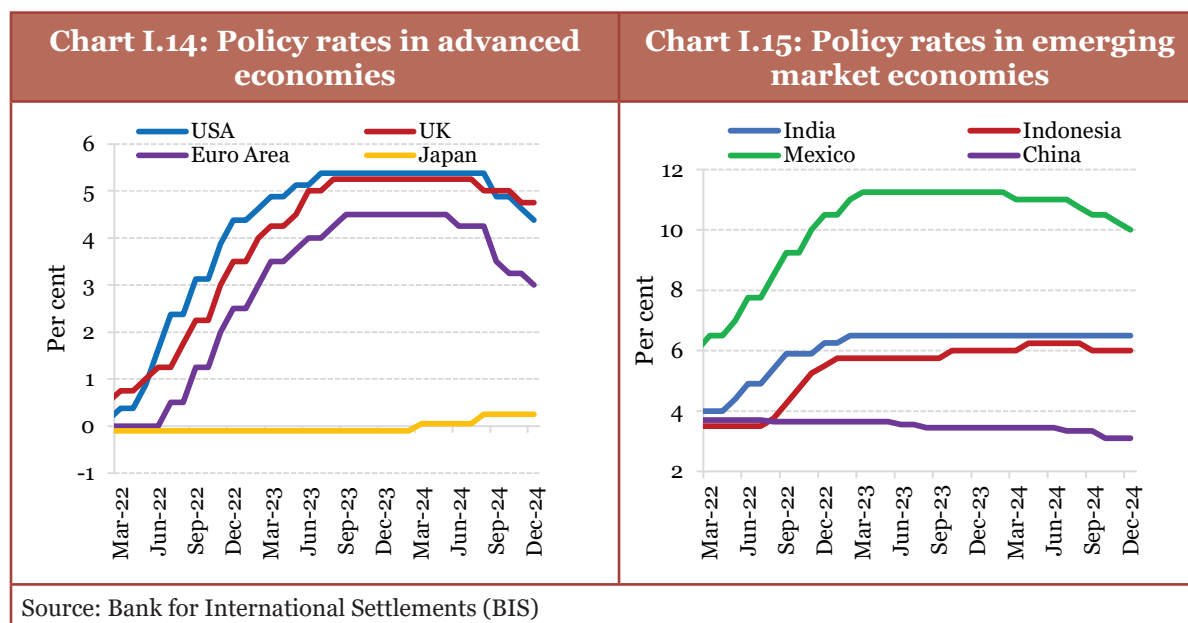
¹¹ World Bank. (2024). 'Commodity Price Synchronization: A New Era?' <https://tinyurl.com/nk59hcpx>.



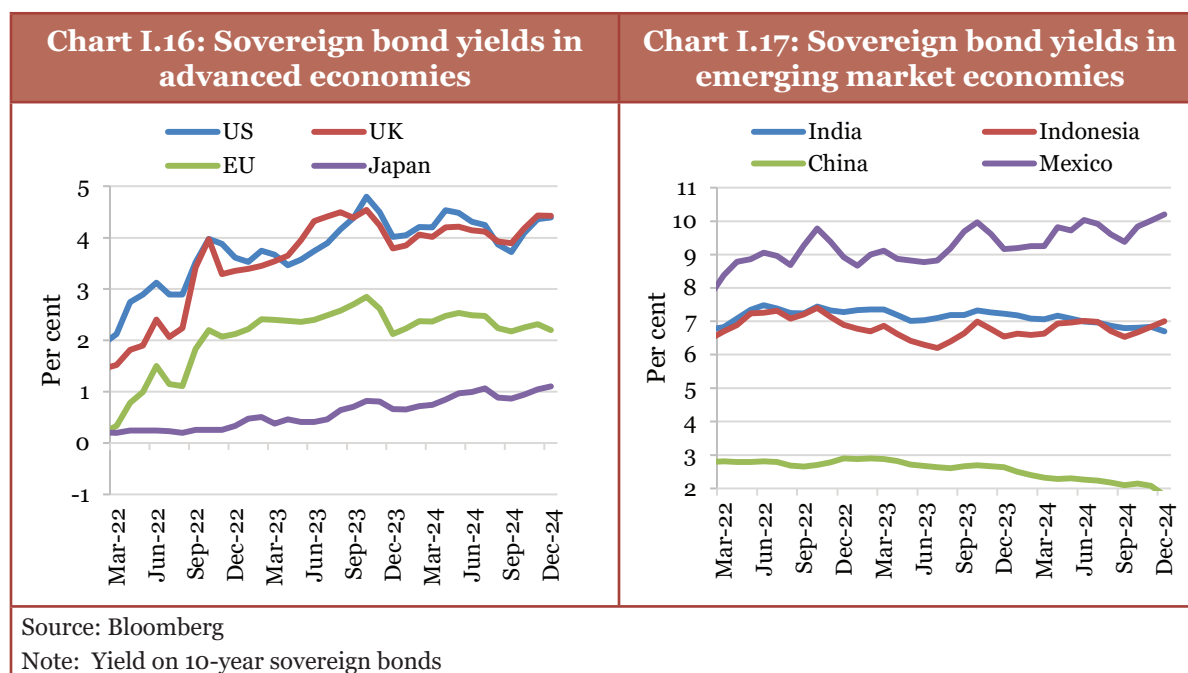
1.17 In the short term, the US market expectations of the Federal Funds Rate (FFR) were much lower than the actual FFR level for both 2023 and 2024. Similar uncertainty may persist over the course of 2025.¹² One way to visualise the uncertainty regarding the FFR over the long term is through the expectations of policymakers about the ‘long-run’ policy rate. The Federal Open Market Committee (FOMC) presents a dot-plot of its members’ assessment of the direction of the policy rate over different time horizons. Chart I.13 presents the dot-plots that represented the FOMC members’ assessments in December 2021, December 2023, and December 2024. The dot-plots show that while

¹² Ashworth, M., & Gilbert, M. (2025, January 2). Politics, economics and markets create a 2025 three-body problem. Bloomberg. <https://tinyurl.com/mppdkbdr>.

the long-run policy rate is likely to be higher, the variance in members' expectations is also larger, indicating increased uncertainty over the terminal policy rate.



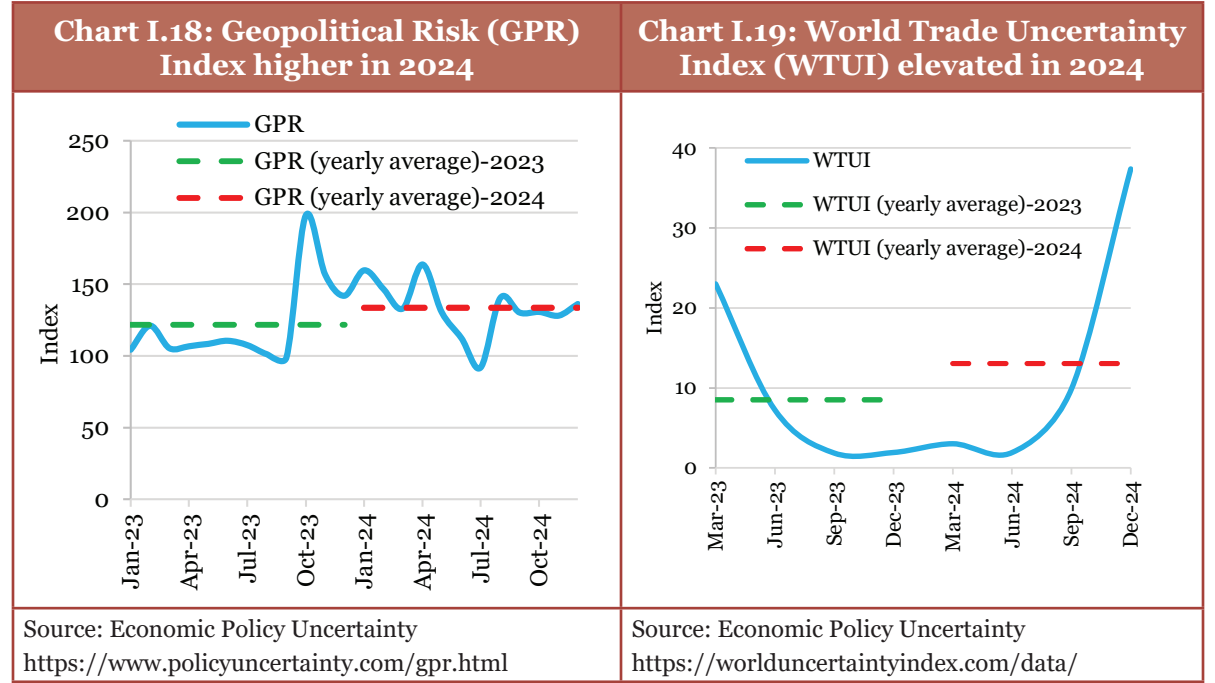
1.18 The success in inflation control, the consequent easing of monetary policies, and expectations of lower borrowing costs began to reflect in the downward trajectory of sovereign bond yields of advanced economies between April and September 2024. However, renewed global uncertainty over inflationary pressures and the direction of monetary policies have pushed bond yields up in October - December 2024. Lower growth prospects and deflationary pressures have pushed Chinese sovereign bond yields lower, thereby widening the sovereign yield spread between the world's two largest economies.



Geopolitical uncertainties continue to pose risks to the global economic outlook

1.19 Geopolitical risks remain elevated (Chart I.18) due to ongoing conflicts, which pose significant risks to the global economic outlook. These risks can influence growth, inflation, financial markets, and supply chains. An intensification of the evolving conflicts in the Middle East, or the Russia-Ukraine conflict, could lead to market repricing of sovereign risk in the affected regions and disrupt global energy markets. The oil market is well-supplied for now. However, any damage to energy infrastructure could tighten supply, adding uncertainty to the global economic outlook.¹³

1.20 Tensions in the Middle East have disrupted trade through one of the critical shipping routes – the Suez Canal. About 15 per cent of global maritime trade volume normally passes through the Suez Canal. In response, several shipping companies have diverted their ships around the Cape of Good Hope, which has increased delivery times by 10 days or more, on average. These disruptions have led to higher freight rates along major shipping routes, which in turn impact global trade activity.



1.21 Heightened risks are also evidenced by other indices, such as the Geopolitical Economic Policy Uncertainty index, which remains elevated due to global concerns about economic policies. Similarly, the World Trade Uncertainty Index has risen, driven by trade tensions and policy shifts in major economies. Trade policy uncertainty has increased sharply in recent months, though it has not yet reached the levels seen in 2018-19. The stock of import-restrictive measures within G20 economies continues to

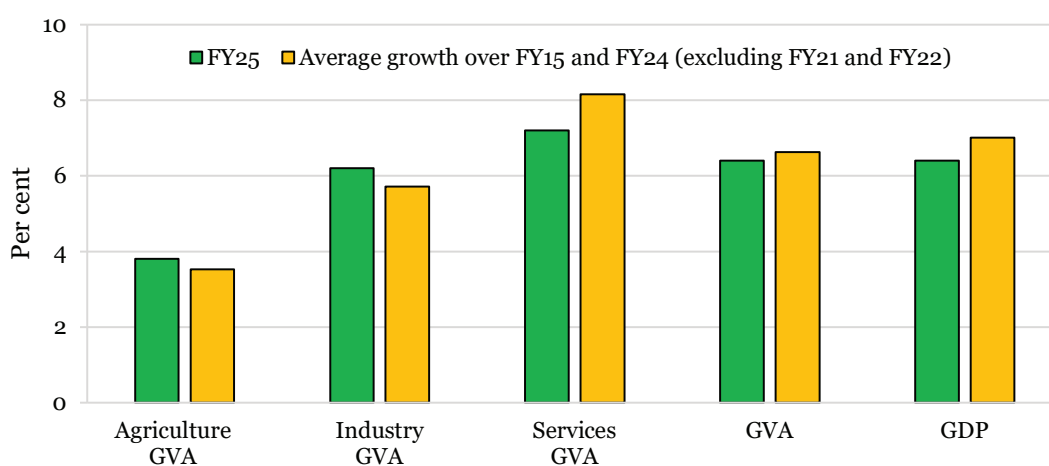
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¹³ OECD. (2024, December). OECD Economic Outlook, Volume 2024 Issue 2. <https://tinyurl.com/m6yn9wz2>.

grow, now affecting 12.7 per cent of G20 imports—more than three times the coverage of such measures in 2015. If uncertainty persists and trade-restrictive measures continue to rise, they could increase costs and prices, deter investment, hinder innovation, and ultimately reduce global economic growth. In light of these developments, Chapter 5 of the Survey on the Medium-Term Outlook elaborates on the global factors and the importance of strengthening the levers of domestic growth.

DOMESTIC ECONOMY REMAINS STEADY AMIDST GLOBAL UNCERTAINTIES

1.22 As per the first advance estimates released by the National Statistical Office, Ministry of Statistics & Programme Implementation (MoSPI), the real gross domestic product (GDP) growth for FY25 is estimated to be 6.4 per cent. From the angle of aggregate demand in the economy, private final consumption expenditure at constant prices is estimated to grow by 7.3 per cent, driven by a rebound in rural demand. PFCE as a share of GDP (at current prices) is estimated to increase from 60.3 per cent in FY24 to 61.8 per cent in FY25. This share is the highest since FY03. Gross fixed capital formation (GFCF) (at constant prices) is estimated to grow by 6.4 per cent.

Chart I.20: Despite global uncertainty, India's growth remains close to decadal average (at constant prices)



Source: Calculations based on Statement 13: Annual and Quarterly Estimates of GDP at constant prices, MoSPI

Note: FY25 values are First Advance Estimates.

1.23 On the supply side, real gross value added (GVA) is also estimated to grow by 6.4 per cent. The agriculture sector is expected to rebound to a growth of 3.8 per cent in FY25. The industrial sector is estimated to grow by 6.2 per cent in FY25. Strong growth rates in construction activities and electricity, gas, water supply and other utility

services are expected to support industrial expansion. Growth in the services sector is expected to remain robust at 7.2 per cent, driven by healthy activity in financial, real estate, professional services, public administration, defence, and other services. The analysis of growth trends in this chapter, hereinafter, is mostly based on the trends in the first half (H1) of FY25, on which the information base is more comprehensive.

Resilient recovery

1.24 The COVID-19 pandemic caused widespread disruptions to economies worldwide. Economic Survey 2023-24¹⁴ compared the post-pandemic trends until Q4 FY24 with the pre-pandemic trajectory and concluded that the economy grew briskly enough to avert any permanent loss of output. This section extends the analysis to Q2 FY25 (ending September 2024) with a sectoral view of the economy.

1.25 The overall picture is encouraging. Aggregate GVA surpassed its pre-pandemic trend in Q1 FY25, and it now hovers above the trend in the H1 FY25¹⁵. The agriculture sector remains strong, consistently operating well above trend levels. The industrial sector has also found its footing above the pre-pandemic trajectory. The robust rate of growth in the recent years has taken the services sector close to its trend levels (Chart I.21 to Chart I.24).

1.26 A closer look at industrial sub-sectors reveals a spectrum of performances (Chart I.25). Construction has been a standout, gaining momentum since mid-FY21 and soaring approximately 15 per cent above its pre-pandemic trend—an impressive feat driven by robust infrastructure development and housing demand. The utilities sector, including electricity, gas, water supply, and other services, reached its pre-pandemic trend by the end of FY23 and has consistently stayed above these levels. Manufacturing, while steadily recovering, remains slightly below its pre-pandemic trajectory. Meanwhile, mining continues to operate below its pre-pandemic trend.

1.27 The recovery within the services sector has been uneven (Chart I.26). Financial, real estate and professional services have taken the lead, surpassing pre-pandemic trend levels by the end of FY23. Public administration, defence, and other services followed suit, exceeding the trend for the first time in Q1 of FY25 since the onset of the pandemic. However, trade, hotels, transport, and communication services are gradually catching up with the pre-pandemic trend. These contact-intensive sectors faced challenges due to lockdown, restricted demand for travel, and reduced demand for hospitality, entertainment, and personal services.

14 Economic survey 2023-24, Chapter 1 – State of the Economy, Box I.1: Growth in GDP, GVA, and their components ensure no permanent losses in demand and output. <https://tinyurl.com/r8ykwj6>.

15 H1 refers to the first half of the corresponding Financial Year that is April to September.

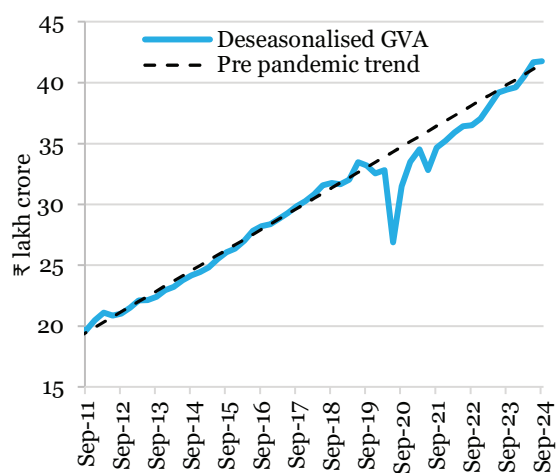
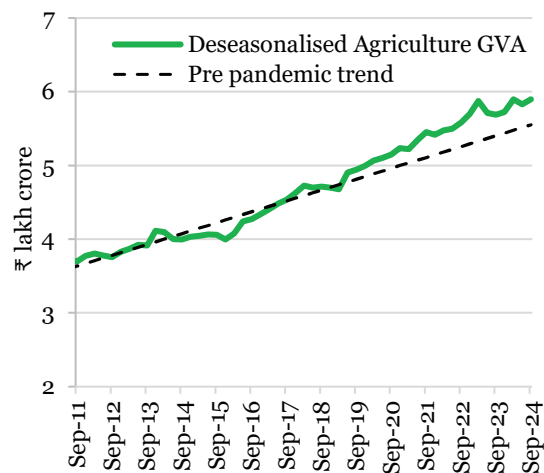
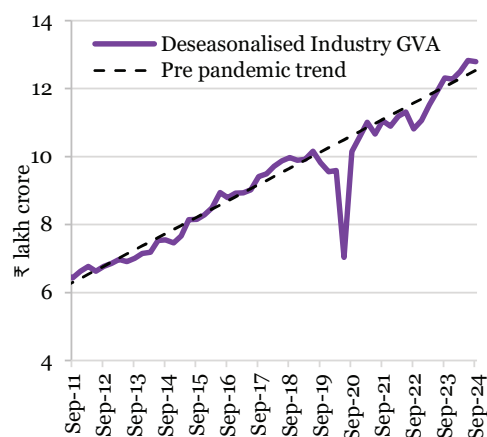
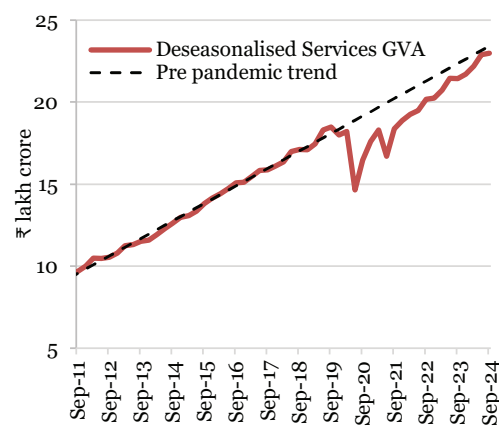
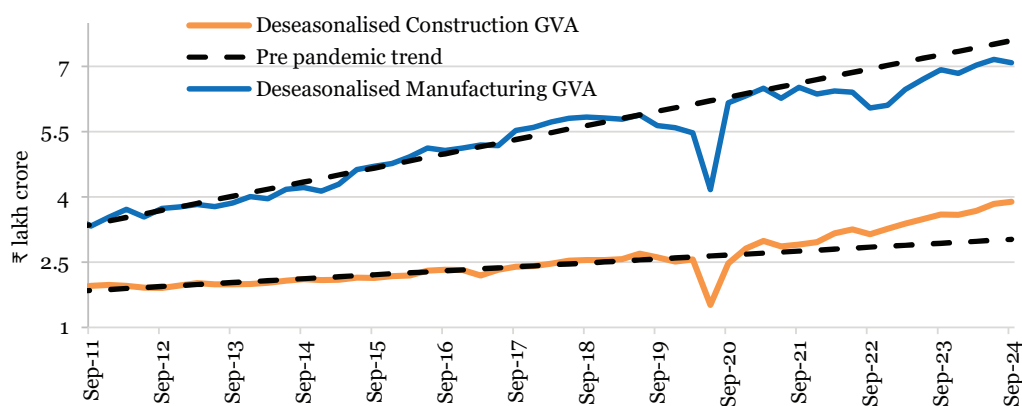
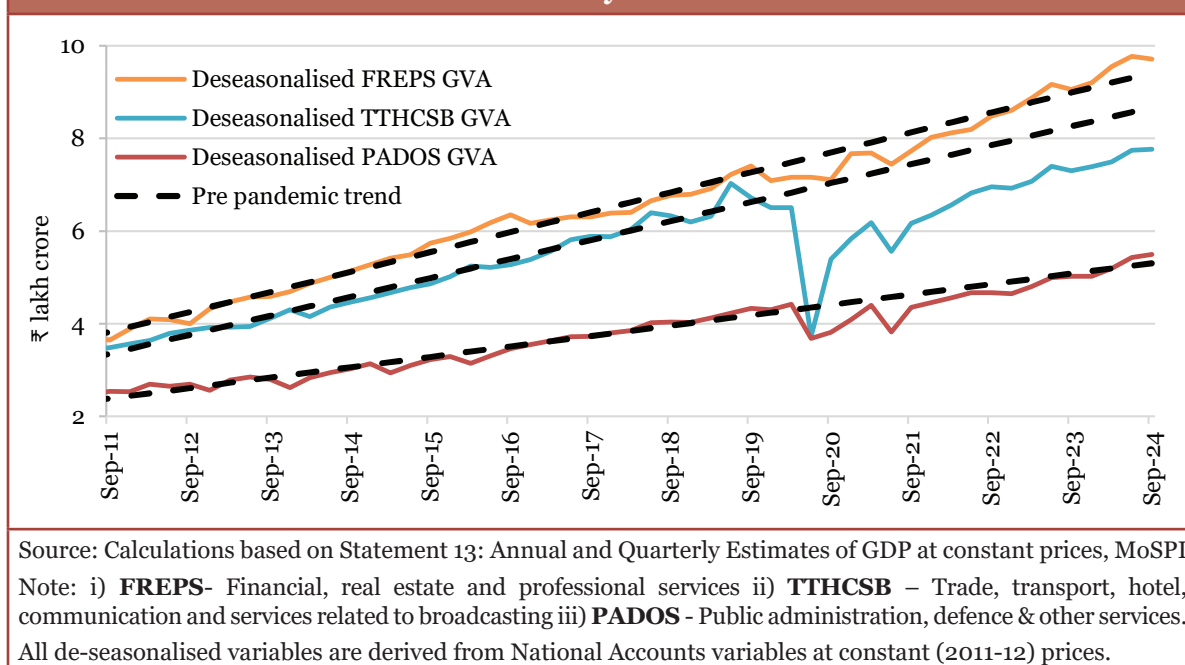
Chart I.21: Aggregate GVA recovery continues**Chart I.22: Agriculture GVA sustained at higher levels****Chart I.23: Industrial GVA operating above the trend level****Chart I.24: Services GVA is close to its trend****Chart I.25: Construction GVA operating well above trend levels, and manufacturing GVA gradually recovering**

Chart I.26: Uneven recovery within the services sector

Growth in H1 FY25 driven by agriculture and services sector

1.28 The real GVA grew by 6.2 per cent in H1 FY25. A strong growth momentum in Q1 FY25 was followed by a subdued performance in Q2 FY25. The agriculture and services sectors emerged as key growth drivers during this period. However, the overall growth was tempered by moderation in industrial growth, particularly in manufacturing, which faced challenges from slowing global demand and supply chain disruptions.

Improved agricultural prospects in FY25

1.29 Agriculture growth remained steady in H1 FY25, with Q2 recording a growth rate of 3.5 per cent, marking an improvement over the previous four quarters. Healthy Kharif production, above-normal monsoons, and an adequate reservoir level supported agricultural growth. As per the first advanced estimates of agricultural production for 2024-25, total Kharif food grain production is estimated at a record 1647.05 lakh metric tonnes (LMT), higher by 5.7 per cent compared to 2023-24 and 8.2 per cent higher than the average food grain production in the past five years. The estimated increase is mainly on account of the rise in rice, maize, coarse grains and oilseeds output. A normal southwest monsoon in 2024 has improved the water levels in reservoirs, ensuring sufficient water for irrigation during the rabi crop production. As of 10 January 2025,

rabi sowing of wheat and gram was 1.4 per cent and 0.8 per cent higher, respectively, compared to the previous year. Improved agricultural prospects also bode well for softening of food inflation pressures over the course of the year.

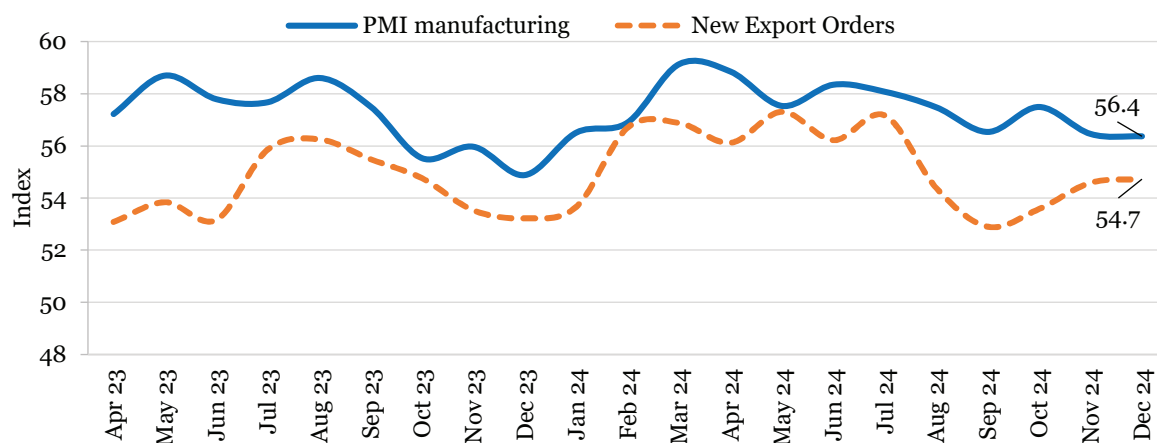
Manufacturing sector growth moderates but shows positive expectations

1.30 The industrial sector grew by 6 per cent in H1 FY25. Q1 saw a strong growth of 8.3 per cent, but growth moderated in Q2 due to three key factors. First, manufacturing exports slowed significantly due to weak demand from destination countries, and aggressive trade and industrial policies in major trading nations. Second, the above-average monsoon had mixed effects - while it replenished reservoirs and supported agriculture, it also disrupted sectors like mining, construction, and, to some extent, manufacturing. Third, the variation in the timing of festivities between September and October in the previous and current years led to a modest growth slowdown in Q2 FY25.

1.31 Disaggregated data reveals that while many manufacturing sub-sectors experienced growth, others faced challenges, likely due to global and seasonal factors. Oil companies suffered due to inventory losses and lower refining margins, while steel companies faced price pressures and lower global prices. The cement sector faced weak demand in Q2 due to heavy rains and lower selling prices. However, with the conclusion of the monsoon season and the expected pick-up in government capital expenditure, sectors such as cement, iron, and steel are expected to see a recovery. Further, mining and electricity are expected to normalise after the monsoon-related disruptions.¹⁶

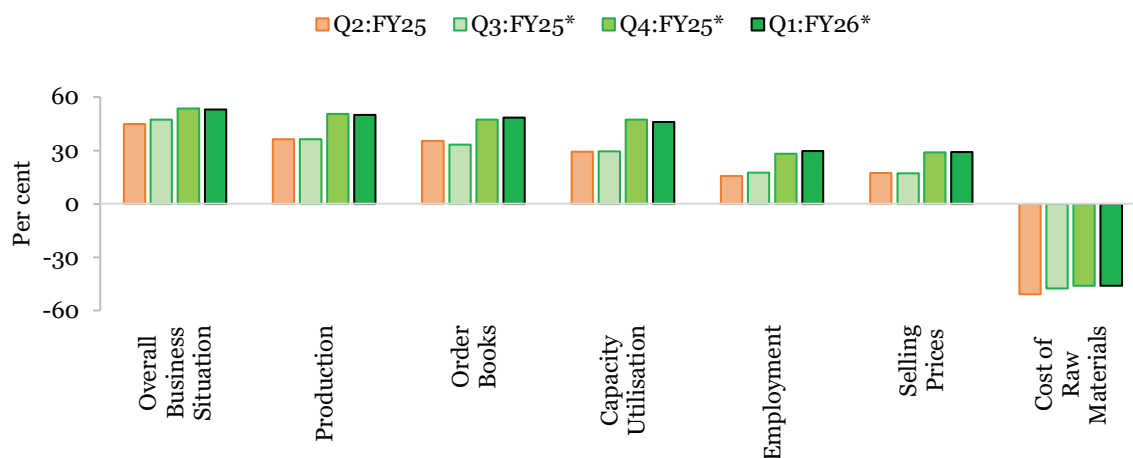
1.32 Despite various challenges, India continues to register the fastest growth in manufacturing PMI, which is also reflected in Chart I.7 of the previous section. The latest Manufacturing PMI for December 2024 remained well within the expansionary zone. The expansion rate for December 2024 exceeded its long-term average, driven by new business gains, robust demand, and advertising efforts. Meanwhile, international orders grew to a four-month high midway through the third fiscal quarter, signalling recovering external demand, as reported by companies.

¹⁶ RBI Governor's Statement: December 6, 2024 <https://tinyurl.com/4j6xwp2r>.

Chart I.27: Global slowdown impacted manufacturing in Q2 of FY25

Source: Compiled from various monthly HSBC India Manufacturing PMI reports

1.33 According to the RBI's Industrial Outlook Survey, manufacturing firms reported improved demand conditions in Q3 FY25 and expect further improvements in Q4 FY25 and Q1 FY26. The survey also reflected better expectations for production, order books, employment, capacity utilisation, and the overall business environment during Q4 FY25 and Q1 FY26.

Chart I.28: Improvement in business expectations

Source: RBI's Quarterly Industrial Outlook Survey

Note: * indicates expectations for the upcoming quarter; The survey results are summarised through a measure called Net Response, constructed as the difference between the proportions of respondents giving 'optimistic' and 'pessimistic' replies.

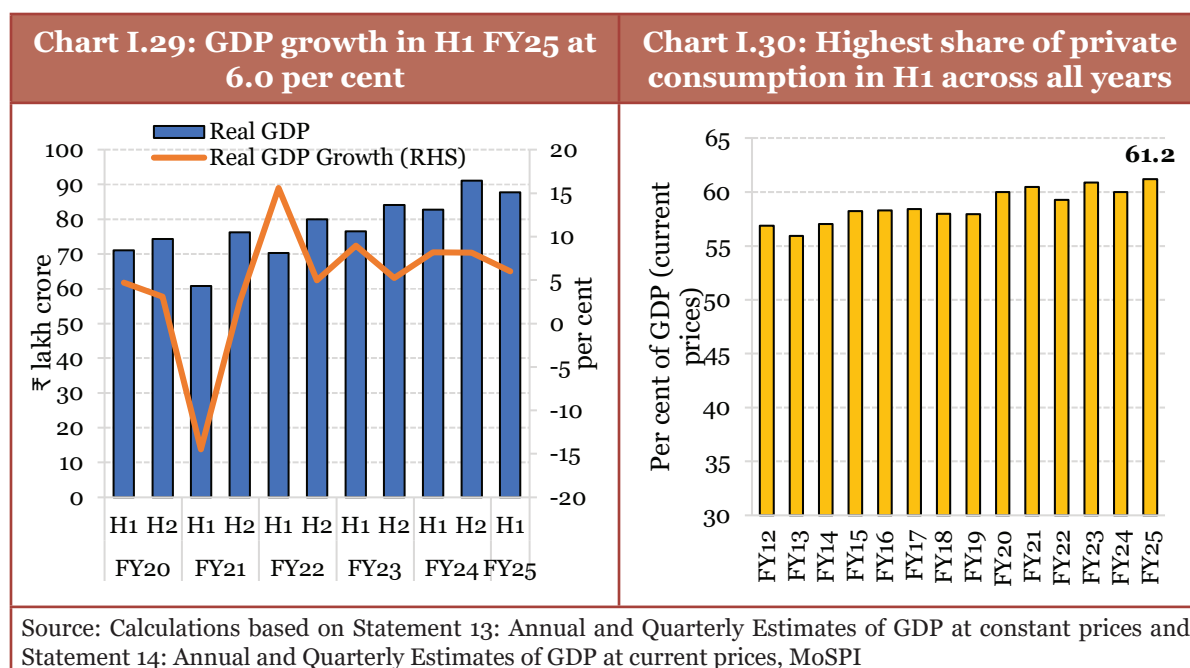
Robust growth in the services sector

1.34 The services sector continues to perform well in FY25. A notable growth in Q1 and Q2 resulted in 7.1 per cent growth in H1 FY25. Across sub-categories, all the sub-sectors have performed well. The robust performance of the services sector is also reflected

in high-frequency indicators (HFIs). PMI services have been in an expansionary zone during H1 FY25, supported by growth in new orders, rise in output, improvement in sales and enhanced employment generation. The hospitality sector performed well, with hotel occupancy rates in H1 FY25 similar to the previous year. Average daily rates and revenue per room increased due to higher corporate and leisure travel. Air cargo activity grew in double digits, while port traffic remained stable. Information Technology (IT) companies also performed better than the previous quarter.¹⁷

Analysis of GDP by expenditure categories

1.35 India's GDP at constant (2011-12) prices grew by 6.7 per cent and 5.4 per cent in Q1 and Q2 FY25, respectively. This implied a real GDP growth of 6.0 per cent in the first half of the current fiscal.



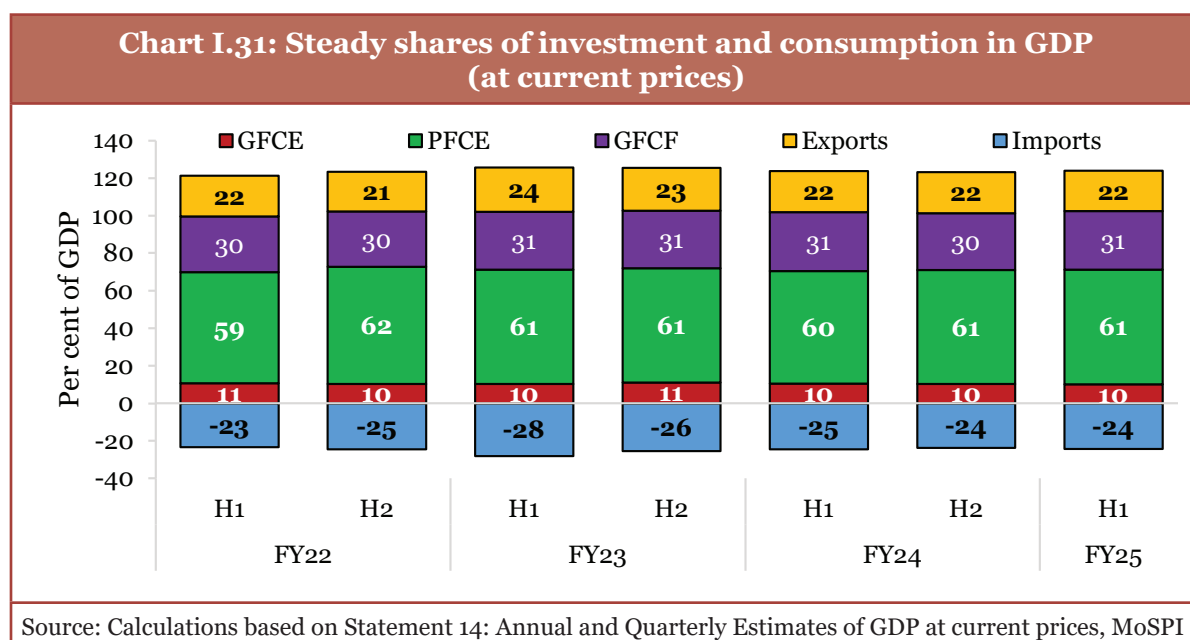
1.36 From a demand perspective, Private Final Consumption Expenditure (PFCE) firmed up in H1 FY25, growing by 6.7 per cent YoY. While National Accounts data is not disaggregated by geography, indicators such as 2-wheeler and 3-wheeler sales and tractor sales signal that rural demand contributed to private consumption growth. This is also reflected in the January 2025 round of National Bank for Agriculture and Rural Development (NABARD's) Rural Economic Conditions and Sentiments Survey, where 78.5 per cent of rural households reported an increase in their consumption expenditure during the last year.¹⁸ The impulse from rural demand is expected to continue in the second half of the fiscal year with the returns from a bumper Kharif crop and higher MSPs for a prospectively good Rabi crop.

17 Reserve Bank of India. (2024, December 24). RBI Bulletin December 2024. <https://tinyurl.com/rur6xe8u>.

18 NABARD, Rural economic conditions & sentiments survey. (January 2025) <https://tinyurl.com/3cu6pfk9>.

1.37 On the other hand, indicators of urban demand presented mixed trends. According to data from the Federation of Automobile Dealers Associations (FADA)¹⁹, the growth of passenger vehicle sales has slowed to 4.2 per cent in April – November 2024 compared to 9.2 per cent in the corresponding period of the previous year. Fast-moving consumer goods (FMCG) sales in urban areas, as per Nielsen IQ, have recorded a moderate growth in H1FY25. However, there is steady growth of 7.7 per cent YoY in air passenger traffic in April – November 2024. The 7.3 per cent YoY growth indicated by the First Advance Estimates for PFCE at constant prices for FY25 indicates a pick-up in the most recent months.

1.38 The moderation in real GDP growth can be traced to a softening of growth in Gross Fixed Capital Formation (GFCF) from 10.1 per cent in H1 FY24 to 6.4 per cent in H1 FY25. Q1 FY25 witnessed a slowdown in capital expenditure across different levels of government on account of the conduct of the general elections. Private sector investment growth may have remained subdued thus far in FY25 on account of the domestic political timetable, global uncertainties and overcapacities.



1.39 An additional reason for the slowdown in capital formation growth in Q2 FY25 may have emanated from the moderation in residential investment by households in this quarter, which is on the back of a sharp uptick over the last few quarters. Industry reports, however, point out that the correction in demand-supply metrics in this sector is indicative of market normalisation after a period of robust performance. An inventory overhang of 23 months signals healthy demand momentum in the segment.

Chart I.32: Moderating housing sales and launches on the back of a high base in the top 8 cities²⁰



Source: Various Real Insight Residential reports by Proptiger

1.40 The slowdown in investment activity is likely temporary. Green shoots in capital formation are visible. Union government capex is up 8.2 per cent in July – November 2024 and is expected to pick up further pace. Early results of the RBI's Order Books, Inventory, and Capacity Utilisation Survey (OBICUS) show that the seasonally adjusted capacity utilisation (CU) in manufacturing firms was 74.7 per cent in Q2 FY25, above the long-term average of 73.8 per cent.²¹ A private sector report's²² analysis of a sample of capital goods companies indicates that the order books of these companies have registered a sharp increase of 23.6 per cent in FY24 as against a compound annual growth rate (CAGR) of 4.5 per cent in the preceding four years. Moreover, in H1 FY25, there has been a growth of 10.3 per cent compared to the end of FY24. The RBI's report on private investments showed that investment intentions increased to ₹2.45 lakh crore for FY25 as compared to ₹1.6 lakh crore for FY24. Along with fresh investment, some of the existing intentions would spill over and be implemented in FY26.

1.41 On the external front, exports of goods and non-factor services at constant prices increased by 5.6 per cent in H1 FY25, while imports increased by 0.7 per cent. In Q2 FY25, imports of goods and services at constant prices contracted by 2.9 per cent, primarily driven by a decline in commodity prices. As a result, net exports contributed positively to real GDP growth in this period.

1.42 As India's economy continues to expand, the growth process has been ably supported by stability on fronts such as inflation, fiscal health, and balance of payments.

²⁰ The top 8 cities refer to Ahmedabad, Bangalore, Chennai, Delhi-NCR, Hyderabad, Kolkata, Mumbai, and Pune.

²¹ Footnote no. 19, RBI Governor's Statement: December 6, 2024 <https://tinyurl.com/4j6xwp2r>.

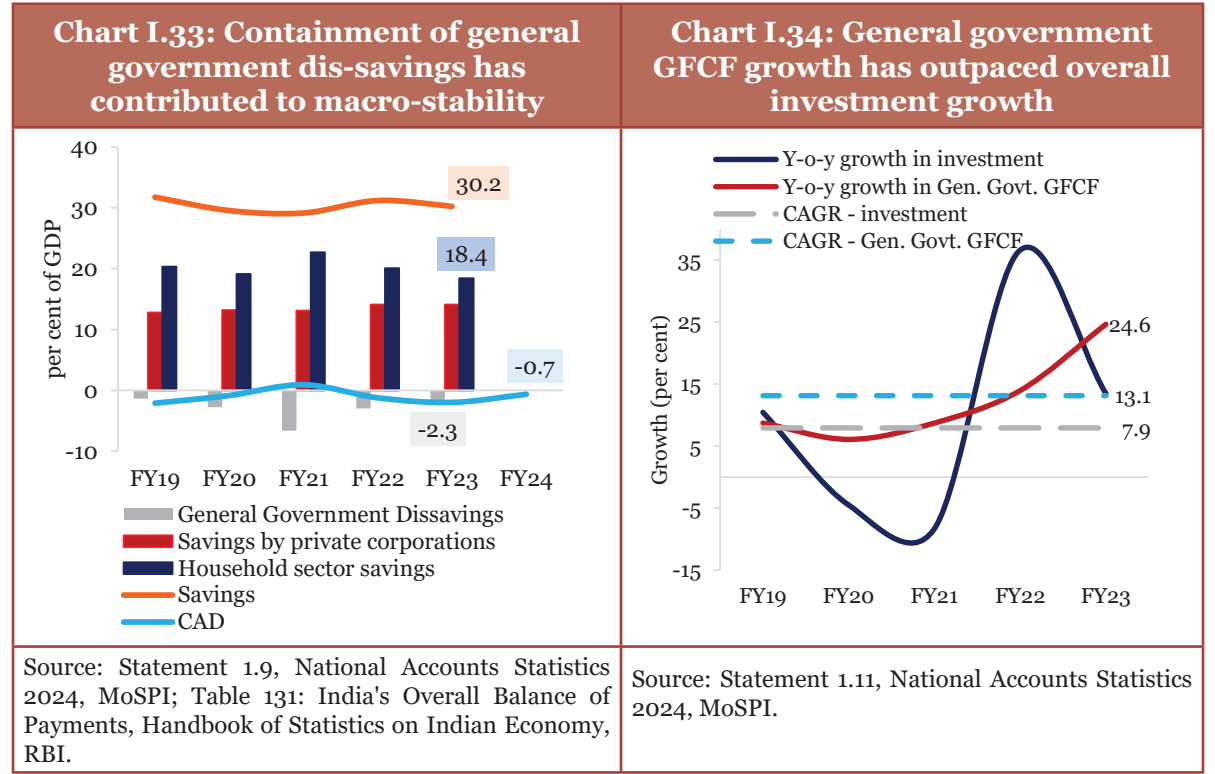
²² CARE Ratings. (2024, November). India's capex story gives a mixed picture. <https://tinyurl.com/54ed858f>.

The following section presents a closer examination of these stability factors and provides valuable insights into the resilience and sustainability of the Indian economy in the face of global and domestic challenges.

ECONOMY CHARACTERISED BY STABILITY AND INCLUSIVITY ON MULTIPLE FRONTS

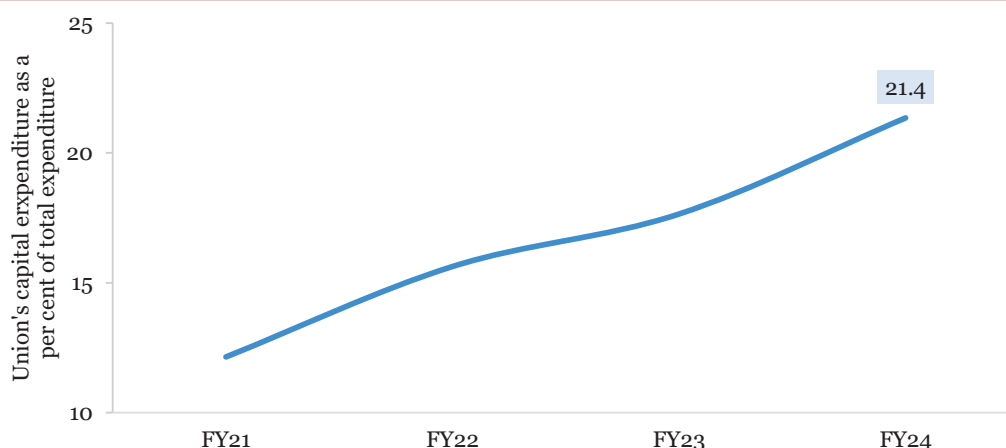
Improving public finances support macro stability

1.43 Since the COVID-19 pandemic, judicious fiscal management has helped to rein in general government dis-savings (Chart I.33). This assumes greater significance in sustaining the overall savings in the economy. With private corporate savings hovering around 14 per cent of GDP, persistent general government dis-savings could have implied a greater reliance on foreign funding. Prudent fiscal management in the last four years kept the overall savings-investment gap from widening and ensured a comfortable financing of the current account deficit, even though the household saving rate moderated. (Chart I.34 below).



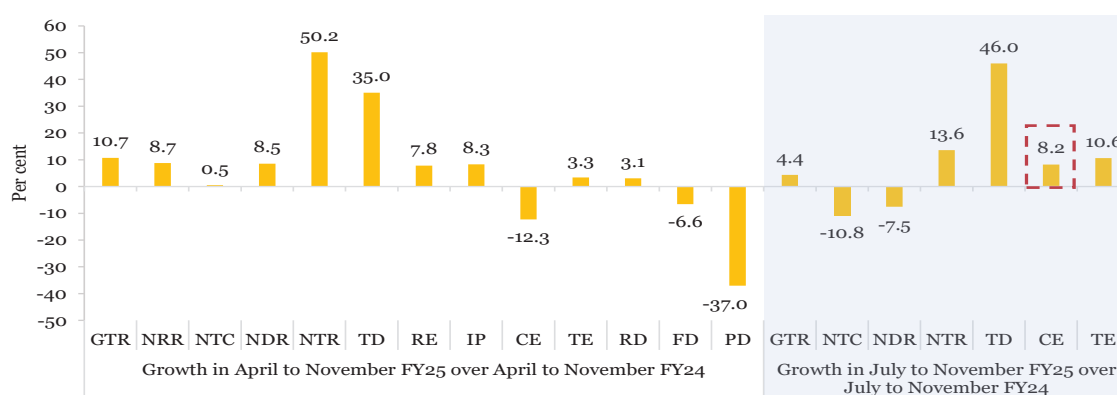
Fiscal discipline of the union government

1.44 The Union government’s indicators of fiscal discipline have improved progressively. Quality of expenditure approximated by capital expenditure as a per cent of total expenditure of the union, has continuously improved since FY21.

Chart I.35: Strong focus on fiscal discipline

Source: Union Budget documents. Provisional actuals for FY24.

1.45 During April - November 2024 (Chart I.36 below), three major facts stand out in union finances. First, following an unprecedented expansion of capital expenditure in the last four years, it remained subdued during Q1 FY25, owing to general elections. However, it rebounded after July despite a reduction in non-debt receipts owing to an increase in the devolution of taxes to states. Until November 2024, defence, railways and road transport accounted for about 75 per cent of the capital expenditure, whereas significant YoY growth occurred in power and food and public distribution. Second, despite the gross tax revenue (GTR) increasing by 10.7 per cent YoY during April-November 2024, the tax revenue retained by the Union, net of devolution to the states, hardly increased. This was because of increased tax devolution, which helped the states to manage their expenditures smoothly. Thirdly, as of November, the deficit indicators of the union were comfortably placed, leaving ample room for developmental and capital expenditure in the rest of the year.

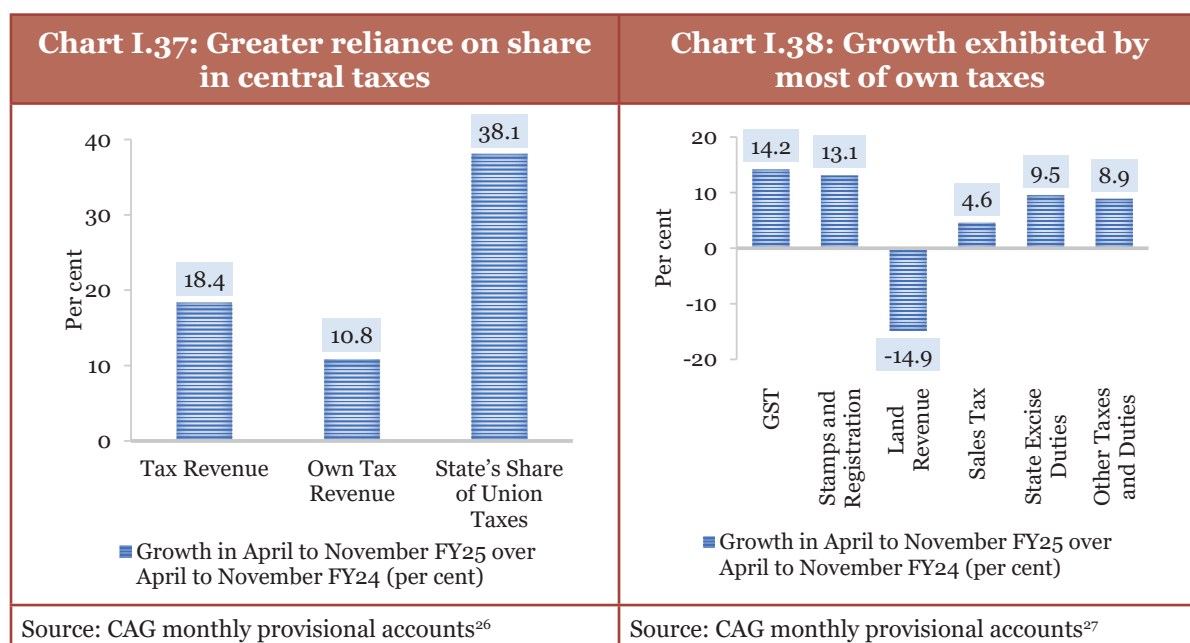
Chart I.36: Sound and sure footing of union finances in FY25

Source: CGA monthly provisional accounts.

Note: GTR- Gross Tax Revenue; NRR-Revenue Receipts (net to Centre); NTC-Tax revenue (net to Centre); NDR-Non-debt receipts; TD-Tax devolution to States; RE-Revenue Expenditure; IP-Interest Payments; CE-Capital Expenditure; TE-Total Expenditure; FD-Fiscal Deficit; RD-Revenue Deficit; PD-Primary Deficit.

Varying patterns in state finances

1.46 A review of preliminary unaudited estimates of 27 states²³ for the period April - November 2024²⁴ corroborates the second point above (Chart I.37). The GTR of the union and own tax revenue (OTR) of the states have increased at comparable pace during this period. However, the overall tax revenue position of the state governments appears better as of November, because of increased tax devolution by the union. Among the state-specific taxes, stamps and registration, sales tax, state excise duties, and other taxes and duties registered positive growth, whereas land revenue²⁵ declined, for states as a collective (Chart I.38).



1.47 For 15 states²⁸, OTR accounted for more than half of their total tax receipts (Chart I.39), the highest being Telangana at 88 per cent, followed by Karnataka and Haryana at 86 per cent each. Further, states with a higher ratio of own revenue receipts (ORR) to total revenue receipts also tended to have relatively lower ratios of revenue deficit to total revenue receipts (Chart I.40).

23 Andhra Pradesh (AP), Arunachal Pradesh (AR), Assam (AS), Bihar (BR), Chhattisgarh (CG), Gujarat (GJ), Haryana (HR), Himachal Pradesh (HP), Jharkhand (JH), Karnataka (KA), Kerala (KL), Madhya Pradesh (MP), Maharashtra (MH), Manipur (MN), Meghalaya (ML), Mizoram (MZ), Nagaland (NL), Odisha (OD), Punjab (PB), Rajasthan (RJ), Sikkim (SK), Tamil Nadu (TN), Telangana (TS), Tripura (TR), Uttar Pradesh (UP), Uttarakhand (UK) and West Bengal (WB).

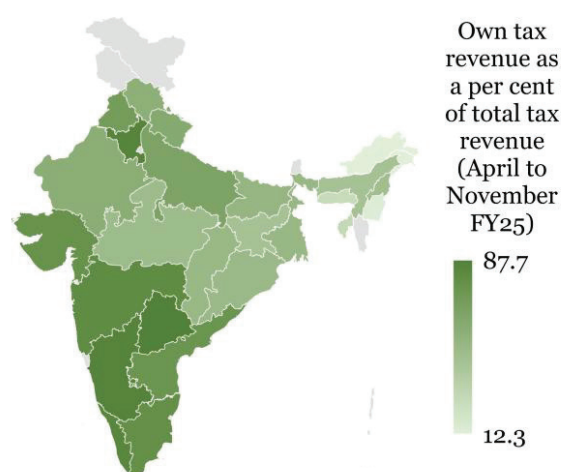
24 April to July reference period for Jharkhand; April to September for Arunachal Pradesh and Manipur.

25 Land revenue for Himachal Pradesh included in 'other taxes and duties'.

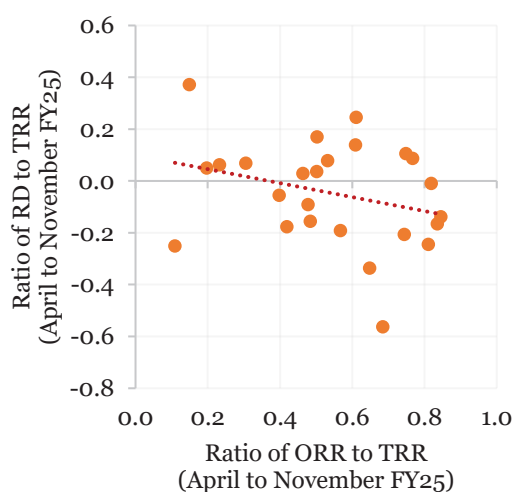
26 Share of central taxes for Mizoram and Sikkim included in 'other taxes and duties'.

27 Ibid.

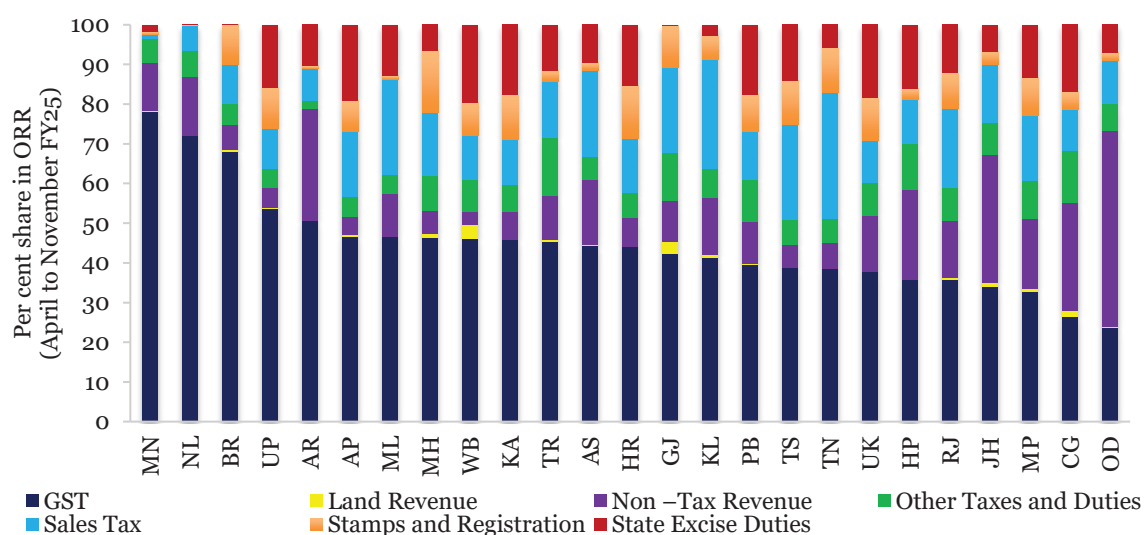
28 Out of 25 States; Mizoram and Sikkim excluded.

Chart I.39: Distribution of reliance on OTR – a diverse scenario across states

Source: CAG monthly provisional accounts

Chart I.40: Correlation between own revenue collection & revenue account healthSource: CAG monthly provisional accounts
RD- revenue deficit, ORR-own revenue receipts, TRR-total revenue receipts.

1.48 For 23 States²⁹, GST was the main source of revenue amongst ORR with the greatest reliance thereon by Manipur and Nagaland at 78 per cent and 72 per cent, respectively (Chart I.41). States garnering the highest shares in respective ORRs w.r.t. stamps & registration, sales tax and state excise duties were Maharashtra, Tamil Nadu and West Bengal, respectively. Odisha exhibited the highest share of non-tax revenue in ORR at 49 per cent.

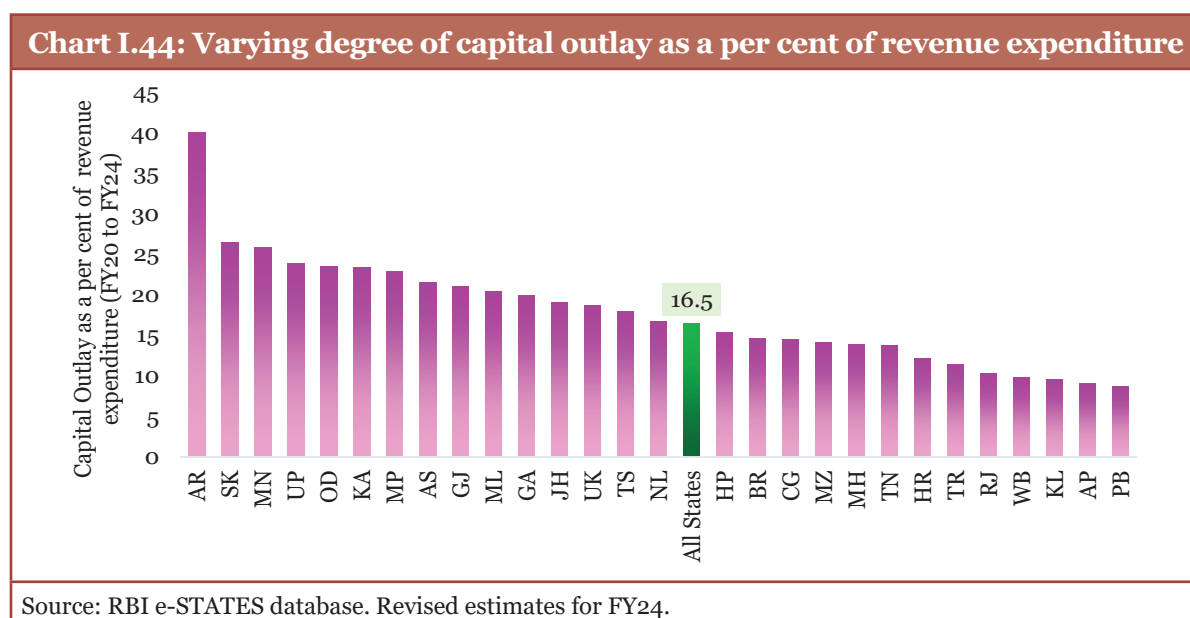
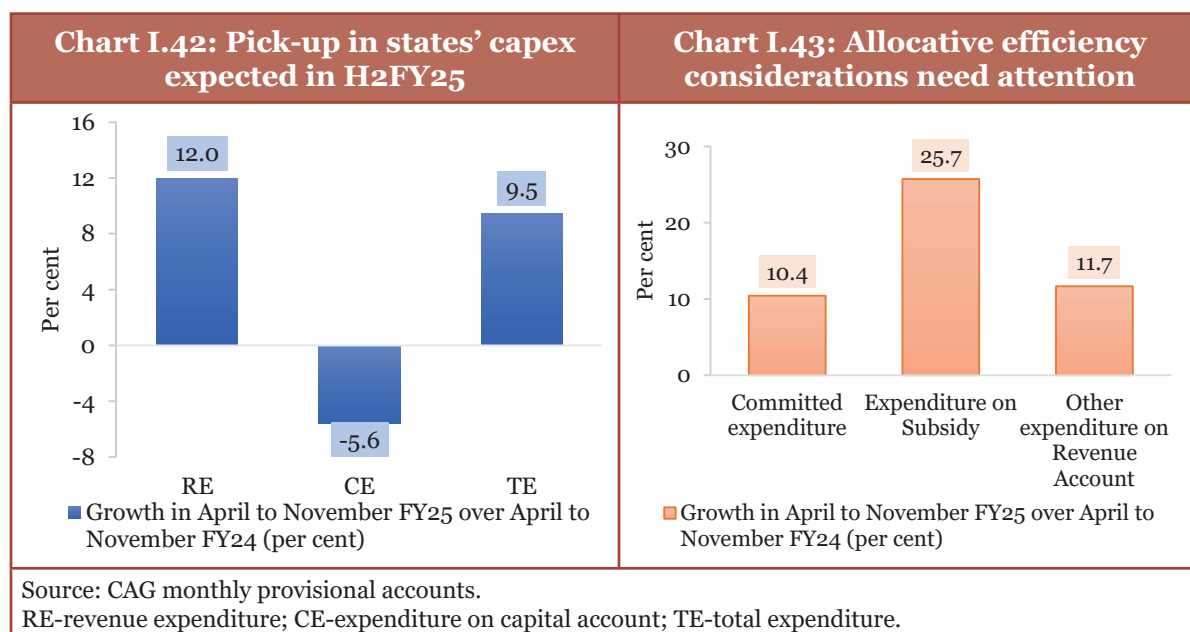
Chart I.41: States' own revenue receipts through an assorted lens

Source: CAG monthly provisional accounts

29 Ibid.

1.49 The revenue expenditure of the states grew at 12 per cent (YoY) during April to November 2024 (Chart I.42), with subsidies and committed liabilities³⁰ registering a growth of 25.7 per cent and 10.4 per cent, respectively (Chart I.43). With expenditure on capital account for states declining by 5.6 per cent, total expenditure grew by 9.5 per cent. However, 11 states witnessed an increase in capex.

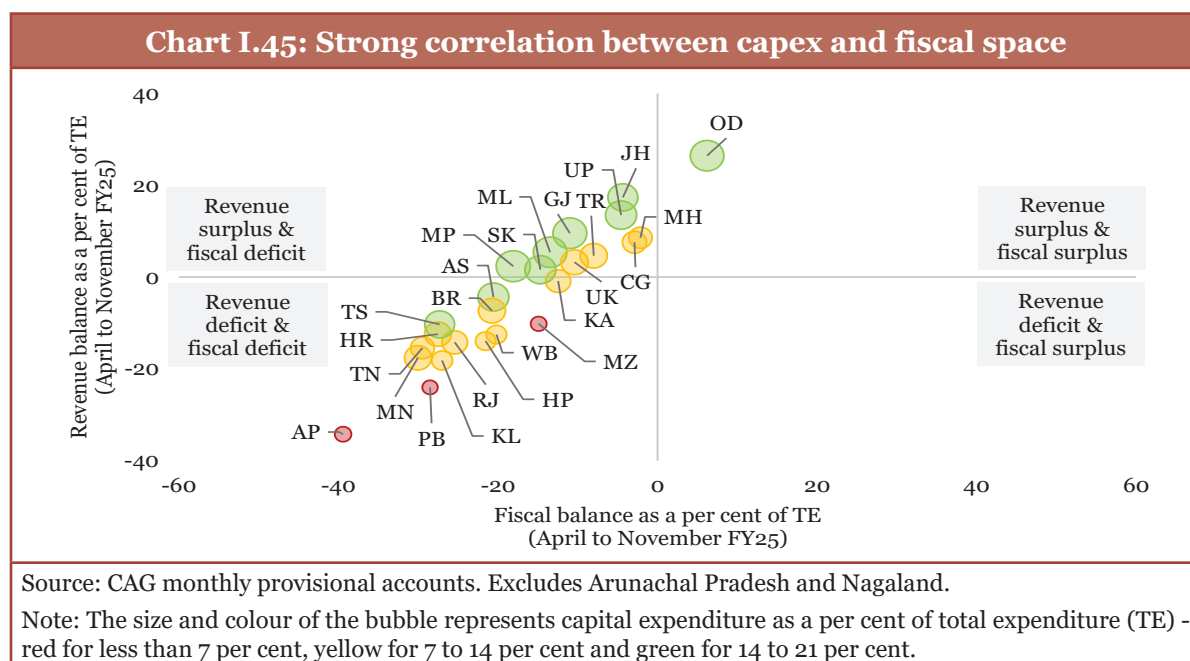
1.50 In the quality of expenditure, measured by capital outlay as a per cent of revenue expenditure over the five years ending FY24, states³¹ exhibited considerable variation (Chart I.44).



³⁰ Interest payments, salary and pension. For Mizoram and Sikkim, expenditure on pension and subsidy; for Karnataka and Tamil Nadu, expenditure on salaries & wages and subsidies; and for Arunachal Pradesh, expenditure on subsidies included in 'other expenditure on revenue account'.

³¹ 28 states.

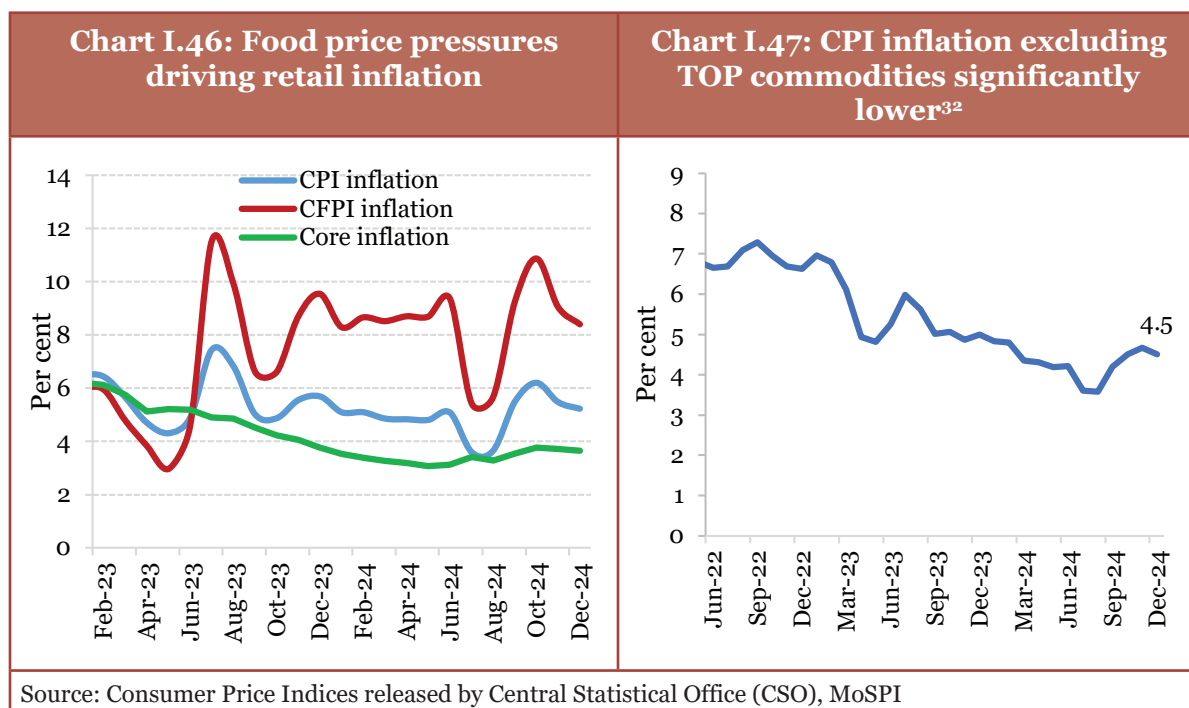
1.51 In April-November 2024, 11 States maintained revenue surplus (Chart I.45). The chart shows that revenue surplus (or lower revenue deficit) is correlated with higher capital expenditure.



Inflation – a combination of low and stable core inflation with volatile food prices

1.52 Retail headline inflation, as measured by the change in the Consumer Price Index (CPI), has softened from 5.4 per cent in FY24 to 4.9 per cent in April – December 2024. The decline is attributed to a 0.9 percentage point reduction in core (non-food, non-fuel) inflation between FY24 and April – December 2024. While the average inflation in FY25 has trended downward, monthly volatility in food prices and a select few commodities have been responsible for CPI inflation printing towards the upper side of the tolerance band of 4 (+/-) 2 per cent.

1.53 Pressures in food prices have been driven by factors such as supply chain disruptions and vagaries in weather conditions. Food inflation, measured by the Consumer Food Price Index (CFPI), has increased from 7.5 per cent in FY24 to 8.4 per cent in FY25 (April-December), primarily driven by a few food items such as vegetables and pulses. Chart I.47 plots headline retail inflation excluding the following commodities – tomato, onion and potato, (TOP). These commodities together constitute 2.2 per cent of the CPI basket.



External sector stability safeguarded by services trade and record remittances

1.54 India's external sector displayed mixed trends, primarily due to volatile global conditions. A decline in commodity prices affected India's merchandise exports through the petroleum goods channel. Data on merchandise trade shows that India's merchandise exports grew by 1.6 per cent YoY in April – December 2024.³³ However, non-petroleum exports (on the same comparison basis) were up by 7.1 per cent. Non-petroleum and non-gems and jewellery exports rose by 9.1 per cent. Merchandise imports rose by 5.2 per cent. This growth was primarily driven by an increase in non-oil, non-gold imports. Gold imports also grew, influenced by higher global prices, early purchases ahead of festive spending, and demand for safe-haven assets.

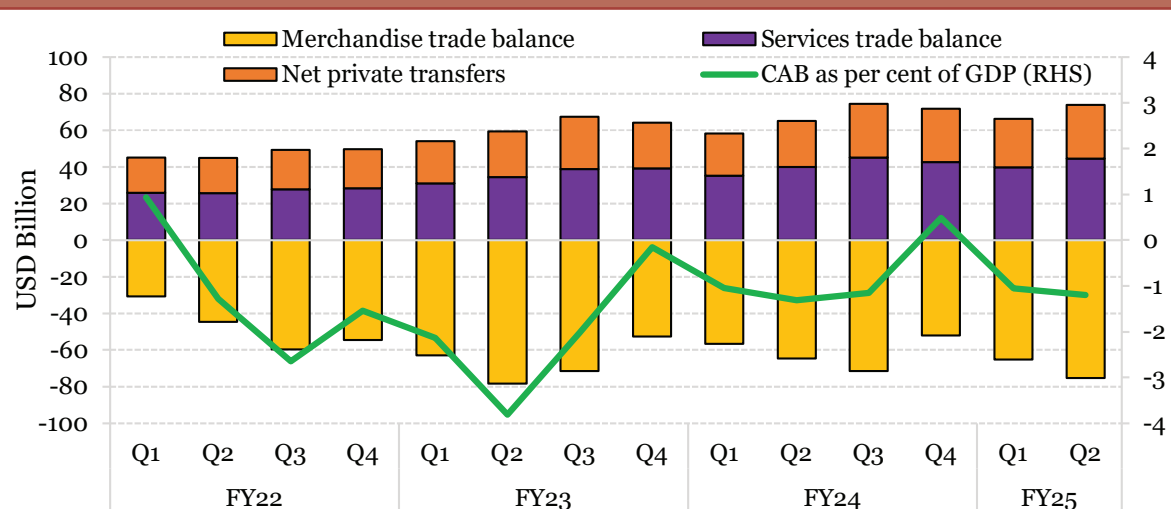
1.55 While the outpacing of merchandise imports over merchandise exports widened India's merchandise trade deficit, India's services trade surplus has lent balance to the overall trade deficit. India's robust services exports have propelled the country to secure the seventh-largest share in global services exports, underscoring its competitiveness

³² Further, if gold and silver are also excluded, CPI inflation excluding these five commodities (which constitute 3.4 per cent of the CPI basket) is even lower.

³³ https://www.commerce.gov.in/wp-content/uploads/2025/01/PIB-Release_15012025-final.pdf.

in this critical sector. In addition to the services trade surplus, remittances from abroad led to a healthy net inflow of private transfers. As per the World Bank, India was the top recipient of remittances in the world, driven by an uptick in job creation in OECD economies.³⁴ These two factors combined to ensure that India's current account deficit (CAD) remains relatively contained at 1.2 per cent of GDP in Q2 FY25.

Chart I.48: Services trade surplus and private transfers lending balance to the external sector



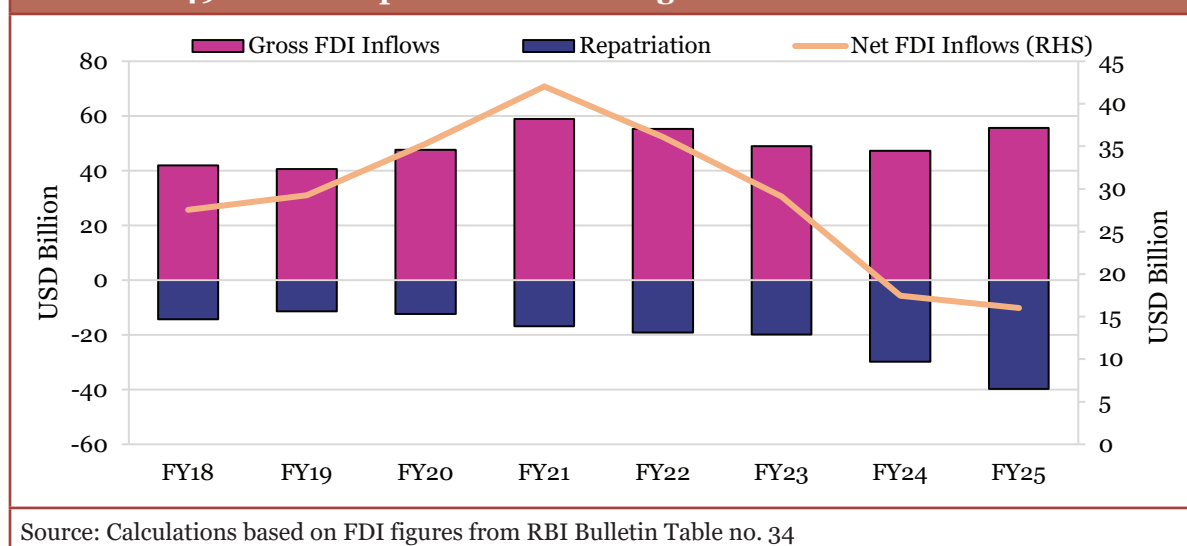
Source: Tables 196 and 197, RBI Handbook of Statistics on the Indian Economy

Note: CAB – Current Account Balance

1.56 Comfortable financing of the CAD by the capital account has ensured external sector stability. Within capital flows, gross foreign direct investment (FDI) inflows increased 17.9 per cent YoY in April – November 2024. Gross FDI inflows during April – November in FY25 are higher than the levels witnessed in the corresponding period of any previous years except FY21. Net FDI inflow declined over this period, primarily on account of the uptick in repatriation, which is higher by 33.2 per cent YoY after a growth of 51.5 per cent in FY24. The rise in repatriation through the channels of secondary sales and Initial Public Offerings (IPOs) by multinational companies amid strong stock market performance points to investor confidence in profitable exits for direct investors.³⁵

³⁴ World Bank. (2024, June 26). In 2024, remittance flows to low- and middle-income countries are expected to reach \$685 billion, larger than FDI and ODA combined. <https://tinyurl.com/38esxhzr>.

³⁵ "Behind India's growth over last 10 yrs—increase in repatriations, steady FDI inflows". <https://tinyurl.com/2tt3pxsf>.

Chart I.49: Rise in repatriation even as gross FDI inflows remain robust

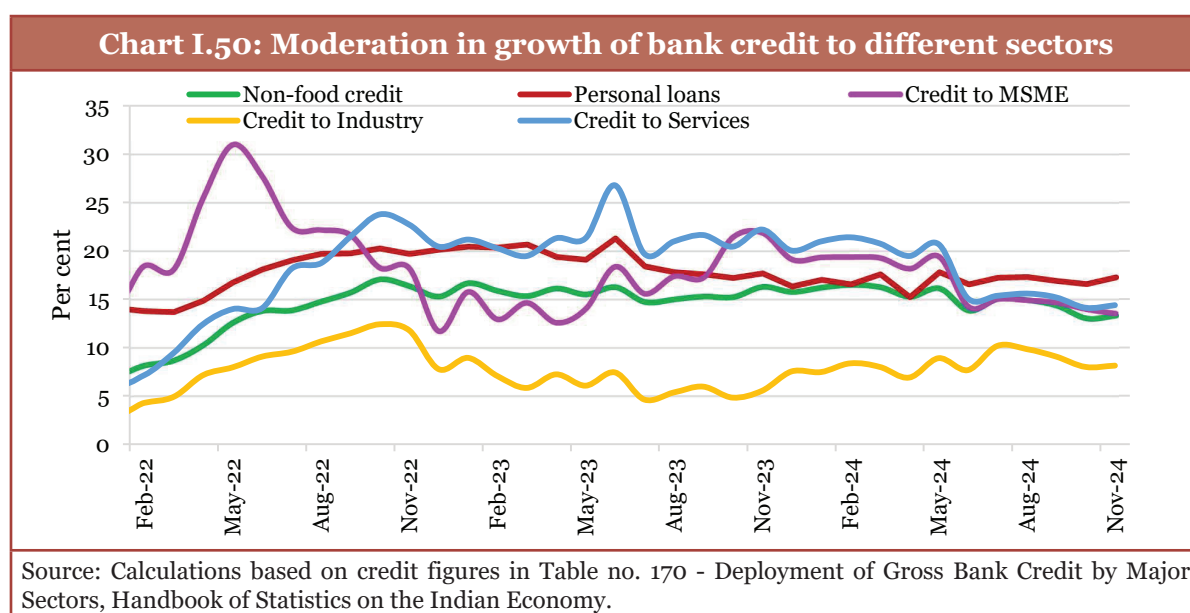
1.57 On the other hand, foreign portfolio investment (FPI) flows have been volatile in the second half of 2024, primarily on account of global geopolitical and monetary policy developments. Net FPI inflows slowed to USD 10.6 billion in April – December 2024 from USD 31.7 billion during the same period the previous year. The inclusion of India's sovereign government securities (G-secs) of certain tenors in the JP Morgan EM Bond Index induced heightened activity within the debt segment of the FPIs. Further elucidation of the impact of the inclusion of Indian G-secs in global bond indices can be seen in Chapter 3.

1.58 As a result of stable capital flows, India's foreign exchange reserves increased from USD 616.7 billion at the end of January 2024 to USD 704.9 billion in September 2024 before moderating to USD 634.6 billion as on 3 January 2025. India's forex reserves are sufficient to cover 90 per cent of external debt and provide an import cover of more than ten months, thereby safeguarding against external vulnerabilities.

1.59 Looking ahead, global policy changes could influence India's external trade. The evolving trade stance of a few major economies could affect key Indian export sectors such as chemicals, machinery, textiles, and electronics. In the short term, diversifying export markets is essential, while medium-term efforts should focus on increasing market share. Over the long term, India must position itself as a strategic partner in high-value sectors like biotechnology and semiconductors. Strategic technology partnerships provide opportunities for enhanced cooperation in key areas like space, semiconductors, quantum technologies and advanced telecommunications.

Financial sector prospects amid a moderation of growth in credit disbursal

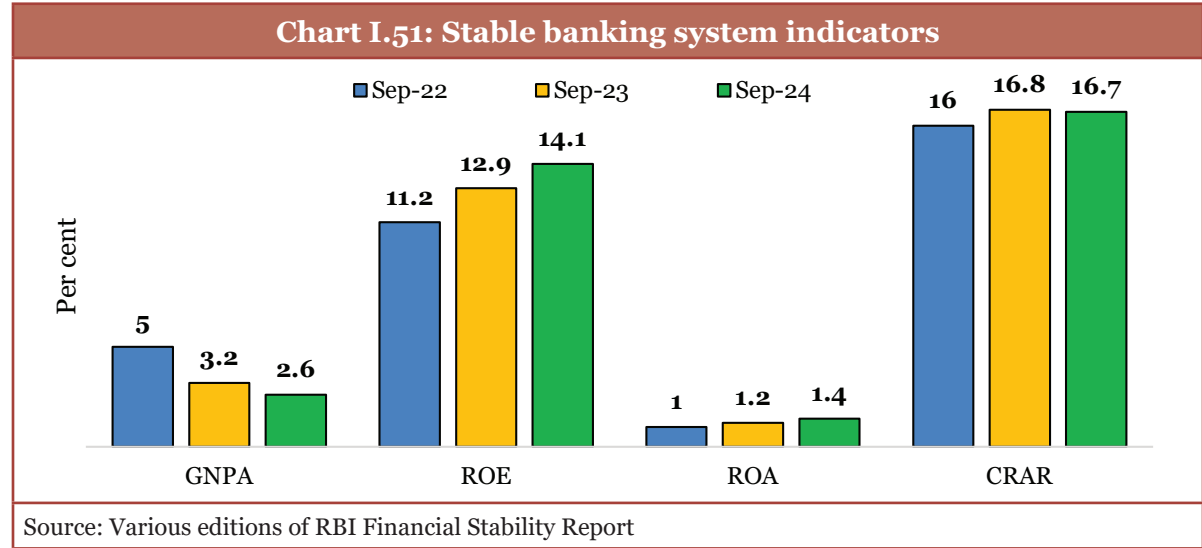
1.60 The banking and financial sector remains stable and well-capitalised, and is catering to the financing needs of the economy. While credit disbursal by scheduled commercial banks (SCBs) is growing in double-digits, there has been a moderation in the growth in recent months. This is on the back of a high base and also due to regulatory tightening in sectors where high growth was observed. In view of high growth in certain components of consumer credit, the RBI had, on 16th November 2023³⁶, raised the risk weights on unsecured retail loans by 25 basis points. However, expansion in the segment continues to be broad-based, with housing loans as the major contributor. Apart from personal loans, credit to the services sector is the other major driver of expansion in gross bank credit. Industrial credit growth is picking up but remains below growth rates in other major sectors.



1.61 Stability in the banking sector is underscored by declining asset impairments, robust capital buffers, and strong operational performance. As per the RBI's Financial Stability Report (FSR), December 2024³⁷, the gross non-performing assets (NPAs) in the banking system have declined to a 12-year low of 2.6 per cent of gross loans and advances. The capital-to-risk-weighted assets ratio (CRAR) for SCBs stands at 16.7 per cent as of September 2024, well above the norm. The profitability of SCBs improved during H1 FY25, with profit after tax (PAT) surging by 22.2 per cent YoY, while the Return on Equity (RoE) and Return on Assets (RoA) have improved on a YoY basis. Macro stress tests suggest that banks' overall capital levels would stay above the regulatory minimum even in adverse scenarios.

36 <https://www.rbi.org.in/scripts/NotificationUser.aspx?Id=12567&Mode=0>.

37 Reserve Bank of India. (2024, December). Financial Stability Report. <https://tinyurl.com/zv662e5d>.



1.62 While the long-term stability of the banking system is safeguarded, there was scrutiny over the short-term dynamics emerging from the mismatch of credit and deposit growth rates. The RBI FSR’s (June 2024)³⁸ analysis of previous episodes where credit growth outpaced deposit growth shows that the average duration of such cycles where credit growth exceeds deposit growth is 41 months. The merger of a bank with a non-bank has elongated the cycle in this episode. The analysis reveals that credit growth precedes deposit growth and that convergence is usually achieved through a fall in credit growth.

1.63 Another area of concern within the banking system is the stress on unsecured credit, i.e., personal loans and credit cards. As of September 2024, 51.9 per cent of the fresh addition to the stock of NPAs in the retail loan portfolio emanated from the slippages in the unsecured loan book.³⁹ The RBI FSR (December 2024) notes that nearly half of borrowers with credit card and personal loans also have another active retail loan, often substantial, such as a housing or vehicle loan. When a borrower defaults on any loan category, financial institutions classify all loans of that borrower as non-performing. Hence, their larger, secured loans face delinquency risks due to defaults in smaller personal loans.

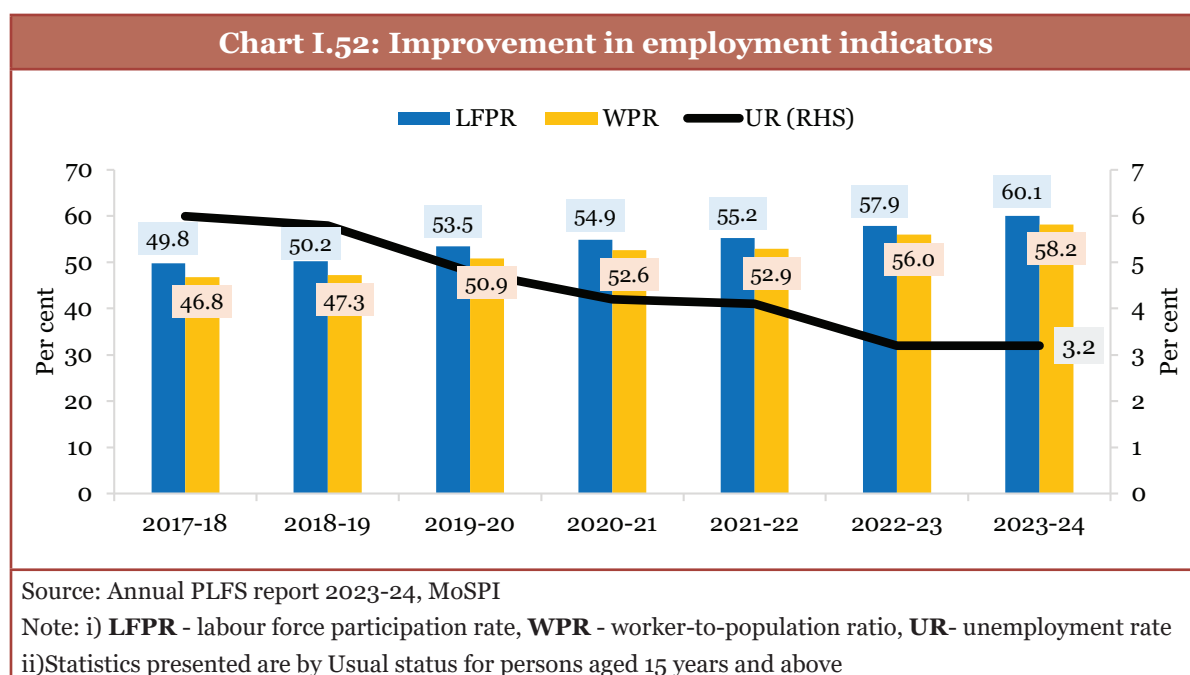
1.64 Apart from active monitoring of the banking system, there is a need to be cautious regarding developments in the Indian and global stock markets. While the Indian financial sector shows resilience, international market conditions may have some influence on India. Any correction in the US stock market could have implications for global markets (See Box II.2 of the Survey for an analysis pertaining to the Indian market).

38 Reserve Bank of India. (2024, June). Financial Stability Report. <https://tinyurl.com/3ba9x6vr>.

39 Reserve Bank of India. (2024, December). Financial Stability Report. <https://tinyurl.com/4wtz3c6u>.

Employment trends

1.65 India's labour market growth in recent years has been supported by post-pandemic recovery and increased formalisation. As per the 2023-24 annual Periodic Labour Force Survey (PLFS) report, the unemployment rate for individuals aged 15 years and above has steadily declined from 6 per cent in 2017-18 to 3.2 per cent in 2023-24. The labour force participation rate (LFPR) and the worker-to-population ratio (WPR) have also increased (Chart I.52). In Q2 FY25, the urban unemployment rate for people aged 15 years and above improved slightly to 6.4 per cent compared to 6.6 per cent in Q2 FY24. Both LFPR and WPR also increased during this period.



1.66 The formal sector in India has seen significant growth, with net Employees' Provident Fund Organisation (EPFO) subscriptions more than doubling from 61 lakh in FY19 to 131 lakh in FY24. In April -November 2024, net additions reached 95.6 lakh, driven largely by youth. Workers aged 18-25 years contributed to 47 per cent of the net payroll additions. This indicates a growing trend towards formal employment, which enhances workers' access to social security and stability. Government initiatives are playing a key role in enhancing the formalisation of the job market.

1.67 Technological developments over recent years have generated much discussion on the impact of Artificial Intelligence (AI) on India's labour market. The integration of AI into India's labour market presents an opportunity to enhance productivity, elevate workforce quality and create employment, provided, systemic challenges are effectively addressed through robust institutional frameworks. For India, a services-driven economy with a youthful and adaptable workforce, the adoption of AI offers

the potential to support economic growth and improve labour market outcomes. Prioritising education and skill development will be crucial to equipping workers with the competencies needed to thrive in an AI-augmented landscape. By capitalising on the global infancy of AI, India has the opportunity to prepare its labour force for a future defined by collaboration between human and machine intelligence. An elucidation of these dynamics can be found in Chapter 13.

OUTLOOK AND WAY FORWARD

1.68 A steady growth trajectory shapes the global economic outlook for 2024, though regional patterns vary. The near-term global growth is expected to be a shade lower than the trend level. The services sector continues to drive global expansion, with notable resilience in India. Meanwhile, manufacturing is struggling in Europe, where structural weaknesses persist. Trade outlook also remains clouded in the next year.

1.69 Inflationary pressures have been easing globally, though risks of synchronised price pressures linger due to potential geopolitical disruptions, such as tensions in the Middle East and the ongoing Russia-Ukraine conflict. Central banks have adopted more accommodative monetary policies. However, the pace of rate cuts varies across regions depending on the growth imperatives and the pace of disinflation, creating potential divergences in economic recovery.

1.70 On the domestic front, rebounding rural demand augurs well for consumption. Investment activity is expected to pick up, supported by higher public capex and improving business expectations. Capacity utilisation in manufacturing remains above the long-term average, and private sector order books have shown steady growth, alongside a rise in investment intentions. However, these gains could be tempered by the global excess capacities in sectors such as steel, leading to aggressive trade policies in search of demand.

1.71 Going forward, food inflation is likely to soften in Q4 FY25 with the seasonal easing of vegetable prices and Kharif harvest arrivals. Good Rabi production is likely to contain food prices in the first half of FY26. Adverse weather events and rise in international agricultural commodity prices, however, pose risks to food inflation. Global energy and commodity prices have softened in the recent past, making the core inflation outlook benign. However, risks remain on account of significant global political and economic uncertainties.

1.72 In brief, there are many upsides to domestic investment, output growth and disinflation in FY26. There are equally strong, prominently extraneous, downsides too.

Nonetheless, the fundamentals of the domestic economy remain robust, with a strong external account, calibrated fiscal consolidation and stable private consumption. On balance of these considerations, we expect that the growth in FY26 would be between 6.3 and 6.8 per cent.

1.73 Navigating global headwinds will require strategic and prudent policy management and reinforcing the domestic fundamentals. The Budget 2024-25 laid out a multi-sectoral policy agenda for sustained growth push. In this context, Chapter 5 elaborates on the need for deregulation and reforms at the grassroots level to improve the overall competitiveness of the economy and to lift trend growth rates, supporting higher levels of economic activity.

role of regulation. Section 2 presents the situation in the health space in the country, its progress, and challenges. It further highlights the role of disruptive technologies in providing equitable healthcare and the impact of lifestyle choices on mental well-being. Section 3 explores the rural economy, focusing on infrastructure development and housing as key drivers of economic growth while advocating for the localisation of Sustainable Development Goals (SDGs) to foster rural progress.

EDUCATION: TREADING NEW PATHWAYS

11.11 Education plays a key role in developing an economy by cultivating individuals capable of rational thought and unleashing their agency to better themselves and society. Education and human capital development are among the foundational pillars of development. The National Education Policy 2020 (NEP) is built upon this principle.¹² The NEP states that –

‘It aims at producing engaged, productive, and contributing citizens for building an equitable, inclusive, and plural society as envisaged by our Constitution.’

School education

11.12 India's school education system serves 24.8 crore students across 14.72 lakh schools with 98 lakh teachers (UDISE+ 2023-24). Government schools make up 69 per cent of the total, enrolling 50 per cent of students and employing 51 per cent of teachers, while private schools account for 22.5 per cent, enrolling 32.6 per cent of students and employing 38 per cent of teachers. The NEP 2020 aims for a 100 per cent Gross Enrolment Ratio (GER) by 2030. The GER is near-universal at the primary (93 per cent) and the efforts are underway to bridge the gaps at the secondary (77.4 per cent) and higher secondary level (56.2 per cent), driving the nation closer to its vision of inclusive and equitable education for all.¹³

11.13 School dropout rates¹⁴ have steadily declined in recent years, standing at 1.9 per cent for primary, 5.2 per cent for upper primary, and 14.1 per cent for secondary levels. However, challenges persist, with retention rates¹⁵ at 85.4 per cent for primary (class I to V), 78 per cent for elementary (classes I to VIII), 63.8 per cent for secondary (classes I to X), and 45.6 per cent for higher secondary (classes I to XII). Improvements in basic facilities and infrastructure, including medical check-ups, sanitation, and information and communication technologies (ICT) availability, have been notable, reflecting a positive trend in school infrastructure development.¹⁶

¹² National Education Policy 2020 (<https://tinyurl.com/rdwuz8md>).

¹³ UDISE+ 2023-24 (<https://tinyurl.com/57c92kuv>).

¹⁴ Dropout rate is the proportion of pupils from a cohort enrolled in a given level at a given school year who are no longer enrolled at any grade in the following school year.

¹⁵ Retention rate is the percentage of a cohort of pupils (or schools) enrolled in the first grade of a given level of education in a given school year who are expected to reach the last grade of the level.

¹⁶ Ibid note 13 above.

Table XI.1 Improving School Infrastructure
(percentage of schools with basic facilities out of total)

| Year | 2019-20 | 2021-22 | 2022-23 | 2023-24 |
|--|---------|---------|---------|---------|
| Girls Toilet | 96.9 | 97.5 | 97 | 97.2 |
| Boys Toilet | 95.9 | 96.2 | 95.6 | 95.7 |
| Hand wash Facility | 90.2 | 93.6 | 94.1 | 94.7 |
| Library/Reading Room/ Reading corner | 84.1 | 87.3 | 88.3 | 89 |
| Electricity | 83.4 | 89.3 | 91.7 | 91.8 |
| Medical check-ups in school in a year | 82.3 | 54.6 | 74.3 | 75.2 |
| Computer | 38.5 | 47.5 | 47.7 | 57.2 |
| Internet | 22.3 | 33.9 | 49.7 | 53.9 |
| Source: UDISE+ 2023-24 | | | | |

11.14 The government has been striving to achieve the objectives of NEP 2020 through a range of programmes and schemes, including the Samagra Shiksha Abhiyan (along with its sub-schemes such as NISHTHA, Vidya Pravesh, District Institutes of Education and Training (DIETs), Kasturba Gandhi Balika Vidyalaya (KGBV), etc.), DIKSHA¹⁷, STARS¹⁸, PARAKH¹⁹, PM SHRI²⁰, ULLAS²¹, and PM POSHAN²², among others. The Economic Survey 2023-24 (Chapter 7, Table VII.4) highlighted the progress made under various government initiatives in school education.

11.15 The pivotal role of early years in development is well-recognised by the Indian education system, as 85 per cent of brain development occurs before the age of six years. To strengthen the Early Childhood Care and Education (ECCE) landscape, the government launched the National Curriculum for ECCE, *Aadharshila*, and the National Framework for Early Childhood Stimulation, *Navchetana*, in April 2024. *Navchetana* focuses on holistic development for children from birth to three years, offering 140 age-specific activities through a 36-month stimulation calendar. It emphasises the inclusion of differently-abled children, maternal mental health, and "*Garbh Sanskar*" (practices during pregnancy). *Aadharshila*, blending Indian and international research, promotes play-based learning with over 130 activities for children aged three to six years that support child-led and educator-led learning. It aims to lay a strong foundation for lifelong learning, aligning with the National Curriculum Framework for Foundational

¹⁷ Digital Infrastructure for Knowledge Sharing (DIKSHA).

¹⁸ Strengthening Teaching-Learning and Results for States (STARS).

¹⁹ Performance Assessment, Review, and Analysis of Knowledge for Holistic Development (PARAKH).

²⁰ Prime Minister's Schools for Rising India (PM SHRI).

²¹ Understanding of Lifelong Learning for All in Society (ULLAS).

²² Pradhan Mantri Poshan Shakti Nirman (PM POSHAN).

Stage 2022 (NCF-FS) and improving the quality of ECCE through competency-based, user-friendly lesson plans. The objective is to improve the quality of ECCE delivered at the Anganwadi centre by prioritising competency-based lesson plans and activities presented in a simple and user-friendly manner.

Building strong foundations through literacy and numeracy

11.16 School education lays the foundation of a country's education system. The NEP 2020 stipulates that foundational literacy and numeracy (FLN) is critical for education and lifelong learning success. Towards this end, the Department of School Education & Literacy launched the National Mission, “National Initiative for Proficiency in Reading with Understanding and Numeracy (NIPUN Bharat),”²³ in July 2021 to ensure that every child in the country necessarily attains FLN by the end of Grade 3, by 2026-27.²⁴ It covers three years of FLN in preschool and Grades 1, 2 and 3. Towards this, the education system is deploying innovative pedagogies and teaching methods to ensure that every child achieves FLN. **Box XI.3** discusses one such innovation, viz. peer teaching.

Box XI.3: Peer Teaching: A pathway to achieving FLN

Achieving the vision of universal FLN by Grade 3 requires not only reaching every child but also overcoming the limitations of traditional lecture-based teaching to address diverse learning needs. While teacher-led instruction is valuable, it may not fully support individualised learning, especially for children who lag behind and need extra support to catch up.

State governments have launched programmes to tackle these challenges. Mission *Ankur* in Madhya Pradesh and Gujarat focuses on engaging schools and communities for the holistic development of primary students, ensuring they achieve FLN skills.²⁵ Similarly, Bihar's Mission *Daksh* aims to provide personalised mentoring for lagging students to achieve grade-level competencies by 2025. While these initiatives address key gaps, they heavily rely on teachers, highlighting the need for scalable, adaptable teaching strategies that offer personalisation without overburdening educators.

Peer teaching is a promising solution, where students learn by teaching and supporting their peers. In classrooms with limited resources and high student-teacher ratios, it provides scalable, accessible support tailored to students' needs. As ‘Student Champions,’ older or more knowledgeable students help guide younger or struggling peers through foundational concepts.

Peer teaching creates a collaborative environment where students learn from each other, boosting confidence and comprehension alongside teacher instruction. The NEP promotes

²³ <https://nipunbharat.education.gov.in/>

²⁴ PIB of Ministry of Education dated 5 July 2021 (<https://tinyurl.com/yc5ejpu8>).

²⁵ Madhya Pradesh & Gujarat: PMU for FLN – The Education Alliance

peer tutoring to foster inclusion and personalised learning, ensuring every child can learn.²⁶ It also encourages using community volunteers and alumni as peer tutors in schools and communities. The SARTHAQ (Students' and Teachers' Holistic Advancement through Quality Education) guidelines for NEP 2020²⁷ emphasise peer tutoring to improve FLN and educational outcomes, highlighting the need for training peer tutors and integrating sessions into school schedules.

Global evidence supports peer learning, showing improved academic performance in math and reading in the US²⁸, enhanced problem-solving abilities and social skills in Australia²⁹, and better literacy outcomes in sub-Saharan Africa³⁰. In sub-Saharan Africa peer-led programmes have successfully supported student-centred learning in under-resourced classrooms. Additionally, peer teaching fosters essential life skills such as leadership, empathy, resilience, and communication, benefiting both tutors and learners.

Experiments in integrating structured peer learning in India's Education system

The **Nalli-Kali (joyful learning in Kannada) programme**, launched in 1995 in Karnataka's Mysuru district, focuses on peer and group work to create a collaborative classroom environment that supports self-paced, personalised learning. It is now the primary pedagogy for Grades 1-3 in Karnataka to develop age-appropriate skills.³¹

The **Prerana model of education**, implemented in Andhra Pradesh, Karnataka, Maharashtra, Tamil Nadu, and Telangana³² through the Sikshana Foundation, also emphasises peer learning and group work.³³ Small groups of four to five students collaborate on classroom activities, teaching and learning from each other.

Involve Learning Solutions Foundation³⁴ is working with educators in six districts across Uttar Pradesh, Bihar, and Karnataka states to integrate structured peer teaching into government schools, directly aligning with NIPUN Bharat's FLN goals. The model pairs among students identified as 'Student Champions' with 'Learners.' Each Student Champion, with better subject mastery, is trained further to support a group of four learners, their peers

26 The NEP in para 2.7 provides that, "Due to the scale of the current learning crisis, all viable methods will be explored to support teachers in the mission of attaining universal foundational literacy and numeracy. Studies around the world show one-on-one peer tutoring to be extremely effective for learning not just for the learner, but also for the tutor. Thus, peer tutoring can be taken up as a voluntary and joyful activity for fellow students under the supervision of trained teachers and by taking due care of safety aspects."; <https://tinyurl.com/mxp5wpfz>

27 <https://tinyurl.com/yc3y7jz2>

28 Fuchs, L. S., Fuchs, D., Yazdian, L., & Powell, S. R. (2002). Title: Enhancing First-Grade Children's Mathematical Development with Peer-Assisted Learning Strategies. Published in: School Psychology Review, Vol. 31, No. 4, pp. 569–583. DOI: 10.1080/02796015.2002.12086175.

29 Fawcett, L. M., & Garton, A. F. (2005). The Effect of Peer Collaboration on Children's Problem-Solving Ability. Published in: British Journal of Educational Psychology, Vol. 75, No. 2, pp. 157–169. DOI: 10.1348/000709904X23411.

30 Fry, K., Rogan, R., & Gruber, S. (2019). Improving Literacy Outcomes in Low-Resource Contexts Through Peer-Led Learning Approaches. Published by: Educational Development Journal, Vol. 35, No. 3, pp. 289–305.

31 <https://tinyurl.com/yuaff8fc>

32 Shikshana Foundation Annual report 2022-23 (<https://tinyurl.com/cy5kr7fc>).

33 <https://www.sikshana.org/Program/Prerana/>

34 <https://involveedu.com/>

who struggle to understand concepts, thereby facilitating their progress through 40-minute sessions three to four times per week.

Early evaluations in Karnataka's Anekal block show increased learning outcomes in numeracy for students by 15 per cent compared to students who did not participate in the programme.³⁵ Similarly, in Bhagalpur, structured peer interactions have helped bridge reading and numeracy gaps among children who could not meet age-appropriate learning milestones. Anecdotal evidence also indicates positive shifts in student engagement and academic outcomes.

To support NIPUN Bharat's mission, peer teaching can be integrated into India's FLN strategy. This involves incorporating peer teaching into teacher training, scaling successful models, assessing its impact on learning outcomes, and using data to refine the approach based on feedback from teachers, students, and administrators. This will help transform classrooms into dynamic spaces where every child receives the support needed to thrive.

Empowering minds: Unlocking potential with social and emotional learning

11.17 The success of school education hinges not just on the student's academic achievements but also on enhancing their social and emotional learning (SEL). A good education enhances a child's mental and physical health, academic performance, and life skills. In this context, ECCE under NEP 2020 aims to achieve foundational literacy and socio-emotional development. The NEP 2020 states that

*'The overall aim of ECCE will be to attain optimal outcomes in the domains of physical and motor development, cognitive development, **socio-emotional-ethical development**, cultural/artistic development, and the development of communication and early language, literacy, and numeracy.'*

11.18 **Box XI.4** discusses the importance of SEL in education, providing examples of how the pedagogy can be developed to incorporate socio-emotional-ethical development in the school curriculum.

Box XI.4: Empowering minds and hearts through SEL techniques

SEL has emerged as a critical pillar within holistic education frameworks that contributes significantly to SDGs, particularly SDG 3 (Good Health & Well-being) & SDG 4 (Quality Education). UNESCO³⁶ defines SEL as a process of *acquiring the competencies to recognise*

35 Pratibha Narayann, P. N., Anna Daniel, A. D. and Dhanashree Balaram, D. B. (2024), Promoting Individualized Learning: The Effectiveness of Peer Teaching Pedagogy. Published by: International Conference on Technology for Education (T4E), Zenodo. doi: 10.5281/zenodo.14004916.

36 UNESCO (2024) Strengthening social and emotional learning in hybrid modes of education: building support for students, teachers, schools and families: a UNESCO-IBE discussion paper; <https://tinyurl.com/nnbafeat>

and manage emotions, develop care and concern for others, establish positive relationships, make responsible decisions, and handle challenging situations effectively. SEL significantly contributes to individual well-being, social participation, and broader individual development. Incorporating SEL from an early age equips children with essential skills that foster resilience and academic success. It also plays a crucial role in preventing future mental health issues and setting the foundation for a healthier society.

CASEL (Collaborative for Academic, Social, and Emotional Learning)³⁷ outlines five core components of SEL, which serve as foundational pillars in fostering holistic development. These components—Self-Awareness, Self-Management, Social Awareness, Relationship Skills, and Responsible Decision-Making—equip students with the skills necessary to navigate life challenges, enhance mental well-being, and improve academic performance. Some successful models effectively implementing SEL programmes worldwide include the Social, Emotional, and Ethical Learning (SEE Learning) by Emory University,³⁸ and the RULER programme³⁹ by Yale Center for Emotional Intelligence.

According to some estimates, for every dollar invested in SEL initiatives, the estimated long-term economic return is USD 11, with outcomes around mental health, education, and employability.⁴⁰ Further, a 2020 UNESCO study⁴¹, highlights that such investments not only yield immediate educational and behavioural benefits but also result in long-term economic gains, including a 30 per cent increase in per capita income. The literature indicates that integrating SEL components into classroom practices increases student commitment⁴², participation,⁴³ cognitive problem-solving abilities,⁴⁴ attendance rates, and overall academic success.⁴⁵ Other than enhancing academic performance, these interventions also promote positive social behaviour and interpersonal relationships, mitigate behavioural issues and

37 CASEL's SEL Framework (2020) What are the Core Competence Areas and Where are they Promoted? <https://casel.org/casel-sel-framework-11-2020/?view=true>

38 Emory University (2022) SEE Learning: Social, Emotional and Ethical Learning Program. (<https://seelarning.emory.edu/en/about>).

39 Yale Center for Emotional Intelligence (2023) RULER Program Overview (<https://www.ycei.org/ruler>).

40 Belfield, C. et.al. (2015). The economic value of social and emotional learning. *Journal of Benefit-Cost Analysis* (<https://tinyurl.com/36w8mft7>).

41 UNESCO (2020) Rethinking learning: A Review of Social and Emotional Learning for Education Systems. (<https://unesdoc.unesco.org/ark:/48223/pf0000373890>).

42 Hawkins, J. D., Smith, B. H., & Catalano, R. F. (2004). Social Development and Social and Emotional Learning. In J. E. Zins, R. P. Weissberg, M. C. Wang, & H. J. Walberg (Eds.), *Building academic success on social and emotional learning: What does the research say?* (pp. 135–150). Teachers College Press.

43 Murdock, T. B. (1999). The social context of risk: Status and motivational predictors of alienation in middle school. *Journal of Educational Psychology*, (<https://doi.org/10.1037/0022-0663.91.1.62>).

44 Battistich, V., Solomon, D., Watson, M., Solomon, J., & Schaps, E. (1989). Effects of an elementary school programme to enhance prosocial behavior on children's cognitive-social problem-solving skills and strategies. *Journal of Applied Developmental Psychology* ([https://doi.org/10.1016/0193-3973\(89\)90002-6](https://doi.org/10.1016/0193-3973(89)90002-6)).

45 Felner, R.D., Primavera, J., & Cauce, A.M. (1995). The impact of a comprehensive school-based intervention on the academic achievement of students: A longitudinal study. *Journal of Educational Psychology*, 87(1), pp. 1-14.; DePaoli, J.L., Elias, M.J., & Weissberg, R.P., 2017. Social and emotional learning: A framework for promoting academic success. *Educational Psychologist*, 52(1), pp. 1-11

psychological distress, and equip young people for success in employment, family life, and broader societal engagement.⁴⁶

Developments in India

The NEP 2020 emphasises the development of social, ethical, and emotional competencies as essential to holistic child development. The National Curriculum Framework 2023⁴⁷ also advocates for SEL-based pedagogies to improve educational outcomes and foster children's well-being. The NIPUN Bharat mission guidelines 2021⁴⁸ emphasise the importance of SEL as a core component of the holistic development objectives for young children in India's foundational education system. It promotes activities that foster self-awareness, social awareness, and responsible decision-making, advocating for inclusive, child-centred practices to create safe, supportive learning environments that nurture both cognitive and emotional growth.

SEL is increasingly being recognised as integral to India's educational and developmental priorities. Initiatives like SEE Learning India⁴⁹ and the Life Skills Collaborative⁵⁰ are paving the way for SEL in structured approaches. They are being adopted in the states of Maharashtra, Mizoram, Uttarakhand, and Rajasthan. SEL interventions are also being carried out in programmes implemented by the governments of Tripura and Uttarakhand etc. In several programmes, state governments have collaborated with non-profit organisations like Dream a Dream Foundation⁵¹ and Labhya⁵². Under these models, classrooms are envisaged as emotionally safe environments wherein children experience interactive group sessions, mindful practices, and spaces for reflection sharing to cope with various challenges and improve their well-being and learning outcomes. Through organisations such as the Aparajitha Foundation, students are taught important life skills, i.e., social and interpersonal skills, that can help them make informed decisions, communicate effectively, and develop coping and self-management skills (See **Box XI.5**).

The evidence supporting the benefits of SEL is robust. The imperative of integrating SEL with educational frameworks is underscored by its profound impact on mental health, academic success, and long-term life outcomes. This is particularly crucial in India, which is characterised by a youthful population poised to enter the workforce. The implementation of SEL, therefore, serves as a strategic investment in the nation's future.

46 Elias, M.J., 2014. Social-emotional learning and its impact on societal engagement. *Journal of Educational Psychology*, 106(3), pp. 1-10; Jones, S.M. and Kahn, J., 2017. The evidence base for how learning happens: A consensus on social, emotional, and academic development. *American Educator*, Winter 2017-2018 (<https://files.eric.ed.gov/fulltext/EJ1164389.pdf>).

47 Ministry of Education, Government of India (2023) National Curriculum Framework 2023. (<https://tinyurl.com/47z2b2m3>).

48 Ministry of Education, Government of India (2021) NIPUN Bharat Mission: National Initiative for Proficiency in Reading with Understanding and Numeracy- Guidelines 2021. (<https://tinyurl.com/mvxnc7k5>)

49 SEE Learning India (2024) SEE Learning India About <https://www.seelearningindia.com/Home/about>

50 Life Skills Collaborative (2024). Life Skills Collaborative Overview <https://lifeskillscollaborative.in/>

51 Dream a Dream Foundation (2024). Dream a Dream Foundation Overview <https://dreamadream.org/>

52 Labhya Foundation (2024) Labhya Foundation Overview. <https://labhya.org>; <https://www.labhya.org/what-we-do/model>

11.19 NEP 2020 emphasises holistic schooling by integrating vocational and digital education with a supporting, well-equipped school infrastructure to enable the smooth transition of a GER of 100 per cent at the secondary level by 2030.

11.20 The importance of skill education in schools has grown significantly with the advent of Industry 4.0, a highly dynamic and skill-intensive era defined by automation, artificial intelligence (AI), internet of things (IoT), big data, and robotics. This industrial revolution has reshaped production and distribution across sectors like manufacturing and agriculture, significantly increasing the demand for a skilled workforce. Alongside technical proficiency, soft skills such as adaptability, problem-solving, and collaboration have become critical for navigating this evolving landscape. **Box XI.5** discusses the *Tim Tim Tare* initiative for imparting life skills.

Box XI.5: Imparting life skills: The Tim Tim Tare initiative

Tim Tim Tare (TTT)⁵³ is a pioneering initiative that aims to impart essential life skills to adolescent students across India. Unlike vocational training, which focuses on technical skills, TTT places emphasis on soft skills—key components of personal growth, effective communication, emotional intelligence, and social well-being. Through TTT, students are empowered to face life's challenges confidently and clearly.

This initiative equips students with essential life skills to navigate the complexities of modern life. Built on the World Health Organization's (WHO) Life Skills Framework, TTT addresses a wide range of 16 core life skills (such as empathy, critical thinking, etiquette, time management, etc) and over 100 related topics designed to meet the evolving needs of today's youth. These skills enable students to make informed, thoughtful decisions personally and professionally and equip them with the skills and attitudes necessary to thrive in their studies and beyond.

TTT's approach stands apart from traditional education due to its student-focused methodology, delivering content in an engaging, immersive manner and creating transformative experiences enabling students to absorb, internalise, and retain key concepts effectively. Each topic is designed with activity-based learning, such as experience sharing, role plays, sing-along songs and interactive games. This approach ensures that every lesson is lively, impactful, and engaging, allowing students to experience the learning process actively.

Started in 2009 in Tamil Nadu, TTT has now expanded to other states⁵⁴ in a phased manner, reaching millions of students across India. In addition to empowering students, TTT has prioritised training thousands of teachers across these states, ensuring that the programme's benefits are deeply rooted and widely disseminated.

A critical focus of TTT has been its commitment to understanding and addressing the needs of its stakeholders. Feedback from students, teachers, principals, and parents has been

⁵³ <https://tinyurl.com/5yxkwerv>

⁵⁴ Such as Gujarat, Madhya Pradesh, Rajasthan, Uttar Pradesh, etc.

systematically collected over the years. This feedback consistently highlights the programme's positive impact on individuals and communities and is a testament to TTT's transformative power and ability to create lasting change.

The TTT programme currently reaches more than 10 crore students, with a significant presence in central India and Gujarat. It is implemented in various types of schools, including government schools, *Navodaya Vidyalayas*, *Kendriya Vidyalayas*, *Kasturba Vidyalayas*, juvenile homes etc. It is also accessible through various platforms such as PM eVidya channels, state government relay centres, YouTube, and WhatsApp groups.

The State Council of Educational Research and Training (SCERT) officially approved the TTT programme, which adds credibility and ensures alignment with national educational standards.

Bridging the gap: Digital technology in education and the essentiality of digital literacy

11.21 Digital literacy ensures that students remain competitive by mastering skills like analysing, synthesising, and communicating digital information. The World Economic Forum (WEF) identifies ICT skills as foundational for the 21st century.⁵⁵ UNESCO defines digital literacy as– ‘*Includes competencies that are variously referred to as computer literacy, ICT literacy, information literacy and media literacy*’.⁵⁶ Digital literacy ranges from basic hardware and software use to advanced programming and network management.

11.22 Data from the Comprehensive Annual Modular Survey 2022-23 reveals a rural-urban digital divide in India with lower internet-searching capabilities in rural areas, especially among females.⁵⁷ Sixty-three per cent of males and 55 per cent of females in rural areas can search the internet for information compared to 74 per cent males and 69 per cent of females in urban areas. The results highlight the need for focused efforts to close the digital gap.

11.23 The NEP 2020 emphasises technology's role in improving education, removing barriers, and ensuring inclusivity for *Divyang* students. Schemes like DIKSHA,⁵⁸ Study Webs of Active Learning for Young Aspiring Minds (SWAYAM)⁵⁹, e-VIDYA⁶⁰, Pradhan Mantri Gramin Digital Saksharta Abhiyan (PMGDISHA)⁶¹ and e-content for *Divyang* are in place to achieve the objective of inclusive digital education. The government

55 New Vision for Education. World Economic Forum (WEF) <https://tinyurl.com/39m36x5h>

56 A Global Framework of Reference on Digital Literacy Skills. UNESCO. <https://tinyurl.com/3e832sct>

57 Comprehensive Annual Modular Survey, 2022-23, MoSPI <https://tinyurl.com/yxrtez7e>

58 <https://diksha.gov.in/data/>

59 <https://swayam.gov.in/explorer?category=SCHOOL>

60 <https://pmevidya.education.gov.in/>

61 PIB release of Ministry of Electronics and IT dated 26 July 2024 (<https://tinyurl.com/4w2bzwsa>).

launched PM e-Vidya DTH Channel for Indian Sign Language, a significant step towards an inclusive and accessible education system for hearing-impaired students in India.⁶² The ICT and Digital Initiatives component of *Samagra Shiksha* provides financial assistance to establish ICT labs and smart classrooms and covers government and aided schools having classes VI to XII across the country.

11.24 The rapid pace of technological change requires educators to stay up-to-date on new digital trends and teaching methods. In an effort to leverage technology towards enhancing the capabilities of educators and preparing them for the demands of the 21st century, the government has launched TeacherApp⁶³, a cutting-edge digital platform. The application offers over 260 hours of resources, including courses, videos, podcasts, and live expert sessions. It also features Teaching Kits with 900 hours of content, providing teachers with essential tools such as lesson plans, worksheets, and project-based learning activities. The application empowers teachers with essential skills and continuous capacity-building through innovative content and community-building features. It is accessible across multiple devices and offers practical strategies for improving pedagogical practices and student engagement.

11.25 Investments in skills, research, innovation ecosystems, government-academic partnerships, and faculty development are pivotal for efficiently delivering education services and improving learning outcomes. Technology acts as a powerful enabler, driving scalability, equity, accessibility, and sustainable learning opportunities across diverse groups, including schools, polytechnics, higher education institutions, out-of-job youth, and working professionals. **Box XI.6** discusses this further.

Box XI.6: Leveraging technology for efficient and effective education delivery.

The integration of technology, including AI, has become essential in addressing the rapidly evolving dynamics of the education system. AI-powered learning systems enable personalised learning experiences tailored to individual students' pace and comprehension, contrasting with traditional approaches that rely on a standardised curriculum and uniform pace for all learners. Additionally, AI facilitates adaptive assessments, aligning with students' unique needs and fostering growth at their own pace. The incorporation of technology also presents cost-effective solutions, making quality education more accessible and inclusive for a broader population.

To improve education systems, technology integration may be focused on three key areas: using AI for teacher development and student tutoring, integrating industry-relevant skills and certifications, and creating personalised learning software. These are discussed below.

62 PIB release of Ministry of Education dated 6 December 2024 (<https://tinyurl.com/59ka4zpb>).

63 PIB release of Ministry of Education dated 25 November 2024 (<https://tinyurl.com/2znk6u>).

Leveraging AI for teachers' professional development and providing AI-driven personal tutors for students

AI can automate tasks like lesson planning, assessment development, and fostering critical thinking, freeing teachers to focus on instruction and mentoring. AI tutors can assist across subjects, offering students the necessary support and allowing them to learn at their own pace and requirements. AI personal tutors may enhance learning with resource guidance, career counselling, and problem-solving strategies. Additionally, AI-driven analytics help teachers tailor their methods to students' needs, and AI-powered platforms can recommend personalised professional development to support teachers' growth. AI can also help both teachers and students in conducting automated assessments and helping in personalised learning of the student.

The government is envisioning and developing e-learning through digital pedagogy as a long-term strategy for the education sector. Various initiatives, such as PM eVidya, DIKSHA, and SWAYAM, are part of this effort. The government has also announced the establishment of a platform under DIKSHA to incorporate advanced technologies like AI and machine learning (ML).⁶⁴

Integrating industry-relevant skills and certifications into education

Incorporating industry-relevant skills and certifications into the educational curriculum will improve the workforce's employability. This may be achieved through the provision of certifications into education through partnerships with industry and certification bodies, practical training modules and AI-driven learning experiences.

Realising the importance of the industry-academia linkage, the Ministry of Education introduced the Apprenticeship Embedded Degree/Diploma Programme in 2020-21 to improve students' employability. Additionally, the National Credit Framework (NCrF) allows for the creditisation for apprenticeship learning hours subject to assessment/ evaluation of the same. NCrF also recommended the expansion of the Academic Bank of Credit (ABC) to include credits earned through apprenticeships, internships, project work, etc.⁶⁵ The National Apprenticeship Promotion Scheme provides financial support to industrial establishments undertaking apprenticeship programmes under the Apprentices Act, 1961.

Building personalised learning software layers & developing AI labs for research, learning and skilling

AI personal tutors in such labs can enormously benefit students across all disciplines and can be a huge aid for them. Virtual Science and AI labs offer unique, beyond-the-classroom experiences. These innovations enhance learning, strengthen foundational skills, and offer cost-effective solutions.

⁶⁴ <https://pmevidya.education.gov.in/diksha.html>

⁶⁵ <https://tinyurl.com/36dy8t8w>

Taking a step in this direction, Atal Innovation Mission (AIM) has introduced Frontier Technology Labs (FTLs) on the foundation of Atal Tinkering Labs (ATLs). FTL will provide students access to advanced technologies, including AI, AR/VR, blockchain, cybersecurity, robotics, 3D printing, and IoT. Building on the foundation of ATLs, which have been established in 10,000 schools across 722 districts, FTLs are designed to equip students with the skills required for the evolving technological landscape.⁶⁶

In conclusion, it is crucial to leverage technology to transform the educational landscape in India. By doing so, a more efficient, effective, and future-ready education system can be created.

11.26 While online learning and digital technology have expanded access to education, the traditional method of learning through physical methods in the classroom still holds merit. The Tamil Nadu government launched a cost-effective remedial programme to bring education to students' doorstep to bridge the learning gaps created by the covid 19 pandemic and ensure equity leading to improvements in learning (**Box XI.7**).

Box XI.7: Tamil Nadu's Illam Thedi Kalvi (Education at Doorstep): Innovation in public education

The Illam Thedi Kalvi Scheme was launched by the Tamil Nadu government to bridge the education gap brought about by the Covid-19 pandemic and the digital divide. The initiative focuses on education through physical methods, which is the primary goal of the *Illam Thedi Kalvi*.⁶⁷

The scheme was designed during Covid-19 to reduce students' reliance on internet resources for their learning, with volunteers assisting them. These volunteers conducted door-to-door efforts to educate the students. The initiative is helping close the educational gap by providing every student in Tamil Nadu the opportunity to receive education through this scheme.

The State Planning Commission conducted a rapid assessment of the programme's impact through a comprehensive survey in September 2022. This assessment involved the active participation of volunteers, teachers, headmasters, and parents from 362 schools across six districts: Ariyalur, Cuddalore, Nagapattinam, Salem, Thiruvarur, and Villupuram.⁶⁸ Parents reported a noticeable improvement in their children's learning experiences, noting that education has become a more enjoyable activity for them. At the same time, the teachers confirmed that the play-based approach has reignited children's interest in learning. As a result, students were interacting more freely and actively participating in regular classes. Students showed a greater interest in mathematics and made significant progress in language skills in their standard classrooms.

66 PIB release of NITI Aayog dated 6 March 2024 (<https://tinyurl.com/3x4tw78x>).

67 <https://illamthedikalvi.tnschools.gov.in/Welcome>

68 <https://tinyurl.com/29f74ccs>.







The scheme continues, post the pandemic, to provide necessary support to the students through remedial lessons. The scheme's volunteers work year-round to integrate out-of-school children into mainstream education, with particular attention to girls, Children with special needs (CwSN), transgender children, and those from migrant worker families. The volunteers can apply online to be a part of the programme and are also given monthly pay. The programme is managed with effective use of technology. To monitor the learning levels of primary school children, volunteers have been given achievement charts to record their progress.

Children with Special Needs (CwSN): Developing a culture of inclusivity

11.27 The National Education Policy (NEP) 2020 envisions a future where every child, including Children with Special Needs (CwSN), feels valued, supported, and included. Recognising their unique potential, the NEP emphasises creating inclusive classrooms where diversity is celebrated. It calls for barrier-free infrastructure, compassionate teacher training, and the integration of assistive technologies to ensure that CwSN can learn alongside their peers. The Samagra Shiksha scheme is in alignment with NEP 2020 and Rights of Persons with Disabilities (RPWD) Act 2016. Under Samagra Shiksha, dedicated funds have been allocated to support CwSN through aids and appliances, assistive devices, allowances, Braille materials, and therapeutic interventions including infrastructure strengthening. Infrastructure improvements include ramps in 11.35 lakh schools, handrails in 7.7 lakh, and accessible toilets in 5.1 lakh schools. The Accessibility Code for Educational Institutions (2024) examines the physical barriers and information & communication barriers of access to school facilities for CwSN.

11.28 Efforts have been made to boost CwSN enrolment at all levels, with notable increases observed in secondary and higher secondary enrolments. Although the COVID-19 pandemic caused a temporary decline, recovery efforts are ongoing to reintegrate out-of-school CwSN into formal education. According to the latest UDISE+ report (2023–24), 16.8 lakh CwSN are enrolled at the elementary level, 2.87 lakh at the secondary level, and 1.18 lakh are enrolled at the higher secondary level.⁶⁹ The various initiatives for CwSN are elaborated as below.

Chart XI.4. Initiatives for CwSN

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|---|--|---|
|  <p>PMeVidya Series NCERT's 'Teaching learning interventions for inclusive classrooms' promotes inclusive pedagogy with ISL interpreters for accessibility.</p> |  <p>Inclusive Cell in CBSE Schools To facilitate equitable and barrier free environment and full participation</p> |  <p>Disability Screening-PRASHAST Covers 21 disabilities, available in 23 languages through a mobile app. Over 10 lakh users and 61.57 lakh screenings completed since 2022.</p> |
|  <p>Accessible content 4250+ ISL Videos, 10,500-Word ISL Dictionary on DIKSHA, 24/7 educational channel on PM eVidya, and DTH Channels. 377 NCERT Talking Bookson e-Pathshala and third-party TTS apps, and 4048 Audio Chapters on DIKSHA</p> |  <p>Inclusive Education National Guidelines and Implementation Framework on Equitable and Inclusive Education (NGIFEIE) (2021–2030) has been developed to provide a roadmap for creating inclusive schools, ensuring no child is left behind.</p> |  <p>Capacity Building and Training 5-day capacity-building program for 60 lakh teachers under NISHTHA (2023-24). Additional online training for 15,964 teachers on digital resources and assistive technologies. Module on Inclusive Education for in-service training of general teachers under Samagra Shiksha.</p> |

Source: Department of School Education and Literacy, MoE

Higher education

11.29 India's higher education system ranks among the largest globally, with 4.33 crore students enrolled in 2021-22, a 26.5 per cent increase from 3.42 crore in 2014-15⁷⁰. The GER for the 18–23 age group also increased from 23.7 per cent to 28.4 per cent during this same period (2014-15 to 2021-22).⁷¹ To achieve the government's goal of increasing GER to 50 per cent by 2035 in higher education, there is a need to double the educational network and infrastructure.

11.30 Over the years, there has been a significant transformation in higher education, ecosystem. The number of Indian Institutes of Technology increased from 16 in 2014 to 23 in 2023, while Indian Institutes of Management grew from 13 in 2014 to 20 in 2023.⁷² Similarly, medical colleges experienced remarkable growth, increasing from 387 in 2013-14 to 780 in 2024-25.⁷³ Universities have also seen substantial expansion, rising from 723 in 2014 to 1,213 in 2024, registering a growth of 59.6 per cent.⁷⁴ Total Higher Education Institutions (HEIs) increased by 13.8 per cent from 51,534 in 2014-15 to 58,643 in 2022-23.⁷⁵

70 All India Survey on Higher Education (AISHE) 2021-22: <https://tinyurl.com/ykn75ump>

71 Ibid note 70

72 PIB release dated 22 April 2023 <https://tinyurl.com/58a9ntna>

73 Ministry of Health and Family Welfare (MoHFW)

74 PIB release of Ministry of Education 17 December 2024 <https://tinyurl.com/47e2e4sn>

75 Ibid note 74 above

11.31 The NEP 2020 visualises a paradigm shift in the Indian higher education system through a restructured system. It highlights key aspects of the system like Multi-disciplinary and Holistic Education; Research, Innovation, and Entrepreneurship; Governance and Capacity Building of Teachers; Quality, Ranking, and Accreditation; Digital Empowerment and Online Education; Equitable and Inclusive Education; Promotion of Indian Languages and Indian Knowledge Systems; Skill Development and Employability and Internationalisation of Higher Education.

11.32 Importantly, the NEP envisages autonomy for institutions to innovate on these foundational aspects. It recognises that *‘regulation of higher education has been too heavy-handed for decades...’* and that the *‘regulatory system is in need of a complete overhaul in order to re-energise the higher education sector and enable it to thrive.’* Towards this end, the NEP suggests several institutional reforms. It asks that regulation must be ‘light but tight’ aimed at financial probity and good governance. Regulation must also ensure transparency of key aspects in the functioning of a university such as finances, procedures, infrastructure, and faculty. Hence it calls for accreditation of institutions based on basic norms, public self-disclosure, good governance and outcomes.

11.33 By 2040, all HEIs are to become multidisciplinary institutions. The measures to achieve this aim include greater opportunities for outstanding public education; scholarships by private/philanthropic universities for disadvantaged and underprivileged students; online education and Open Distance Learning (ODL); and all infrastructure and learning materials accessible and available to learners with disabilities. The policy calls for making ‘India a global knowledge superpower.’

11.34 Effective implementation of NEP 2020 requires collaboration across the centre, states, UTs, HEIs, and regulatory bodies. The University Grants Commission (UGC) has introduced several initiatives like Guidelines for Multiple Entry and Exit in Academic Programmes, Common Universities Entrance Test, Regulations on Academic collaboration with foreign HEIs for Joint and Dual Degree Programmes, Guidelines for Professor of Practice, Guidelines on Pursuing two Academic Programmes simultaneously, Guidelines for Internship/Apprenticeship embedded Degree programme, Guidelines for Admission and Supernumerary seats of International Students in Undergraduate and Postgraduate Programmes in HEIs in India, Guidelines for the Establishment of Research and Development Cells in HEIs, Guidelines on Fostering Social Responsibility and Community Engagement in HEIs in India 2.0 etc.

11.35 India’s higher education sector exhibits considerable multiplicity where several institutions have achieved excellence, and many others are aspiring to reach that

standard. The challenges faced by the institutions vary, requiring tailored solutions. The regulatory framework (UGC/AICTE) currently includes over 50 regulations addressing different aspects of education and research. However, this approach does not fully align with the ‘light but tight’ regulatory model envisioned by the NEP.⁷⁶ For example, the UGC specifies minimum credits for various course categories (e.g., skill enhancement’, ‘value-added’) and prescribes the sequencing of courses over four years, aspects that could be entrusted to the institutions themselves.

11.36 Standardisation of key parameters and consistency of programmes across institutions is perhaps the objective of these regulations. Achieving compliance with UGC norms may be an excellent way for institutions to achieve credibility in the eyes of prospective students, faculty, and employees. On the other hand, such compliance is not essential for quality institutions. These have already achieved strong reputations in teaching, research, and placement of their students. These institutions have innovated on some dimensions of their functioning, and they should be encouraged to follow that path since that is the only way to compete with global institutions.

11.37 It should be explicitly stated that compliance with regulations beyond the minimum accreditation requirements (proposed in NEP) is voluntary. Such compliance will be desired by institutions wishing to signal their capability and credibility.

11.38 Institutions that desire to stand by their own hard-won reputations should be free to carve out their own path. There is no greater accountability than that demanded by the market through prospective faculty, students, their parents, and collaborating academic and non-academic institutions. In the spirit of good governance and transparency, these institutions should be required to publicise prominently that they are not complaint-certified by the regulator. It is important to embrace diversity and to trust the genius of faculty and students to come up with frameworks that are novel, creative, and impactful on society.

11.39 Further, there is an increasing focus on strengthening the ecosystem for professional/technical streams of education such as medicine. Emphasis on regulatory reform and enhancement of standards is being made. **Box XI.8** discusses the medical education landscape’s challenges and measures taken to address them.

⁷⁶ <https://tinyurl.com/bpn69rvx>

Box XI.8: Challenges to medical education and action

The medical education ecosystem in the country has made significant strides, with notable achievements that lay a strong foundation for future growth. However, there are exciting opportunities to further enhance the system and ensure it fully aligns with broader policy objectives. While the regulatory framework has made progress, there is an opportunity to evolve and keep pace with the dynamic needs of the healthcare sector.

The number of candidates aspiring to study MBBS has increased consistently over the years, from around 16 lakh in 2019 to around 24 lakh in 2024.⁷⁷ The National Eligibility cum Entrance Test – Under Graduate (NEET-UG) is the single mode of entry through which students enter into medical education, MBBS courses in India and abroad. There has been a sustained increase in the number of opportunities available for medical education in the previous ten years. Since FY19, the number of medical colleges grew from 499 to 648 in FY23 to 780 in FY25, during which time the MBBS seats increased from 70,012 to 96,077 in FY23 to 1,18,137 in FY25 and post graduate seats increased from 39,583 to 64,059 in FY23⁷⁸ to 73,157 in FY25.

There are 13.86 lakh practitioners of modern medicine registered as of July, 2024,⁷⁹ which converts into current availability for the whole population of the country in the ratio of 1:1263.⁸⁰ The WHO standard norm of 1:1000 seems to be attainable by 2030 with a conservative 50,000 doctors being licensed every year till 2030. Thus, numerical shortage of physician availability in India is perhaps no longer a primary concern. However, there are some larger concerns warranting attention. These are discussed below.

The issue of affordability

Unlike other professional education streams, fees for medical education is highly regulated. In case of government medical colleges, the respective state governments are responsible for fixation of fees. In the case of private unaided medical colleges, the fee structure is decided by a committee set up by the respective state government under the chairmanship of a retired High Court Judge in pursuance of the directions of the Hon'ble Supreme Court of India.⁸¹ The National Medical Commission (NMC) has issued guidelines for determination of fees and all other charges in respect of 50 per cent of seats in private medical institutions and deemed to be universities. Despite such measures, fees remain high – at ₹60 lakh to one crore or more⁸² in the private sector which holds 48 per cent of MBBS seats. This highlights the opportunity to make medical education more accessible and affordable for all, particularly

77 National Testing Agency, Press release 26 July 2024 (<https://tinyurl.com/3nxf8uru>).

78 Lok Sabha Reply to Starred Question No. 7 on 2 February 2024. <https://tinyurl.com/34ezez47>

79 Lok Sabha Reply to Starred Question No. 7 on 2 August 2024 <https://tinyurl.com/cbtfvemj>

80 Physician availability is calculated at 80 per cent of registered doctors, as per norms-and population of 140.07 crore for 2024, as projected in the Report of the Technical Group for Population Projections, Ministry of Health, and Family Welfare available at <https://tinyurl.com/3bn4mrym>

81 Lok Sabha Unstarred Question No. 391 on 21 July, 2023 <https://tinyurl.com/cks2yr5z>

82 157th Report on Quality of Medical Education in India, Department related Standing Committee on health and Family Welfare February, 2024. <https://tinyurl.com/472h232h>

for those from less privileged backgrounds. By reducing the cost of medical education, we can contribute to lowering healthcare service costs. If universal coverage is the goal, prioritising cost and equity in medical education will be key to achieving it.

The consequence is that every year thousands of students go abroad to around 50 countries especially those with lower fees such as China, Russia, Ukraine, Philippines, Bangladesh.⁸³ Medical education abroad entails hardships of studying abroad and productive years of youth invested in repeated attempts at exams - the NEET-UG before taking admission, the Foreign Medical Graduates (FMG) Exam⁸⁴ on completing the course and then complete compulsory internships of 12 months in India.

FMGs in China (during COVID lockdowns) and Ukraine (as the conflict escalated), had to return to India dropping their education and faced uncertain prospect. The subsequent regulatory issues in addressing the difficulties faced by FMGs and the need to maintain standards in allowing them to practice in India has been a challenge and has required interventions of the courts in more than one occasion. The very low pass percentage of FMGs in the qualifying exam (16.65 per cent in 2023⁸⁵) indicates sub-par quality of medical education abroad including lack of clinical training. As policy intervention to dissuade medical education abroad is crafted, keeping costs in India within reasonable limits is essential.

Geographical reach

The availability of opportunities for medical education appears to be geographically skewed, apparent from the fact that 51 per cent of undergraduate seats and 49 per cent of post-graduate seats are in the southern states.⁸⁶ Further, the availability is skewed in favour of urban areas with the urban to rural doctor density ratio being 3.8:1.⁸⁷ These patterns tend to follow the pattern in availability of healthcare services in general. It has been estimated that 75 per cent of dispensaries and 60 per cent of hospitals are in urban areas, where 80 per cent of doctors serve.⁸⁸ The imbalance in distribution can be attributed to the state/region level of economic development, demand for and expansion of healthcare services, and increasing market for medical value travel.

The growth in the number of medical practitioners offers a prospect to improve the distribution of healthcare professionals across regions. While many graduates and specialists prefer to practice in their home states or in major cities due to better amenities and professional opportunities, this presents a chance to enhance healthcare access in rural and underserved

83 Country-wise Performance in FMGE 2023 <https://tinyurl.com/yc2k6zuz>

84 The FMGE is conducted twice a year and the average pass percentage in 2023 was 16.65 per cent with 61,616 candidates appearing, showing that the quality of education abroad is not on par with standards in India and FMG then require multiple attempts to qualify. Students may require anywhere between a minimum of 8-10 years to become eligible to obtain the license to practice.

85 Ibid 83 above

86 As per numbers available for Andhra Pradesh, Karnataka, Kerala, Puducherry, Tamil Nadu, Telangana and Maharashtra in Lok Sabha Reply to Starred Question No. 7 on 2 February 2024. <https://tinyurl.com/34ezez47>

87 FAQs on National medical Commission (Bill) 2019 <https://tinyurl.com/b4y43cv3>

88 Mishra, S., Mohanty, S.K. Out-of-pocket expenditure and distress financing on institutional delivery in India. *Int J Equity Health* 18, 99 (2019). <https://doi.org/10.1186/s12939-019-1001-7>

areas. By offering incentives, improving infrastructure, and fostering professional growth in these regions, we can attract and retain healthcare professionals, ensuring a more balanced and equitable distribution of doctors to strengthen public healthcare services nationwide.

Specialisations

There is also a skewed distribution of seats in favour of specialisations like radiology, dermatology, gynaecology, cardiology while specialities like psychiatry, geriatrics etc., are neglected. The current shortage of specialists across specialities will further aggravate in streams that are currently not preferred but will be required in the future. Demand for post graduate education is not restricted by the need for clinical practitioners, these doctors form the resource pool for research and development in advanced fields of medicine, pharmaceuticals, biotechnology etc. They are also crucial as faculty and trainers of the next generation. While we focus on increasing facilities for specialisations it is also necessary to maintain distribution across geographies and streams.⁸⁹

Remuneration

Market estimates indicate that remuneration of fresh graduates is around ₹ 5 lakh and senior doctors earn between ₹12.5 -18.4 lakh per annum in cities.⁹⁰ This is almost similar or lower to the packages that are available to other graduates at the entry level. The attraction towards the medical profession, as seen from the consistently increasing number of aspirants, seems to arise more from the social status attached to it rather than its earning potential. This may mean that the availability of meaningful work and commensurate remuneration may reduce with increase in the number of doctors available in the future. This would reinforce the already occurring migration of doctors from India into greener pastures. The OECD countries reported in 2021 that there were close to 19,000 physicians from India in their workforce and migration in 2021 alone was over 2800 physicians. Increased public and private sector investments into medical education is in effect creating a global health workforce. The trends in migration need to be factored while incentives for service in public health system are calibrated to ensure availability of doctors in rural areas.

Other issues

Quality of education is directly related to the availability of qualified and experienced faculty and the clinical exposure at the hospital. Regulatory requirements in terms of both are robust. Non-compliance carries penalties including the cancellation of recognition of courses. The NMC is empowered to monitor and penalise such non-compliance. Measures such as CCTV cameras and an Aadhaar based attendance system which are centrally monitored by the national regulator have been put in place. The granularity of regulations may appear necessary given that medical profession deserves to be of the highest quality possible but also seem overbearing in terms of associated compliance and monitoring costs. Despite the

⁸⁹ The 157th Report on Quality of Medical Education in India, Department related Standing Committee on Health and Family Welfare February, 2024 – Para 2.7 -2.15

⁹⁰ <https://tinyurl.com/5573epev>.

elaborate regulations and monitoring, issues like shortage of faculty, ghost faculty, low patient load in hospitals etc., continue to affect the quality of training. There may be need to revisit the incentive-disincentive and design of regulatory measures to improve compliance, reduce costs and prevent associated rent-seeking.

The success of any policy, including regulatory ones, lies in its execution. If outcomes do not align with our goals or if there are unexpected effects, it is essential to take a step back and refine these policies to make them more meaningful and impactful.

Conclusion

To address the uneven distribution of seats and to expand the availability of seats, the central government is supporting the states through three centrally sponsored schemes, viz., the construction of new medical colleges, creation of infrastructure for expansion of MBBS and post graduate seats.⁹¹ The regulatory reform process started with the setting up of the NMC in 2019. NMC has since brought into effect broad based regulations specifying minimum standards for establishment of colleges, increasing number of seats, opening new courses, introduction of a competency-based curriculum, minimum qualification, and training of teachers etc. In collaboration with the Quality Council of India, a rating and accreditation system for medical colleges has also been proposed.

With all these efforts being made and the private sector remaining an active participant, the medical education landscape presents large opportunities for the future and presents a bigger challenge to policymakers than any other field of professional education does.

TOWARDS A HEALTHY NATION

11.40 Health is a crucial component of human capital and a valuable asset for a prosperous and stable economy. It boosts productivity, reduces healthcare needs, enhances life expectancy, and supports social development. Furthermore, good health is foundational for the young generation to achieve their aspirations and contribute to society. The emphasis on health is important given that India is emerging into an economic powerhouse driven by its youthful population. Through concerted efforts by individuals, communities, and policy interventions, a robust and healthy generation of adults can be raised. Government initiatives, including preventive measures, universal access to high-quality healthcare, strengthened public health infrastructure, and advancements in medical education, have collectively contributed to making healthcare in India more accessible and affordable for all.

91 <https://mohfw.gov.in/?q=pressrelease-33>